



**THIS IS SCHEDULE PART 24 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 24



(1) PARSONS BRINCKERHOFF LIMITED

- and -

(2) TIE LIMITED

- and -

(3) INFRACO

**COLLATERAL WARRANTY IN
FAVOUR OF TIE FROM THE SDS
PROVIDER**

relating to

**THE PROVISION OF SYSTEM
DESIGN SERVICES FOR THE
EDINBURGH TRAM NETWORK**

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AGREEMENT

BETWEEN

- (1) **PARSONS BRINCKERHOFF LIMITED** (Company Number 2554514) whose registered office is at Amber Court, William Armstrong Drive, Newcastle Business Park, Newcastle Upon Tyne, NE4 7YQ ("**SDS Provider**");
- (2) **TIE LIMITED** (Company Number SC230949) whose registered office is at City Chambers, High Street, Edinburgh, Midlothian, EH1 1YJ ("**tie**") which term shall include its successors and permitted assignees); and
- (3) **BILFINGER BERGER UK LIMITED**, a company incorporated in England and Wales under number 02418086 and having its registered office at 150 Aldersgate Street, London, EC1A 4EJ, which expression shall include its successors, permitted assignees and transferees and **SIEMENS PLC**, a company incorporated in England and Wales under number 00727817 and having its registered office at Faraday House, Sir William Siemens House, Frimley, Camberley, Surrey, GU16 8QD, which expression shall include its successors, permitted assignees and transferees, acting jointly and severally (together the "**Infraco**").

BACKGROUND

- A By an agreement in writing dated 19 September 2005 (the "**SDS Agreement**"), **tie** appointed the SDS Provider to provide system design services in connection with the Edinburgh Tram Network.
- B **tie** and Infraco have entered into a contract under which Infraco has been appointed to complete the design and carry out the construction, installation, commissioning and maintenance planning in respect of the Edinburgh Tram Network.
- C **tie** and Infraco have agreed, with the consent of the SDS Provider, that the Infraco shall take over the rights and liabilities of the "Client" under the SDS Agreement by novating the SDS Agreement from **tie** to Infraco upon and subject to the terms of the Novation Agreement (as hereinafter defined).
- E It is a term of the SDS Agreement that the SDS Provider shall enter into this Agreement with **tie** following the execution of the Novation Agreement.

IT IS AGREED as follows:

1. DEFINITIONS AND INTERPRETATION

1.1 In this Agreement the following words and expressions have the following meanings, unless the context requires otherwise:

"**Agreement**" means this document (as amended from time to time pursuant to Clause 15);

"**Deliverables**" means the Functional Requirements Specifications, the Technical Specifications and the items listed in Appendix 3 to Schedule 1 (*Scope of Services*) of the SDS Agreement, the design produced pursuant to the Novation Agreement as set out in Appendix Part 4 to that agreement and any other design SDS produces for the Infraco and all other documents, information, reports, records, diagrams, bills of quantities, manuals, schedules, databases, reinforcement details, photographs, formulae, consultation materials, plans, designs, specifications, drawings (including as-built drawings), details, calculations, transport and other models and simulations, the outputs and reports based on any models, programmes and all other material created and/or provided by the SDS Provider (and/or any SDS Provider Party or any other third party) in the performance of the Services and the SDS Provider's other obligations under the SDS Agreement to the Novation Agreement;

"**Infraco Contract**" means the contract to be entered into or entered into by **tie** with the Infraco in relation to the completion of the design, and carrying out the construction, commissioning and maintenance planning in respect of the Edinburgh Tram Network;

"**Novation Agreement**" means the novation agreement entered into among **tie**, the SDS Provider and the Infraco;

"**Party**" means each and any of the parties to this Agreement and Parties shall be construed accordingly;

"**SDS Agreement**" means the agreement dated 19 September 2005 originally entered into by the SDS Provider and **tie**, which has been novated to the Infraco and the SDS Provider.

1.2 Unless the context requires otherwise:

1.2.1 words importing:

1.2.1.1 the singular include the plural and vice versa; and

1.2.1.2 one gender include all other genders.

- 1.2.2 a reference to:
- 1.2.2.1 persons includes firms, companies, corporations, partnerships, trusts, authorities and other incorporated and/or unincorporated bodies; and
 - 1.2.2.2 a recital, clause or schedule is a reference to a recital, clause or schedule of or to this Agreement;
- 1.3 The list of contents and clause headings in this Agreement are included for convenience only and do not affect its interpretation; and
- 1.4 Where a party comprises two or more persons:
- 1.4.1 any obligations on the part of that party contained or implied in this agreement are deemed to be joint and several obligations on the part of those persons; and
 - 1.4.2 references to that party shall include references to each and any of those persons.
- 1.5 Unless otherwise defined hereunder, where the SDS Agreement defines a meaning to any capitalised word or expression used in this Agreement, the same meaning shall be given to it in this Agreement;
- 1.6 In the case of any unintended conflict between the definition or interpretation of words or expressions in this Agreement and the SDS Agreement, the SDS Agreement shall prevail save where by express words or where it is apparent from the context that the contrary is intended in this Agreement.

2. STANDARD OF CARE

The SDS Provider warrants and undertakes to **tie** that:

- 2.1 it has carried out and shall carry out its Services and other duties and obligations under the SDS Agreement and the Novation Agreement subject to and in accordance with the terms thereof; and
- 2.2 in addition to and without derogation from clause **Error! Reference source not found.**
 - 2.2.1 the SDS Provider warrants to **tie** that, in the production of the Deliverables and in the performance of the Services and its other obligations under the SDS Agreement it shall exercise a reasonable level of professional skill, care and diligence to be expected of a properly qualified and competent system design services provider

experienced in performing services similar to the Services in connection with projects of a similar size, scope and complexity; and

2.2.2 it owes a duty of care to **tie** in carrying out its duties and obligations under the SDS Agreement and the Novation Agreement.

3. COPYRIGHT LICENCE

3.1 The SDS Provider hereby grants to **tie** an irrevocable, perpetual, royalty-free and non-exclusive licence to use such Project IPR and SDS Provider IPR as may be necessary for **tie** to use in relation to any projects associated with the Services. This licence shall carry the right to grant sub-licences, and be freely transferable to third parties. The SDS Provider shall be liable for the Project IPR and the SDS Provider IPR only to the extent that it is used for the purposes for which it was intended.

3.2 In so far as ownership of the copyright and any other Intellectual Property Rights in any Deliverable prepared or provided by the SDS Provider in connection with the Edinburgh Tram Network is vested in any person other than the SDS Provider including, without limitation, any SDS Provider Party, the SDS Provider shall procure for **tie** the benefit of such a licence as is referred to in clause **Error! Reference source not found.** for the purposes referred to therein.

3.3 The SDS Provider shall, if so requested at any time, execute such documents and perform such acts (including the grant to **tie** of a licence to use any SDS Provider Software and/or any Third Party Software and/or any Specially Written Software) as may be required fully and effectively to assure to **tie** or any third party the rights referred to in this clause **Error! Reference source not found.**

3.4 The SDS Provider shall provide to **tie** a copy of any of the Deliverables as soon as reasonably practicable after receipt by the SDS Provider of a written request from **tie** to do so.

3.5 The SDS Provider undertakes to **tie** that the use by **tie** of any of the Deliverables for any purpose provided for in this clause **Error! Reference source not found.** shall not infringe the rights of any third party in relation to the Deliverables.

4. REQUIRED INSURANCES

4.1 The SDS Provider undertakes that:

- 4.1.1 it has maintained and shall maintain during the performance of its obligations under the SDS Agreement each of the Required Insurances in accordance with the requirements of Clause 17 (*Required Insurances*) and Schedule 6 (*Required Insurances*) of the SDS Agreement;
 - 4.1.2 cover under the professional indemnity insurance is extended to include the SDS Provider's liabilities under this Agreement;
 - 4.1.3 this Agreement has been disclosed to the SDS Provider's current professional indemnity insurers or brokers (as the case may be) and shall be disclosed to any future professional indemnity insurers or brokers providing the insurance required by this Agreement; and
 - 4.1.4 the SDS Provider shall abide by the terms and conditions of insurance and not do or omit to do anything that might prejudice the cover or its right to make a claim.
- 4.2 As and when required by **tie**, the SDS Provider shall produce for inspection documentary evidence that such insurance is being properly maintained.
- 4.3 The SDS Provider shall not make any material alteration to the terms of the Required Insurances without **tie's** prior approval which approval shall not be unreasonably withheld. If the insurer makes or attempts to make any material alteration or purports to withdraw cover, or if the SDS Provider is unable to obtain professional indemnity insurance, the SDS Provider shall promptly give notice of this to **tie**.

5. TIE STEP-IN

- 5.1 The SDS Provider shall not exercise nor seek to exercise any right of determination of the SDS Agreement or the Novation Agreement or to rescind the SDS Agreement or the Novation Agreement by reason of a Client Default or to otherwise discontinue the performance of any of the SDS Provider's obligations in relation to the SDS Agreement or the Novation Agreement by reason of breach on the part of the Infraco (or otherwise) without giving to **tie** not less than 21 days' written notice of its intention to do so and specifying in such notice the grounds for the proposed determination. The SDS Provider shall for the period of any such notice diligently and properly continue to perform the SDS Provider's obligations under the SDS Agreement or the Novation Agreement.
- 5.2 Any period stipulated in the SDS Agreement or the Novation Agreement for the exercise by the SDS Provider of a right of determination shall nevertheless be extended as may be

necessary to take account of the period of notice required under clause **Error! Reference source not found.**

- 5.3 Compliance by the SDS Provider with the provisions of clause **Error! Reference source not found.** shall not be treated as a waiver of any breach on the part of the Infraco giving rise to the right of determination nor otherwise prevent the SDS Provider from exercising its rights after the expiration of the notice unless the right of determination shall have ceased under the provisions of clause **Error! Reference source not found.**
- 5.4 The right of the SDS Provider to determine the SDS Agreement or to rescind the SDS Agreement or the Novation Agreement or to discontinue the performance of any of its obligations in relation to the SDS Agreement or the Novation Agreement shall cease if within the period of 21 days referred to in clause **Error! Reference source not found.**, **tie** gives written notice to the SDS Provider:
- 5.4.1 requiring the SDS Provider to continue with the performance of all its obligations under the SDS Agreement or the Novation Agreement;
 - 5.4.2 acknowledging that **tie** is assuming all the obligations of the Infraco (as "**Client**") under the SDS Agreement or the Novation Agreement; and
 - 5.4.3 undertaking to the SDS Provider to discharge all amounts payable to the SDS Provider under the terms of the SDS Agreement or the Novation Agreement.
- 5.5 Upon compliance by **tie** with the requirements of clause **Error! Reference source not found.**, the SDS Agreement or the Novation Agreement shall continue in full force and effect as if the right of determination on the part of the SDS Provider had not arisen and in all respects as if the SDS Agreement or the Novation Agreement had been made between **tie** and the SDS Provider to the exclusion of the Infraco.
- 5.6 Notwithstanding that as between the Infraco and the SDS Provider, the SDS Provider's right of determination of its engagement under the SDS Agreement or the Novation Agreement may not have arisen the provisions of clause **Error! Reference source not found.** shall nevertheless apply if **tie** gives written notice to the SDS Provider and the Infraco to that effect and **tie** complies with the requirements on its part under clause **Error! Reference source not found.**
- 5.7 The SDS Provider does not need to be concerned or required to enquire whether, and shall be entitled to assume that, as between the Infraco and **tie**, the circumstances have occurred permitting **tie** to give notice under clause **Error! Reference source not found.**

- 5.8 The SDS Provider acting in accordance with the provisions of this clause **Error! Reference source not found.** shall not incur any liability to the Infraco.
- 5.9 Unless and until **tie** has given notice under this clause **Error! Reference source not found.:**
- 5.9.1 **tie** has no liability whatsoever to the SDS Provider in respect of amounts payable to the SDS Provider under the SDS Agreement or the Novation Agreement (except in relation to the sums referred to in Clause 8 of this Agreement); and
- 5.9.2 **tie** has no authority to issue any direction or instruction to the SDS Provider in relation to the performance of the SDS Provider's obligations under the SDS Agreement or the Novation Agreement.
- 5.10 Without prejudice to the provisions of clauses **Error! Reference source not found.** to **Error! Reference source not found.** inclusive, if prior to the service of any notice under clause **Error! Reference source not found.** the SDS Provider is determined under the SDS Agreement and the Novation Agreement for any reason whatsoever the SDS Provider shall if required in writing so do to by **tie** no later than 12 weeks after the date of such determination forthwith enter into a new agreement with **tie** on the same terms as the SDS Agreement and the Novation Agreement, but with such revisions as **tie** and the SDS Provider may reasonably require to reflect altered circumstances and the fact that it is **tie** and not the Infraco employing the SDS Provider.

6. ASSIGNATION

- 6.1 The SDS Provider shall not assign, novate or otherwise transfer the whole or any part of this Agreement without the prior written agreement of **tie**.
- 6.2 **tie** shall be entitled to assign, novate or otherwise transfer the whole or any part of this Agreement:
- 6.2.1 to the Scottish Ministers or any local authority or other body with no worse financial standing than that of **tie** who, as a result of any Change in Law, takes over all or substantially all the functions of **tie**; or
- 6.2.2 to any other person whose obligations under this Agreement are unconditionally and irrevocably guaranteed (in a form reasonably acceptable to the SDS Provider) by **tie** or a person falling within clause 6.2.1; or
- 6.2.3 to CEC or Transport Edinburgh Limited; or

6.2.4 with the prior written consent of the SDS Provider (such consent not to be unreasonably withheld or delayed).

6.3 The SDS Provider undertakes to **tie** not to contend in any court proceedings under this Agreement that any person to whom **tie** assigns or has assigned its rights under this Agreement or any of them in accordance with the foregoing provisions of this clause is to be precluded from recovering any loss resulting from any breach of this Agreement (whenever happening) by reason that such person is an assignee and not the original contracting party under this Agreement or by reason that **tie** is named under this Agreement or any intermediate assignee of **tie** escaped loss resulting from such breach by reason of the disposal of its interest in the same.

7. LIABILITY OF THE SDS PROVIDER

7.1 No provision of this Agreement is intended to exclude any obligation or liability which would otherwise be implied whether by law of contract, delict or otherwise.

7.2 The responsibility of the SDS Provider under this Agreement is not to be reduced or in any way released or limited by any enquiry or inspection by or on behalf of any person notwithstanding that such enquiry or inspection may give rise to a claim by **tie** against a third party.

7.3 The rights and benefits conferred upon **tie** by this Agreement are in addition to any other rights and remedies that **tie** may have against the SDS Provider including (without prejudice to the generality of the foregoing) any remedies in delict.

7.4 Subject to the other provisions of this Agreement, the liability of the SDS Provider to **tie** is to be determined in all respects in accordance with the terms of the SDS Agreement and the Novation Agreement and, in the event of any claim by **tie** under this Agreement, the SDS Provider shall be entitled to rely upon any defence, right, limitation or exclusion under the SDS Agreement or the Novation Agreement as though **tie** were named as Client under it, except that:

7.4.1 **tie** shall not be affected by any subsequent variation of the SDS Agreement which would adversely affect the obligations owed by SDS Provider or the waiver, compromise or withdrawal of any claim made by the Infraco; and

7.4.2 the SDS Provider shall not be entitled to exercise any right of set-off, retention or withholding against **tie** to which the SDS Provider may be entitled as against the Infraco.

7.5 The liability of the SDS Provider under this Agreement shall be no greater in extent than the liability of the SDS Provider under the SDS Agreement.

8. PAYMENT TO THE SDS PROVIDER IN RESPECT OF RETENTIONS AND REDUCTIONS IN THE SCOPE OF SERVICES

8.1 **tie** shall make payment of any sums which have been agreed to be due to the SDS Provider in accordance with Clause 12.7.3 and/or Clause 29.4 of the SDS Agreement, in the amounts and the timescales set out within these said Clauses and such payment shall be deemed to be in full and final settlement of any claims by SDS Provider.

9. ONGOING SCOPE OF SERVICES TO TIE

9.1 The SDS Provider undertakes to **tie** to perform and **tie** agrees to pay for the Services set out in the Schedule on behalf of **tie** as the Client in accordance with the terms of the SDS Agreement, and as if the Novation Agreement had not been entered into and:

9.1.1 in respect of Schedule Part 1 a lump sum of £103,744 is payable, together with any further payment due in respect of changes which will be valued in accordance with the Schedule or in accordance with the estimate for the change; or

9.1.2 in respect of Schedule Parts 2 and 3 at the rates set out in the Schedule,
and the Infraco acknowledges this.

10. CONSENT OF INFRACO

10.1 The Infraco consents to the terms of this Agreement.

11. NOTICES

11.1 Any notice required to be given under this Agreement is to be hand delivered or sent by prepaid registered or recorded delivery post to the party concerned at its address set out in this Agreement or to such other addresses as may be notified by such party for the purposes of this clause.

11.2 Any notice given pursuant to this clause, if sent by registered or recorded delivery, is deemed to have been received 48 hours after being posted.

12. RIGHTS OF THIRD PARTIES

- 12.1 A person who is not a party to this Agreement shall have no right to enforce any term of this Agreement.

13. INVALID TERMS

13.1 If any term of this Agreement shall be held to any extent to be invalid, unlawful or unenforceable

13.1.1 that term shall to that extent be deemed not to form part of this Agreement; and

13.1.2 the validity and enforceability of the remainder of this Agreement shall not be affected.

14. VARIATIONS AND WAIVERS TO BE IN WRITING

14.1 No variation, alteration or waiver of any of the provisions of this Agreement shall be effective unless it is in writing and signed by or on behalf of the Party against which the enforcement of such variation, alteration or waiver is sought.

15. WAIVER

15.1 Save where expressly stated, no failure or delay by either Party to exercise any right or remedy in connection with this Agreement shall operate as a waiver of it or of any other right or remedy nor shall any single or partial exercise preclude any further exercise of the same, or of some other right or remedy. A waiver of any breach of this Agreement shall not be deemed to be a waiver of any subsequent breach.

15.1.1 The Parties' rights and remedies under this Agreement are, except where provided otherwise in this Agreement, independent, cumulative and do not operate to exclude one another or any rights or remedies provided by law.

16. JURISDICTION AND LAW

16.1 This Agreement is governed by and is to be construed according to Scots law and the Scottish courts shall have jurisdiction in relation to all matters arising under it.

16.2 The Parties agree that any dispute in relation to this Agreement shall be conducted in accordance with Clause 28 (*Dispute Resolution Procedure*) of the SDS Agreement and the provisions of the said Clause 28 and Schedule 10 (*Panels to the Dispute Resolution Procedure*) are deemed to be incorporated mutatis mutandis in respect of this Agreement provided that any reference to "**Parties**" shall be deemed to refer to **tie** and the SDS Provider, any reference to "**Client**" shall be deemed to refer to **tie**, the reference to "Clause 36" shall mean Clause 11 of this Agreement.

IN WITNESS WHEREOF these presents on this and the preceding 10 pages together with the Schedule in 3 Parts and Appendix in 3 Parts which are annexed hereto are executed as follows:

EXECUTED for and on behalf of **PARSONS BRINCKERHOFF LIMITED**

at

on _____ 2008 by:

Director/Authorised Signatory

Full Name

Witness Signature

Full Name

Address

EXECUTED for and on behalf of **TIE LIMITED** at

on _____ 2008 by:

Authorised Signatory

Full Name

Witness Signature

Full Name

Address

EXECUTED for and on behalf of
BILFINGER BERGER UK LIMITED

at

on 2008 by:

Director

Full Name

Director

Full Name

EXECUTED for and on behalf of **SIEMENS
PLC**

at

on 2008 by:

Authorised Signatory

Full Name

Authorised Signatory

Full Name

This is the Schedule referred to in the foregoing collateral warranty among Parsons Brinkerhoff Limited, tie, and the Infracore

SCHEDULE PART 1

SDS SCOPE OF SERVICES FOR TIE

Utilities Diversions

- 1 The SDS Provider shall provide technical and specialist assistance to **tie** with the management of the advanced utilities diversion programme being carried out under the Multi Utilities Diversion Framework Agreement. As **Appendix A** this shall include:
- (a) assessing the need for and acquiring relevant data relating to the presence and location of all buried and above ground utility services;
 - (b) agreeing the need for and extent of diversions;
 - (c) undertaking critical design and developing a strategy for all utilities diversions to minimise diversion requirements and out-turn costs;
 - (d) preparing C4 cost schedules;
 - (e) activities required to support the utilities diversion process including, but not limited to, traffic management plans/traffic regulation orders (including temporary traffic regulation orders), site meetings and all necessary re-designs;
 - (f) design re-work/modifications on an as required basis to deal with unidentified diversions;
 - (g) construction support and on-site attendance at appropriate seniority on an as-required basis;
 - (h) attendance at all meetings at appropriate seniority on an as-required basis;
 - (i) production of utilities designs that are complete in all respects including input from statutory utilities, and fully and finally checked and coordinated by PB prior to issue to the contractor under the MUDFA Contract.

SCHEDULE PART 2

SDS SCOPE OF SERVICES FOR TIE

MANHOLES and SEWER WORKS

Utilities Diversions

- 1 The SDS Provider shall provide technical and specialist assistance to **tie** with the management of the advanced utilities Sewer diversion programme being carried out under the Multi Utilities Diversion Framework Agreement. This work shall be instructed as a change order in accordance with the change process and be in accordance with Clause 15 of the SDS Agreement. The work content is listed in **Appendix B**, this shall include:
 - (a) assessing the need for and acquiring relevant data relating to the presence and location of all sewers and manholes;
 - (b) agreeing the need for and extent of sewer diversions;
 - (c) undertaking critical sewer design and developing a strategy to minimise associated diversion requirements and outturn costs
 - (d) provide on-site attendance at appropriate seniority on an as-required basis;
 - (e) provided adequate notice and information (previous minutes, Agenda etc) is provided by tie attendance at meetings at appropriate seniority on an as-required basis until sewer designs are completed.

SCHEDULE PART 3

SDS RETAINED SCOPE OF SERVICES FOR TIE

Utilities Diversions

1. The SDS Provider shall extend the duration of their provision of technical and specialist assistance to tie with the management of the advanced utilities diversion programme being carried out under the Multi Utilities Diversion Framework Agreement.

This work shall be carried out on a time and expense basis in accordance with the table of rates (as **Appendix C**) and shall include:

- (a) assessing the need for and acquiring relevant data relating to the presence and location of all buried and above ground utility services;
 - (b) agreeing the need for and extent of diversions;
 - (c) undertaking critical design and developing a strategy for all utilities diversions to minimise diversion requirements and out-turn costs;
 - (d) preparing C4 cost schedules;
 - (e) carry out design re-work/modifications/additional diversion designs on an as required basis to deal with unidentified services in a timely manner to avoid or minimise disruption to the ongoing programme of works;
 - (f) Provided adequate notice and information (objective of visit, identification/clarification of problem etc) is received from tie, provide appropriate on-site attendance on an as-required basis;
 - (g) Provided adequate notice and information (Previous Minutes, Agenda etc) is provided by tie attendance at meetings at appropriate seniority on an as-required basis;
 - (h) The timely production of utilities designs that are complete in all respects including input from statutory utilities, and fully and finally checked by the relevant utility and coordinated by PB prior to issue to the contractor under the MUDFA Contract
2. Parsons Brinckerhoff. shall provide all technical support (on and off site) required to address any utilities design issues arising from the works under the MUDFA Contract and including resolution by Parsons Brinckerhoff of all technical queries arising from use by the contractor under the MUDFA Contract of Parsons Brinckerhoff design in a proactive manner to minimise

disruption and delays to the progress of the works under the MUDFA Contract and the Edinburgh Tram Network installation works (The Infraco Works).

This work will be carried out on a time and expense basis in accordance with the table of rates (as **Appendix C**).

APPENDIX A

Section	Location Plates	Remarks
1A	plates 1-5	<p>Forth Ports Agreement Drawings (for utility definition) to be instructed by tie. Road/kerb detail and alignments to be confirmed from Forth Ports Agreement such that telecomms designs (box details) may be confirmed.</p> <p>VE exercise being carried out by tie Management Team week commencing 6th May 2008. (tie to visit Chancelot Mills to agree route of power cables. (Note. These utilities running outside LOD)</p>
1A	plates 6-10	<p>Forth Ports Agreement Drawings (for utility definition) to be instructed by tie. Road/kerb detail and alignments to be confirmed from Forth Ports Agreement such that telecomms designs (box details) may be confirmed.</p> <p>Note. SDS utility IFA Drawings issued to SUC's on 8th Feb 2008.</p> <p>VE exercise being carried out by tie Management Team week commencing 6th May 2008. SDS await revised drawings from tie/Scottish Power.</p>
1A	plates 11-12	Utilities being designed in accordance with bridge designs for Victoria Bridge and Tower Place Bridge. This work being carried out in line with Change CR278 for the bridge re-designs.
2A	plates 1-3	Drawings issued for approval on 14th April 2008. tie formal ROR not yet received. SDS working on unofficial ROR. IFC to be issued 17th May 2008.
6A	plates 1	SDS to issue IFC Drawings 7th May 2008
6	Gogar 800 main	SDS to issue IFC Drawings 9th May 2008
SDS CHANGE ORDER WORK for COMPLETION		
1A	plates 14/15	Change No CR 257. Original diversions carried out by MUDFA on plate 15. As-built drawings for plate 14 & 15 awaited from tie. This holding up the completion of work.
3A	Full Sub-section	CR325 SDS is instructed not to seek approvals to these designs. All Phase 1A utility designs to be procured prior to Phase 1B designs.
3B	Full Sub-section	CR325 SDS is instructed not to seek approvals to these designs. All Phase 1A utility designs to be procured prior to Phase 1B designs.
3C	Full Sub-section	CR325 SDS is instructed not to seek approvals to these designs. All Phase 1A utility designs to be procured prior to Phase 1B designs.
5C	Edin Parl	CR 305 Edinburgh Park Private Utilities Relocation. Utilities being moved out of tramway path. IFC programmed for 24th May 2008.

APPENDIX B

MANHOLE/SEWER WORK for COMPLETION		
		See SDS letter ref ULE90130-SW-LET-01040 dated 17th April 2008. This letter identifies that the tie /MUDFA Sewer Survey Programme should have been complete by 28th February 2008. This survey work is still incomplete which has delayed the SDS delivery of sewer designs. The below programme of work is identified (by section) with proposed dates to completion on the basis of total manhole/sewer information being provided to SDS by 6th May 2008.
1A	Full Sub-section	Forth Ports Agreement Drawings (for utility definition) to be instructed by tie . Road/kerb detail and alignments to be confirmed from Forth Ports
1B	Full Sub-section	IFA Drawings issued to SW on 20th March 2008. Approval awaited from SW and tie . Commercial issue not allowing SW to approve drawings. Tie to resolve.
1C	Full Sub-section	IFA Drawings to be issued on 20th May 2008.
1D	Full Sub-section	IFA Drawings to be issued on 20th May 2008.
2A	Full Sub-section	IFA Drawings to be issued on 26th May 2008.
5A/5B/5C	Full Section	IFA Drawings to be issued 26th May 2008. Sewer diversion at A8 Underpass IFA to be issued early on 6th May 2008. One section of manhole information detail still info still required from tie for this drawing to be complete.
6	Full Sub-section	IFA Drawings to be issued 26th May 2008.
7A	Full Sub-section	IFA Drawings to be issued 7th June 2008.
3A/3B/3C	Full Section	CR325 SDS is instructed not to seek approvals to these designs. All Phase 1A utility designs to be procured prior to Phase 1B designs.

APPENDIX C

The table of rates for Retained Scope of Services for **tie** and the provision of technical and specialist services for utilities

TABLE OF RATES FOR RETAINED SCOPE OF SERVICES		
Reference	Role	Hourly Rate
GD	Graduate Designer	£55.00
SD	Senior Designer	£78.00
PD	Principal Designer	£95.00
CT	CAD Technician	£38.00
ST	Senior CAD Technician	£49.00
TS	Technical Support	£38.00

.....
 Director/Authorised Signatory
tie LIMITED

.....
 Director/Authorised Signatory
BILFINGER BERGER UK LIMITED

.....
 Director/Authorised Signatory
PARSONS BRINCKERHOFF LIMITED

.....
 Director/Authorised Signatory
SIEMENS PLC



(1) PARSONS BRINCKERHOFF LIMITED

- and -

(2) TIE LIMITED

- and -

(3) INFRACO

**COLLATERAL WARRANTY IN
FAVOUR OF TIE FROM THE SDS
PROVIDER**

relating to

**THE PROVISION OF SYSTEM
DESIGN SERVICES FOR THE
EDINBURGH TRAM NETWORK**

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AGREEMENT

BETWEEN

- (1) **PARSONS BRINCKERHOFF LIMITED** (Company Number 2554514) whose registered office is at Amber Court, William Armstrong Drive, Newcastle Business Park, Newcastle Upon Tyne, NE4 7YQ ("**SDS Provider**");
- (2) **TIE LIMITED** (Company Number SC230949) whose registered office is at City Chambers, High Street, Edinburgh, Midlothian, EH1 1YJ ("**tie**") which term shall include its successors and permitted assignees); and
- (3) **BILFINGER BERGER UK LIMITED**, a company incorporated in England and Wales under number 02418086 and having its registered office at 150 Aldersgate Street, London, EC1A 4EJ, which expression shall include its successors, permitted assignees and transferees and **SIEMENS PLC**, a company incorporated in England and Wales under number 00727817 and having its registered office at Faraday House, Sir William Siemens House, Frimley, Camberley, Surrey, GU16 8QD, which expression shall include its successors, permitted assignees and transferees, acting jointly and severally (together the "**Infraco**").

BACKGROUND

- A By an agreement in writing dated 19 September 2005 (the "**SDS Agreement**"), **tie** appointed the SDS Provider to provide system design services in connection with the Edinburgh Tram Network.
- B **tie** and **Infraco** have entered into a contract under which **Infraco** has been appointed to complete the design and carry out the construction, installation, commissioning and maintenance planning in respect of the Edinburgh Tram Network.
- C **tie** and **Infraco** have agreed, with the consent of the SDS Provider, that the **Infraco** shall take over the rights and liabilities of the "Client" under the SDS Agreement by novating the SDS Agreement from **tie** to **Infraco** upon and subject to the terms of the Novation Agreement (as hereinafter defined).
- E It is a term of the SDS Agreement that the SDS Provider shall enter into this Agreement with **tie** following the execution of the Novation Agreement.

IT IS AGREED as follows:

1. DEFINITIONS AND INTERPRETATION

1.1 In this Agreement the following words and expressions have the following meanings, unless the context requires otherwise:

"**Agreement**" means this document (as amended from time to time pursuant to Clause 15);

"**Deliverables**" means the Functional Requirements Specifications, the Technical Specifications and the items listed in Appendix 3 to Schedule 1 (*Scope of Services*) of the SDS Agreement, the design produced pursuant to the Novation Agreement as set out in Appendix Part 4 to that agreement and any other design SDS produces for the Infraco and all other documents, information, reports, records, diagrams, bills of quantities, manuals, schedules, databases, reinforcement details, photographs, formulae, consultation materials, plans, designs, specifications, drawings (including as-built drawings), details, calculations, transport and other models and simulations, the outputs and reports based on any models, programmes and all other material created and/or provided by the SDS Provider (and/or any SDS Provider Party or any other third party) in the performance of the Services and the SDS Provider's other obligations under the SDS Agreement to the Novation Agreement;

"**Infraco Contract**" means the contract to be entered into or entered into by tie with the Infraco in relation to the completion of the design, and carrying out the construction, commissioning and maintenance planning in respect of the Edinburgh Tram Network;

"**Novation Agreement**" means the novation agreement entered into among tie, the SDS Provider and the Infraco;

"**Party**" means each and any of the parties to this Agreement and Parties shall be construed accordingly;

"**SDS Agreement**" means the agreement dated 19 September 2005 originally entered into by the SDS Provider and tie, which has been novated to the Infraco and the SDS Provider.

1.2 Unless the context requires otherwise:

1.2.1 words importing:

1.2.1.1 the singular include the plural and vice versa; and

1.2.1.2 one gender include all other genders.

1.2.2 a reference to:

1.2.2.1 persons includes firms, companies, corporations, partnerships, trusts, authorities and other incorporated and/or unincorporated bodies; and

1.2.2.2 a recital, clause or schedule is a reference to a recital, clause or schedule of or to this Agreement;

1.3 The list of contents and clause headings in this Agreement are included for convenience only and do not affect its interpretation; and

1.4 Where a party comprises two or more persons:

1.4.1 any obligations on the part of that party contained or implied in this agreement are deemed to be joint and several obligations on the part of those persons; and

1.4.2 references to that party shall include references to each and any of those persons.

1.5 Unless otherwise defined hereunder, where the SDS Agreement defines a meaning to any capitalised word or expression used in this Agreement, the same meaning shall be given to it in this Agreement;

1.6 In the case of any unintended conflict between the definition or interpretation of words or expressions in this Agreement and the SDS Agreement, the SDS Agreement shall prevail save where by express words or where it is apparent from the context that the contrary is intended in this Agreement.

2. STANDARD OF CARE

The SDS Provider warrants and undertakes to **tie** that:

2.1 it has carried out and shall carry out its Services and other duties and obligations under the SDS Agreement and the Novation Agreement subject to and in accordance with the terms thereof; and

2.2 in addition to and without derogation from clause 2.1;

2.2.1 the SDS Provider warrants to **tie** that, in the production of the Deliverables and in the performance of the Services and its other obligations under the SDS Agreement it shall exercise a reasonable level of professional skill, care and diligence to be expected of a properly qualified and competent system design services provider

experienced in performing services similar to the Services in connection with projects of a similar size, scope and complexity; and

2.2.2 it owes a duty of care to **tie** in carrying out its duties and obligations under the SDS Agreement and the Novation Agreement.

3. COPYRIGHT LICENCE

3.1 The SDS Provider hereby grants to **tie** an irrevocable, perpetual, royalty-free and non-exclusive licence to use such Project IPR and SDS Provider IPR as may be necessary for **tie** to use in relation to any projects associated with the Services. This licence shall carry the right to grant sub-licences, and be freely transferable to third parties. The SDS Provider shall be liable for the Project IPR and the SDS Provider IPR only to the extent that it is used for the purposes for which it was intended.

3.2 In so far as ownership of the copyright and any other Intellectual Property Rights in any Deliverable prepared or provided by the SDS Provider in connection with the Edinburgh Tram Network is vested in any person other than the SDS Provider including, without limitation, any SDS Provider Party, the SDS Provider shall procure for **tie** the benefit of such a licence as is referred to in clause 3.1 for the purposes referred to therein.

3.3 The SDS Provider shall, if so requested at any time, execute such documents and perform such acts (including the grant to **tie** of a licence to use any SDS Provider Software and/or any Third Party Software and/or any Specially Written Software) as may be required fully and effectively to assure to **tie** or any third party the rights referred to in this clause 3.

3.4 The SDS Provider shall provide to **tie** a copy of any of the Deliverables as soon as reasonably practicable after receipt by the SDS Provider of a written request from **tie** to do so.

3.5 The SDS Provider undertakes to **tie** that the use by **tie** of any of the Deliverables for any purpose provided for in this clause 3 shall not infringe the rights of any third party in relation to the Deliverables.

4. REQUIRED INSURANCES

4.1 The SDS Provider undertakes that:

4.1.1 it has maintained and shall maintain during the performance of its obligations under the SDS Agreement each of the Required Insurances in accordance with the

requirements of Clause 17 (*Required Insurances*) and Schedule 6 (*Required Insurances*) of the SDS Agreement;

- 4.1.2 cover under the professional indemnity insurance is extended to include the SDS Provider's liabilities under this Agreement;
 - 4.1.3 this Agreement has been disclosed to the SDS Provider's current professional indemnity insurers or brokers (as the case may be) and shall be disclosed to any future professional indemnity insurers or brokers providing the insurance required by this Agreement; and
 - 4.1.4 the SDS Provider shall abide by the terms and conditions of insurance and not do or omit to do anything that might prejudice the cover or its right to make a claim.
- 4.2 As and when required by **tie**, the SDS Provider shall produce for inspection documentary evidence that such insurance is being properly maintained.
- 4.3 The SDS Provider shall not make any material alteration to the terms of the Required Insurances without **tie's** prior approval which approval shall not be unreasonably withheld. If the insurer makes or attempts to make any material alteration or purports to withdraw cover, or if the SDS Provider is unable to obtain professional indemnity insurance, the SDS Provider shall promptly give notice of this to **tie**.

5. TIE STEP-IN

- 5.1 The SDS Provider shall not exercise nor seek to exercise any right of determination of the SDS Agreement or the Novation Agreement or to rescind the SDS Agreement or the Novation Agreement by reason of a Client Default or to otherwise discontinue the performance of any of the SDS Provider's obligations in relation to the SDS Agreement or the Novation Agreement by reason of breach on the part of the Infraco (or otherwise) without giving to **tie** not less than 21 days' written notice of its intention to do so and specifying in such notice the grounds for the proposed determination. The SDS Provider shall for the period of any such notice diligently and properly continue to perform the SDS Provider's obligations under the SDS Agreement or the Novation Agreement.
- 5.2 Any period stipulated in the SDS Agreement or the Novation Agreement for the exercise by the SDS Provider of a right of determination shall nevertheless be extended as may be necessary to take account of the period of notice required under clause 5.1.

- 5.3 Compliance by the SDS Provider with the provisions of clause 5.1 shall not be treated as a waiver of any breach on the part of the Infraco giving rise to the right of determination nor otherwise prevent the SDS Provider from exercising its rights after the expiration of the notice unless the right of determination shall have ceased under the provisions of clause 5.4.
- 5.4 The right of the SDS Provider to determine the SDS Agreement or to rescind the SDS Agreement or the Novation Agreement or to discontinue the performance of any of its obligations in relation to the SDS Agreement or the Novation Agreement shall cease if within the period of 21 days referred to in clause 5.1, **tie** gives written notice to the SDS Provider:
- 5.4.1 requiring the SDS Provider to continue with the performance of all its obligations under the SDS Agreement or the Novation Agreement;
 - 5.4.2 acknowledging that **tie** is assuming all the obligations of the Infraco (as "Client") under the SDS Agreement or the Novation Agreement; and
 - 5.4.3 undertaking to the SDS Provider to discharge all amounts payable to the SDS Provider under the terms of the SDS Agreement or the Novation Agreement.
- 5.5 Upon compliance by **tie** with the requirements of clause 5.4, the SDS Agreement or the Novation Agreement shall continue in full force and effect as if the right of determination on the part of the SDS Provider had not arisen and in all respects as if the SDS Agreement or the Novation Agreement had been made between **tie** and the SDS Provider to the exclusion of the Infraco.
- 5.6 Notwithstanding that as between the Infraco and the SDS Provider, the SDS Provider's right of determination of its engagement under the SDS Agreement or the Novation Agreement may not have arisen the provisions of clause 5.5 shall nevertheless apply if **tie** gives written notice to the SDS Provider and the Infraco to that effect and **tie** complies with the requirements on its part under clause 5.4.
- 5.7 The SDS Provider does not need to be concerned or required to enquire whether, and shall be entitled to assume that, as between the Infraco and **tie**, the circumstances have occurred permitting **tie** to give notice under clause 5.6.
- 5.8 The SDS Provider acting in accordance with the provisions of this clause 5 shall not incur any liability to the Infraco.
- 5.9 Unless and until **tie** has given notice under this clause 5:

- 5.9.1 **tie** has no liability whatsoever to the SDS Provider in respect of amounts payable to the SDS Provider under the SDS Agreement or the Novation Agreement (except in relation to the sums referred to in Clause 8 of this Agreement); and
- 5.9.2 **tie** has no authority to issue any direction or instruction to the SDS Provider in relation to the performance of the SDS Provider's obligations under the SDS Agreement or the Novation Agreement.
- 5.10 Without prejudice to the provisions of clauses 5.1 to 5.9 inclusive, if prior to the service of any notice under clause 5.4 the SDS Provider is determined under the SDS Agreement and the Novation Agreement for any reason whatsoever the SDS Provider shall if required in writing so do to by **tie** no later than 12 weeks after the date of such determination forthwith enter into a new agreement with **tie** on the same terms as the SDS Agreement and the Novation Agreement, but with such revisions as **tie** and the SDS Provider may reasonably require to reflect altered circumstances and the fact that it is **tie** and not the Infraco employing the SDS Provider.

6. ASSIGNATION

- 6.1 The SDS Provider shall not assign, novate or otherwise transfer the whole or any part of this Agreement without the prior written agreement of **tie**.
- 6.2 **tie** shall be entitled to assign, novate or otherwise transfer the whole or any part of this Agreement:
- 6.2.1 to the Scottish Ministers or any local authority or other body with no worse financial standing than that of **tie** who, as a result of any Change in Law, takes over all or substantially all the functions of **tie**; or
- 6.2.2 to any other person whose obligations under this Agreement are unconditionally and irrevocably guaranteed (in a form reasonably acceptable to the SDS Provider) by **tie** or a person falling within clause 6.2.1; or
- 6.2.3 to CEC or Transport Edinburgh Limited; or
- 6.2.4 with the prior written consent of the SDS Provider (such consent not to be unreasonably withheld or delayed).
- 6.3 The SDS Provider undertakes to **tie** not to contend in any court proceedings under this Agreement that any person to whom **tie** assigns or has assigned its rights under this

Agreement or any of them in accordance with the foregoing provisions of this clause is to be precluded from recovering any loss resulting from any breach of this Agreement (whenever happening) by reason that such person is an assignee and not the original contracting party under this Agreement or by reason that **tie** is named under this Agreement or any intermediate assignee of **tie** escaped loss resulting from such breach by reason of the disposal of its interest in the same.

7. LIABILITY OF THE SDS PROVIDER

- 7.1 No provision of this Agreement is intended to exclude any obligation or liability which would otherwise be implied whether by law of contract, delict or otherwise.
- 7.2 The responsibility of the SDS Provider under this Agreement is not to be reduced or in any way released or limited by any enquiry or inspection by or on behalf of any person notwithstanding that such enquiry or inspection may give rise to a claim by **tie** against a third party.
- 7.3 The rights and benefits conferred upon **tie** by this Agreement are in addition to any other rights and remedies that **tie** may have against the SDS Provider including (without prejudice to the generality of the foregoing) any remedies in delict.
- 7.4 Subject to the other provisions of this Agreement, the liability of the SDS Provider to **tie** is to be determined in all respects in accordance with the terms of the SDS Agreement and the Novation Agreement and, in the event of any claim by **tie** under this Agreement, the SDS Provider shall be entitled to rely upon any defence, right, limitation or exclusion under the SDS Agreement or the Novation Agreement as though **tie** were named as Client under it, except that:
- 7.4.1 **tie** shall not be affected by any subsequent variation of the SDS Agreement which would adversely affect the obligations owed by SDS Provider or the waiver, compromise or withdrawal of any claim made by the Infraco; and
- 7.4.2 the SDS Provider shall not be entitled to exercise any right of set-off, retention or withholding against **tie** to which the SDS Provider may be entitled as against the Infraco.
- 7.5 The liability of the SDS Provider under this Agreement shall be no greater in extent than the liability of the SDS Provider under the SDS Agreement.

8. PAYMENT TO THE SDS PROVIDER IN RESPECT OF RETENTIONS AND REDUCTIONS IN THE SCOPE OF SERVICES

8.1 **tie** shall make payment of any sums which have been agreed to be due to the SDS Provider in accordance with Clause 12.7.3 and/or Clause 29.4 of the SDS Agreement, in the amounts and the timescales set out within these said Clauses and such payment shall be deemed to be in full and final settlement of any claims by SDS Provider.

9. ONGOING SCOPE OF SERVICES TO TIE

9.1 The SDS Provider undertakes to **tie** to perform and **tie** agrees to pay for the Services set out in the Schedule on behalf of **tie** as the Client in accordance with the terms of the SDS Agreement, and as if the Novation Agreement had not been entered into and:

9.1.1 in respect of Schedule Part 1 a lump sum of £103,744 is payable, together with any further payment due in respect of changes which will be valued in accordance with the Schedule or in accordance with the estimate for the change; or

9.1.2 in respect of Schedule Parts 2 and 3 at the rates set out in the Schedule,
and the Infraco acknowledges this.

10. CONSENT OF INFRACO

10.1 The Infraco consents to the terms of this Agreement.

11. NOTICES

11.1 Any notice required to be given under this Agreement is to be hand delivered or sent by prepaid registered or recorded delivery post to the party concerned at its address set out in this Agreement or to such other addresses as may be notified by such party for the purposes of this clause.

11.2 Any notice given pursuant to this clause, if sent by registered or recorded delivery, is deemed to have been received 48 hours after being posted.

12. RIGHTS OF THIRD PARTIES

12.1 A person who is not a party to this Agreement shall have no right to enforce any term of this Agreement.

13. INVALID TERMS

13.1 If any term of this Agreement shall be held to any extent to be invalid, unlawful or unenforceable

13.1.1 that term shall to that extent be deemed not to form part of this Agreement; and

13.1.2 the validity and enforceability of the remainder of this Agreement shall not be affected.

14. VARIATIONS AND WAIVERS TO BE IN WRITING

14.1 No variation, alteration or waiver of any of the provisions of this Agreement shall be effective unless it is in writing and signed by or on behalf of the Party against which the enforcement of such variation, alteration or waiver is sought.

15. WAIVER

15.1 Save where expressly stated, no failure or delay by either Party to exercise any right or remedy in connection with this Agreement shall operate as a waiver of it or of any other right or remedy nor shall any single or partial exercise preclude any further exercise of the same, or of some other right or remedy. A waiver of any breach of this Agreement shall not be deemed to be a waiver of any subsequent breach.

15.1.1 The Parties' rights and remedies under this Agreement are, except where provided otherwise in this Agreement, independent, cumulative and do not operate to exclude one another or any rights or remedies provided by law.

16. JURISDICTION AND LAW

16.1 This Agreement is governed by and is to be construed according to Scots law and the Scottish courts shall have jurisdiction in relation to all matters arising under it.

16.2 The Parties agree that any dispute in relation to this Agreement shall be conducted in accordance with Clause 28 (*Dispute Resolution Procedure*) of the SDS Agreement and the provisions of the said Clause 28 and Schedule 10 (*Panels to the Dispute Resolution Procedure*) are deemed to be incorporated mutatis mutandis in respect of this Agreement provided that any reference to "Parties" shall be deemed to refer to **tie** and the SDS Provider, any reference to "Client" shall be deemed to refer to **tie**, the reference to "Clause 36" shall mean Clause 11 of this Agreement.

IN WITNESS WHEREOF these presents on this and the preceding 10 pages together with the Schedule in 3 Parts and Appendix in 3 Parts which are annexed hereto are executed as follows:

EXECUTED for and on behalf of **PARSONS BRINCKERHOFF LIMITED**

at Edinburgh

on 14th May 2008 by:

Director/Authorised Signatory

Full Name

Witness Signature

Full Name

Address

[Redacted Signature]

STEPHEN CHRISTOPHER REMOIS

[Redacted Signature]

CHRISTOPHER IAN ATKIN

[Redacted] WILTON ROAD

LONDON, SW1.

EXECUTED for and on behalf of **TIE LIMITED** at Edinburgh

on 14th May 2008 by:

Authorised Signatory

Full Name

Witness Signature

Full Name

Address

[Redacted Signature]

WILLIAM CALLAGHER

[Redacted Signature]

ANDREW SUTHERLAND FITCHIE

DOY PIPEE, RUTLAND SQUARE,

EDINBURGH, EH1 2AA

EXECUTED for and on behalf of
BILFINGER BERGER UK LIMITED

at *Edinburgh*

on *14th May* 2008 by:

Director

[Redacted]

Full Name

GARY STEUB DALTON

Director

[Redacted]

Full Name

Kenneth John Dawson

EXECUTED for and on behalf of **SIEMENS
PLC**

at *EDINBURGH*

on *14 MAY* 2008 by:

Authorised Signatory

[Redacted]

Full Name

M. Roth

Authorised Signatory

[Redacted]

Full Name

M. ROTH

This is the Schedule referred to in the foregoing collateral warranty among Parsons Brinkerhoff Limited, tie, and the Infracore

SCHEDULE PART 1

SDS SCOPE OF SERVICES FOR TIE

Utilities Diversions

- 1 The SDS Provider shall provide technical and specialist assistance to tie with the management of the advanced utilities diversion programme being carried out under the Multi Utilities Diversion Framework Agreement. As **Appendix A** this shall include:
 - (a) assessing the need for and acquiring relevant data relating to the presence and location of all buried and above ground utility services;
 - (b) agreeing the need for and extent of diversions;
 - (c) undertaking critical design and developing a strategy for all utilities diversions to minimise diversion requirements and out-turn costs;
 - (d) preparing C4 cost schedules;
 - (e) activities required to support the utilities diversion process including, but not limited to, traffic management plans/traffic regulation orders (including temporary traffic regulation orders), site meetings and all necessary re-designs;
 - (f) design re-work/modifications on an as required basis to deal with unidentified diversions;
 - (g) construction support and on-site attendance at appropriate seniority on an as-required basis;
 - (h) attendance at all meetings at appropriate seniority on an as-required basis;
 - (i) production of utilities designs that are complete in all respects including input from statutory utilities, and fully and finally checked and coordinated by PB prior to issue to the contractor under the MUDFA Contract.

SCHEDULE PART 2
SDS SCOPE OF SERVICES FOR TIE
MANHOLES and SEWER WORKS

Utilities Diversions

- 1 The SDS Provider shall provide technical and specialist assistance to **tie** with the management of the advanced utilities Sewer diversion programme being carried out under the Multi Utilities Diversion Framework Agreement. This work shall be instructed as a change order in accordance with the change process and be in accordance with Clause 15 of the SDS Agreement. The work content is listed in **Appendix B**, this shall include:
- (a) assessing the need for and acquiring relevant data relating to the presence and location of all sewers and manholes;
 - (b) agreeing the need for and extent of sewer diversions;
 - (c) undertaking critical sewer design and developing a strategy to minimise associated diversion requirements and outturn costs
 - (d) provide on-site attendance at appropriate seniority on an as-required basis;
 - (e) provided adequate notice and information (previous minutes, Agenda etc) is provided by tie attendance at meetings at appropriate seniority on an as-required basis until sewer designs are completed.

SCHEDULE PART 3

SDS RETAINED SCOPE OF SERVICES FOR TIE

Utilities Diversions

1. The SDS Provider shall extend the duration of their provision of technical and specialist assistance to tie with the management of the advanced utilities diversion programme being carried out under the Multi Utilities Diversion Framework Agreement.

This work shall be carried out on a time and expense basis in accordance with the table of rates (as **Appendix C**) and shall include:

- (a) assessing the need for and acquiring relevant data relating to the presence and location of all buried and above ground utility services;
 - (b) agreeing the need for and extent of diversions;
 - (c) undertaking critical design and developing a strategy for all utilities diversions to minimise diversion requirements and out-turn costs;
 - (d) preparing C4 cost schedules;
 - (e) carry out design re-work/modifications/additional diversion designs on an as required basis to deal with unidentified services in a timely manner to avoid or minimise disruption to the ongoing programme of works;
 - (f) Provided adequate notice and information (objective of visit, identification/clarification of problem etc) is received from tie, provide appropriate on-site attendance on an as-required basis;
 - (g) Provided adequate notice and information (Previous Minutes, Agenda etc) is provided by tie attendance at meetings at appropriate seniority on an as-required basis;
 - (h) The timely production of utilities designs that are complete in all respects including input from statutory utilities, and fully and finally checked by the relevant utility and coordinated by PB prior to issue to the contractor under the MUDFA Contract
2. Parsons Brinckerhoff. shall provide all technical support (on and off site) required to address any utilities design issues arising from the works under the MUDFA Contract and including resolution by Parsons Brinckerhoff of all technical queries arising from use by the contractor under the MUDFA Contract of Parsons Brinckerhoff design in a proactive manner to

minimise disruption and delays to the progress of the works under the MUDFA Contract and the Edinburgh Tram Network installation works (The Infraco Works).

This work will be carried out on a time and expense basis in accordance with the table of rates (as **Appendix C**).

APPENDIX A

Section	Location Plates	Remarks
1A	plates 1-5	Forth Ports Agreement Drawings (for utility definition) to be instructed by tie. Road/kerb detail and alignments to be confirmed from Forth Ports Agreement such that telecomms designs (box details) may be confirmed. VE exercise being carried out by tie Management Team week commencing 6th May 2008. (tie to visit Chancelot Mills to agree route of power cables. (Note. These utilities running outside LOD)
1A	plates 6-10	Forth Ports Agreement Drawings (for utility definition) to be instructed by tie. Road/kerb detail and alignments to be confirmed from Forth Ports Agreement such that telecomms designs (box details) may be confirmed. Note. SDS utility IFA Drawings issued to SUC's on 8th Feb 2008. VE exercise being carried out by tie Management Team week commencing 6th May 2008. SDS await revised drawings from tie/Scottish Power.
1A	plates 11-12	Utilities being designed in accordance with bridge designs for Victoria Bridge and Tower Place Bridge. This work being carried out in line with Change CR278 for the bridge re-designs.
2A	plates 1-3	Drawings issued for approval on 14th April 2008. tie formal ROR not yet received. SDS working on unofficial ROR. IFC to be issued 17th May 2008.
6A	plates 1	SDS to issue IFC Drawings 7th May 2008
6	Gogar 800 main	SDS to issue IFC Drawings 9th May 2008
SDS CHANGE ORDER WORK for COMPLETION		
1A	plates 14/15	Change No CR 257. Original diversions carried out by MUDFA on plate 15. As-built drawings for plate 14 & 15 awaited from tie. This holding up the completion of work.
3A	Full Sub-section	CR325 SDS is instructed not to seek approvals to these designs. All Phase 1A utility designs to be procured prior to Phase 1B designs.
3B	Full Sub-section	CR325 SDS is instructed not to seek approvals to these designs. All Phase 1A utility designs to be procured prior to Phase 1B designs.
3C	Full Sub-section	CR325 SDS is instructed not to seek approvals to these designs. All Phase 1A utility designs to be procured prior to Phase 1B designs
5C	Edin Parl	CR 305 Edinburgh Park Private Utilities Relocation. Utilities being moved out of tramway path. IFC programmed for 24th May 2008.

APPENDIX B

MANHOLE/SEWER WORK for COMPLETION		
		See SDS letter ref ULE90130-SW-LET-01040 dated 17th April 2008. This letter identifies that the tie/MUDFA Sewer Survey Programme should have been complete by 28th February 2008. This survey work is still incomplete which has delayed the SDS delivery of sewer designs. The below programme of work is identified (by section) with proposed dates to completion on the basis of total manhole/sewer information being provided to SDS by 6th May 2008.
1A	Full Sub-section	Forth Ports Agreement Drawings (for utility definition) to be instructed by tie. Road/kerb detail and alignments to be confirmed from Forth Ports
1B	Full Sub-section	IFA Drawings issued to SW on 20th March 2008. Approval awaited from SW and tie. Commercial issue not allowing SW to approve drawings. Tie to resolve.
1C	Full Sub-section	IFA Drawings to be issued on 20th May 2008.
1D	Full Sub-section	IFA Drawings to be issued on 20th May 2008.
2A	Full Sub-section	IFA Drawings to be issued on 26th May 2008.
5A/5B/5C	Full Section	IFA Drawings to be issued 26th May 2008. Sewer diversion at A8 Underpass IFA to be issued early on 6th May 2008. One section of manhole information detail still info still required from tie for this drawing to be complete.
6	Full Sub-section	IFA Drawings to be issued 26th May 2008.
7A	Full Sub-section	IFA Drawings to be issued 7th June 2008.
3A/3B/3C	Full Section	CR325 SDS is instructed not to seek approvals to these designs. All Phase 1A utility designs to be procured prior to Phase 1B designs.

APPENDIX C

The table of rates for Retained Scope of Services for tie and the provision of technical and specialist services for utilities

TABLE OF RATES FOR RETAINED SCOPE OF SERVICES		
Reference	Role	Hourly Rate
GD	Graduate Designer	£55.00
SD	Senior Designer	£78.00
PD	Principal Designer	£95.00
GT	CAD Technician	£38.00
ST	Senior CAD Technician	£49.00
TS	Technical Support	£38.00

[Redacted Signature]

Director/Authorised Signatory
tie LIMITED

[Redacted Signature]

Director/Authorised Signatory
PARSONS BRINCKERHOFF LIMITED

[Redacted Signature]

Director/Authorised Signatory
BILFINGER BERGER UK LIMITED

[Redacted Signature]

Director/Authorised Signatory
SIEMENS PLC



**THIS IS SCHEDULE PART 25 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 25

SPARE PARTS

Part A - Infrastructure Spare Parts

SIEMENS

**ETN Infraco Maintenance
Initial Spare Parts Package**

Initial Spare parts for Traction Power System

Designation	Original Qty.	Qty. revised by Tie	unit	Price/unit in GBP	Total in GBP
PTC thermistor detector NAT=140°C, Trafo Winding Temp Alarm	2	2	pc	98,20	196,40
PTC thermistor detector NAT=160°C, Trafo Winding Temp Trip	2	2	pc	98,20	196,40
PTC thermistor detector NAT=230°C, Trafo Core Temp Trip	2	2	pc	98,20	196,40
Temperature relay, 3 sensor inputs and 3 CO contacts	1	1	pc	728,90	728,90
Cooling rail, 4 mountings SITRAS REC-D, black coated	1	1	pc	208,30	208,30
Heat sink SITRAS REC-D, black coated	2	2	pc	44,30	88,60
Semiconductor fuse 900V/1600A BKN/95	6	6	pc	84,90	509,40
Micro-switch for semiconductor fuse	2	2	pc	8,70	17,40
Capacitor 20µF 2150V MP (metallized-dielectric capacitor)	2	2	pc	65,90	131,80
Rectifier diode, repetitive peak reverse voltage V _{rrm} =2200V	6	6	pc	131,30	787,80
Vitreous enamel wirewound resistor 3 Ohm, +/-10%, WM 110	1	1	pc	54,40	54,40
Vitreous enamel wirewound resistor 3.9k Ohm, +/-10%, typ 500	2	2	pc	60,60	121,20
Thermostatic switch (NC) switch off 120°C, switch on >105°C, 10A	2	2	pc	74,30	148,60
Thermostatic switch (NC) switch off 135.5°C, switch on >120°C, 10A	2	2	pc	74,30	148,60
Position switch, open type with normal stroke, slow-action contacts	4	4	pc	45,80	183,20
Diode-module EMG22-DIO4E	1	1	pc	2.314,90	2.314,90
SITRAS DPU96 VD voltage divider, inputs: 1000-2000-4000 V	1	1	pc	177,80	177,80
Simatic C7-635 touch, compact unit	1	1	pc	509,40	509,40
Simatic DP, interface module IM151 basic for ET200S	2	2	pc	11,40	22,80
SIMATIC DP, IM151-7 CPU for ET200S, 48 KB working memory	2	2	pc	6,50	13,00
SIMATIC DP, power module PME for ET200S, DC 24 V	3	3	pc	29,90	89,70
SIMATIC DP, terminal module TM-P15S23-A1 for ET200S	1	1	pc	108,00	108,00
SIMATIC DP, 5 terminal modules TM-E15S23-01 for ET200S	1	1	pc	146,30	146,30
SIMATIC DP, 5 electron. Modules for ET200S, 4 DI, DC 24V	1	1	pc	153,20	153,20
Optical link module OLM/G11	2	2	pc	346,30	692,60
Optical link module OLM/G12	2	2	pc	411,20	822,40
DP/DP coupler	1	1	pc	277,20	277,20
Isolator	1	1	pc	26,30	26,30
Temperature controller, AC/DC 110-265V 50 / 60 Hz	1	1	pc	13,20	13,20
heater unit with convection for cubicles power 60W	1	1	pc	22,50	22,50
Voltage relay	1	1	pc	217,20	217,20
Digital protective unit SITRAS DPU96 PU, central equipment	1	1	pc	3.162,90	3.162,90
Digital protective unit SITRAS DPU96 FC, contr. section feeder	1	1	pc	832,40	832,40
Digital protective unit SITRAS DPU96 FC, intertripping	1	1	pc	124,90	124,90
Digital protective unit SITRAS DPU96 FC, time synchronisation	1	1	pc	124,90	124,90
Simatic outdoor load power supply PS 305	1	1	pc	215,10	215,10
Plug-in relay, 4 CO contacts, 24V DC, 5A with freewheeling diode/LED	10	10	pc	3,40	34,00
Plug-in relay, 4 CO contacts, 110V DC, 5A with freewheeling diode/LED	5	5	pc	3,40	17,00
Contacter Relay 44E EN50011	3	3	pc	39,70	119,10
Moving coil instrument for DC, class 1,5 for transducer, 0...10 V	1	1	pc	28,10	28,10
Moving coil instrument for DC, class 1,5, +/-10 V, 0..10 V, test voltage 3 kV	3	3	pc	35,00	105,00
Moving coil instrument for DC, class 1,5, for shunt connection 60 mV, 0...90 mV, test voltage 3 kV,	3	3	pc	37,10	111,30
Summator 24VDC, 6 digits, latch fastener, 25Imp/s	3	3	pc	31,10	93,30
High speed DC circuit breaker, 4500 A, rated voltage max. 1 kV	1	1	pc	8.947,80	8.947,80
Mechanical manual emergency tripping,	1	1	pc	99,90	99,90
Change-over disconnecter, 2-pole, DC 1200 V	1	1	pc	2.064,50	2.064,50
Disconnecter, 2-pole, DC 1200 V, rated current DC 3750 A	1	1	pc	2.064,50	2.064,50
Blocking magnet, type TGN17, for DC operation voltage	1	1	pc	527,30	527,30
Motor drive, size 2	1	1	pc	1.398,50	1.398,50
Auxiliary contact, type ET20, slow-action contact, 2NO	4	4	pc	53,40	213,60
Auxiliary contact, type ETS11	2	2	pc	88,10	176,20
Disconnecter, 1-pole, DC 3600 V, rated current DC 5300 A	1	1	pc	1.519,40	1.519,40
Motor drive, size 1C	1	1	pc	1.285,40	1.285,40

Disconnecter, 2-pole, DC 3600 V, rated current DC 5300 A	1	1	pc	2.812,60	2.812,60
Resistance, 750 V, 50 Ohm	1	1	pc	114,20	114,20
Shunt 10.000A/60mV	1	1	pc	675,70	675,70
Shunt 6000A/60mV	1	1	pc	393,40	393,40
Wire wound resistance 200 W, 80 Ohm +/- 10%, adjustable	1	1	pc	19,80	19,80
Shunt 1000 A / 150 mV	1	1	pc	79,10	79,10
DC-transducer type VariTrans,	1	1	pc	110,90	110,90
SITRAS DPU96 BA Buffer amplifier	1	1	pc	749,10	749,10
Control cable set, halogen free, flexible, 6x2,5 mm ² , 41x1,5 mm ² , on one side with 30-pole plug, length 2320 mm	1	1	set	237,70	237,70
Optical fibre cable with plug, cable connector length 3,5 m	2	2	set	59,90	119,80
Surge arrester in plastic housing for direct-current voltage use	1	1	pc	199,80	199,80
Lamp Oval-luminaire, plastic 1/GLS100W, E27, grey	5	5	pc	8,20	41,00
Power contacts for HSCB (fixed contact)	5	5	pc	224,70	1.123,50
Power contacts for HSCB (moving contact)	5	5	pc	101,50	507,50
Coil for HSCB (complete driving device)	1	1	pc	727,50	727,50
Arc chute for HSCB (type 81)	1	1	pc	1.306,80	1.306,80
SITRAS SCD firing module for short circuiting device	1	1	pc	91,40	91,40
SITRAS DPU96 VD voltage divider, inputs: 1000-2000-4000 V	1	1	pc	141,50	141,50
SIMATIC C7-613, compact unit with 4 line display	1	1	pc	834,80	834,80
SIMATIC Net, CP 342-5	1	1	pc	746,60	746,60
Simatic outdoor load power supply PS 307,	1	1	pc	147,30	147,30
Coupling relay, 2NO+2NC, DC 24 V, 0.7...1.25 x Us, size S00	2	2	pc	15,00	30,00
DC-contactor, list 549, type G800 neg., 1-pole, size C	2	2	pc	2.190,80	4.381,60
Shunt 4000 A / 60 mV	1	1	pc	183,10	183,10
DC-Transducer IsoAmp	1	1	pc	258,00	258,00
Buffer amplifier VariTrans A26038	1	1	pc	165,10	165,10
Measuring transducer AC / DC 650-2 A2	1	1	pc	216,20	216,20
Thyristor-assemble W1C-circuitry	1	1	pc	2.904,90	2.904,90
DEHNgap B/n	1	1	pc	63,80	63,80
D.C. fuse with trip-indicator,	2	2	pc	19,30	38,60
Total			GBP		52.010,30

As there is no final design up to now, given price might be changed after design freeze.
The given unit prices are only valid if ordering the complete package.

SIEMENS

**ETH Infraco Maintenance
Initial Spares Parts Package**

	Price for original qty:	Price for revised qty:
TPS	1,560,000	1,560,000
CHL	2,000,000	2,000,000
#CADA & Commc	1,000,000.00	1,400,000.00
Truck	1,175,000.00	1,100,000.00
#ignoring	1,100,000.00	1,100,000.00
Truckcom	1,100,000.00	1,200,000.00
Deval	1,100,000.00	1,100,000.00
TOTAL:	E 1,313,002.20	E 1,312,089.70

Part B - Tram Supplier Spare Parts

Item	Description	Assumed no. (per Tram)	Minimum Spares Holding	Price (per unit)	Total price (Minimum Spares Holding x Price per Unit)	Total price (Minimum Spares Holding x Price per Unit)
1	Motor bogie (complete)	3	4	182.118 €	728.473 €	£536.303
2	Trailer bogie (complete)	1	2	135.760 €	271.521 €	£199.894
3	Traction set including :	3	1	466.192 €	466.192 €	£343.210
	IGBT Traction inverter					
	Traction control unit ECON					
	Traction motors					
	Braking resistor					
	High speed circuit breaker					
	Water controllers			Included above		
4	Gearbox	12	6	24.548 €	147.290 €	£108.435
5	Brake actuator (for motor bogie)	12	6	6.167 €	37.004 €	£27.243
6	Brake actuator (for trailer bogie)	4	2	6.374 €	12.747 €	£9.385
7	Wheel sets (complete, for one motor bogie)	6	6	24.548 €	147.290 €	£108.435
8	Wheel sets (complete, for one trailer bogie)	2	2	32.055 €	64.110 €	£47.198
9	Wheel rims (1 set)	1 set	2	7.912 €	15.824 €	£11.650
10	Emergency coupler	2	2	9.009 €	18.017 €	£13.264
11	Pantograph	1	2	13.232 €	26.465 €	£19.483
12	Battery charger	1	1	19.799 €	19.799 €	£14.576
13	Battery	1	1	6.990 €	6.990 €	£5.146
14	High Voltage control box	3			Included in traction	Included in traction
15	Cab air conditioning unit	2	3	18.110 €	34.329 €	£39.997
16	Saloon heating and ventilation unit	3	2	27.330 €	54.661 €	£40.241
17	Tram control computer	1	1	62.076 €	62.076 €	£45.701
18	Brake pump / Central hidráulica	4	4	12.278 €	49.114 €	£36.158

Item	Description	Assumed no. (per Tram)	Minimum Spares Holding	Price (per unit)	Total price (Minimum Spares Holding x Price per Unit)	Total price (Minimum Spares Holding x Price per Unit)
19	Brake discs	16	16	2.059 €	32.944 €	£24.255
20	EVENT RECORDER	2	2	19.179 €	38.358 €	£38.739
21	Cab desk panel (without equipment) set	2	2	11.773 €	23.547 €	£17.335
22	Drivers seat	2	2	1.612 €	3.224 €	£2.404
23	Windscreen	2	8	4.186 €	13.488 €	£24.655
24	Door mechanism and leaf (double door)	10	5	10.175 €	50.875 €	£37.453
25	Door mechanism and leaf (single door)	4	2	8.593 €	17.186 €	£12.652
26	Saloon side window 1 set per tram	1 set	2	14.872 €	29.743 €	£21.897
27	Body front skirt (2 sets)	2 sets	8	3.257 €	19.541 €	£14.386
28	Body side skirts (2 sets)	2 sets	6	18.030 €	108.182 €	£79.643
29	Passenger seat unit (1 set per tram)	1 set	0	62.165 €	15.541 €	£11.441
30	Passenger seat equab (1 set per tram)	1 set	1	28.648 €	28.648 €	£21.091
31	Handrails (1 set)	1 set	1	13.752 €	6.876 €	£5.062
32	Cameras (1 set)	1 set	1	39.808 €	39.808 €	£39.307
33	Passenger Display unit (interior) (1 set)	1 set	2	25.700 €	51.400 €	£37.840
34	Passenger Display unit (exterior) (1 set)	1 set	2	6.853 €	13.706 €	£10.090
35	Complete Articulation assembly	5	3	22.349 €	67.048 €	£49.360
36	Swing units (1 set)	1 set	1	10.361 €	10.361 €	£7.628
37	Suspension arms (1 set)	1 set	1	27.013 €	27.013 €	£19.887
38	Energy absorption device (2 sets)	2 sets	2	18.394 €	36.788 €	£27.083
39	Flange Lubrication System	1 set	1	1.214 €	1.214 €	£893
40	Cab Front Shell Moulding	2	2	14.468 €	28.936 €	£21.302
41	Under-run Guard	2	2	6.785 €	13.570 €	£9.990
42	Exterior Lighting Units		2	6.185 €	12.369 €	£9.106

Item	Description	Assumed no. (per Tram)	Minimum Spares Holding	Price (per unit)	Total price (Minimum Spares Holding x Price per Unit)	Total price (Minimum Spares Holding x Price per Unit)
43	Axle End Earthing Brush Units complete		4	3.394 €	13.576 €	£9.994
44	Speed Probes		1	1.885 €	1.885 €	£1.381
45	Roof Equipment Set of cases complete with fittings		0	To be defined	To be defined	To be defined
46	Cab Sun Blind	2	2	128 €	257 €	£189
47	Swan-neck cab microphone		4	342 €	1.368 €	£1.007
48	Electro-magnetic track brake unit complete		4	9.423 €	37.691 €	£27.748
49	Cab door complete with fittings		2	613 €	1.227 €	£905
50	Interior lighting (covers)		1	7.387 €	7.387 €	£5.438
51	Pantograph head assembly		6	1.713 €	10.277 €	£7.566
52	Windscreen wiper arms complete		6	429 €	2.571 €	£1.895
53	Cab rear view camera		2	2.833 €	5.665 €	£4.171
	TOTAL				2.974.213 €	£2.189.615

Director/Authorised Signatory
TIE LIMITED

Director/Authorised Signatory
[INFRACO]



**THIS IS SCHEDULE PART 26 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 26

TIE OBLIGATIONS

No.	Description	Date
1	tie shall procure that the 2 storage tanks at Haymarket Depot are removed and the ground reinstated to a condition suitable for the carrying out of the Infraco Works by no later than the date shown in column 3 (Date).	15 October 2008
2	tie shall in relation to each building to be demolished as part of the Infraco Works, complete Stage 3 asbestos surveys by no later than the date shown in column 3 (Date).	In relation to each building, 4 weeks prior to the date for commencement of demolition shown on the Programme
3	tie shall procure power (the supply of electrical energy) so that it is available by the energisation dates for each Section as shown on the Programme to allow the Infraco to undertake and complete the commissioning of the Edinburgh Tram Network. Power will be supplied via the tram system sub stations and power supply infrastructure provided by Infraco.	Energisation dates shown on the Programme
4	<p>Upon 30 days written notice from Infraco, tie shall procure for the Infraco access to and occupation of, for an agreed period (no less than up to issue of Certificate of Service Commencement), the land (previously designated as the Leith tram depot site) and marked in red on the plan included in Schedule Part 31 at sheet 2a, version 5 entitled Ocean Terminal to Casino Square (Ocean Drive) 2 (the "Leith Depot Site").</p> <p>tie shall provide the Infraco with an exclusive sub-license to occupy a substantial area at the Leith Depot Site (and a non-exclusive right to use any other part thereof) upon any reasonable conditions tie may wish to impose, including any conditions required by the owner of the Leith Depot Site. In the event any such conditions are more restrictive or more onerous than the requirements of this Agreement the Infraco shall be entitled to any reasonable additional costs or other relief to be evaluated in accordance with Clause 65 (<i>Compensation Events</i>).</p> <p>The Infraco shall comply with such conditions during its occupation of the Leith Depot Site and shall vacate that land on expiry or termination of the license leaving it in the same conditions as at entry, removing all plant, equipment and materials used or stored there and taking all reasonable measures to carry out any necessary reinstatement.</p> <p>tie gives no undertaking or warranty as to the condition of the Leith Depot Site or its access or their fitness for the Infraco's purposes, nor does tie provide any undertaking regarding any extension to the agreed period of access and occupation.</p>	

5	tie shall provide office space to the SDS Provider in accordance with paragraphs 5.3, 6.1, 7.7 and 8.3 of Appendix 4 to the SDS Novation Agreement.	
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**THIS IS SCHEDULE PART 27 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 27

ASSET PROTECTION AGREEMENT AND BRIDGE AGREEMENT



(1) NETWORK RAIL INFRASTRUCTURE LIMITED

- and -

(2) TIE LIMITED

- and -

(3) CITY OF EDINBURGH COUNCIL

**ASSET PROTECTION
AGREEMENT**

relating to

Provisions in respect of the construction of a
light rail system known as the "Edinburgh
Tram Network"

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AGREEMENT

AMONG

- (1) **NETWORK RAIL INFRASTRUCTURE LIMITED** a company registered in England and Wales (company number 2904587) whose registered office is at 40 Melton Street, London NW1 2EE ("**Network Rail**");
- (2) **CITY OF EDINBURGH COUNCIL** the Local Authority for the said City constituted in terms of the Local Government etc. (Scotland) Act 1994 and having its principal offices at City Chambers, High Street, Edinburgh EH1 1YJ ("**CEC**"); and
- (3) **tie LIMITED** (company number SC230949) a wholly owned subsidiary of CEC, whose registered office is at City Chambers, High Street, Edinburgh EH1 1YJ ("**tie**") and its successors or assignees;

WHEREAS:

- (A) CEC promoted two private bills introduced to the Scottish Parliament on 29 January 2004, Edinburgh Tram (Line One) Bill ("**ETL1 Bill**") and Edinburgh Tram (Line Two) Bill ("**ETL2 Bill**") (collectively, the "**Bills**"). ETL1 Bill received royal assent on 8 May 2006 and ETL2 Bill received royal assent on 27 April 2006, each becoming Edinburgh Tram (Line One) Act 2006 ("**ETL1 Act**") and Edinburgh Tram (Line Two) Act 2006 ("**ETL2 Act**"), respectively (collectively, the "**Tram Acts**"). The tram lines form the proposed Edinburgh Tram Network
- (B) **tie** has been appointed by CEC and has delegated authority to act as agent for CEC in respect of the application for legal powers and the procurement of the funding, construction, commissioning, operation and maintenance of the Edinburgh Tram Network. **tie** wishes to procure the design and construction of the Works.
- (C) Network Rail is prepared to enter into the arrangements set out in this Agreement so as to facilitate the design and construction of the Works by or on behalf of **tie**.

IT IS AGREED as follows:**1. DEFINITIONS AND INTERPRETATION**

- 1.1 In this Agreement the following words and expressions shall have the following meanings unless the context requires otherwise:

"**Act**" means the Railways Act 1993;

"Adjudication Procedure" means that part of the Dispute Resolution Procedure set out in Schedule Part 9 (*Adjudication Procedure*);

"Affiliate" means in relation to any company:

- (a) a company which is either a holding company or a subsidiary of such company; or
- (b) a company which is a subsidiary of a holding company of which such company is also a subsidiary

and "holding company" and "subsidiary" shall have the respective meanings given to them in section 736 of the Companies Act 1985;

"Booked" means, in relation to any Possession, the registration of such Possession in Network Rail's Possession Planning System pursuant to Clause 8 (*Programming of Works and Obtaining Possessions*), subject to Network Rail's annual and quarterly planning processes and the other provisions of Part D of the Network Code;

"Bridge Agreements" means any agreement entered into between the Parties (or any of them) in respect of obligations as regards the railway bridges relevant to the Works;

"CDM Regulations" means the Construction (Design and Management) Regulations 2007;

"CEC/tie Cap" means four million five hundred thousand pounds sterling (£4,500,000);

"Checker" has the meaning ascribed to it in the Standards;

"Change in Law" means the coming into effect of:

- (a) any Act of Parliament or subordinate legislation, any exercise of the Royal Prerogative or any enforceable community right within the meaning of section 2 of the European Communities Act 1972 (by means of any enactment, revocation, repeal, amendment, alteration or otherwise); or
- (b) any applicable judgement of a relevant court of law which creates or changes a binding precedent;

"Change in Standards" means the coming into effect, in respect of each specific element of the Works, after such element of the Works has passed Stage Gate 4, of a Group Standard or of any amendment thereto, or of a Network Rail Standard or of any amendment thereto which, in either case, is related to safety and with which any Contractor is obliged to comply;

"Collateral Warranty" means a warranty from:

(a) the Infraco (as required pursuant to Clause 7.4.2) in favour of Network Rail in the form set out in Schedule Part 5 Part 1 (*Form of Infraco Collateral Warranty*); and/or

(b) each Contractor and Key Sub-Contractor (as required pursuant to Clause 7.4.2) in favour of Network Rail substantially in the form set out in Schedule Part 5 Part 2 (*Form of Collateral Warranty (non Infraco)*);

"Commencement Date" means the last date of execution of this Agreement;

"Competent Authority" means any local, national or supra-national agency, authority, department, inspectorate, minister, ministry, official, court, tribunal or public or statutory person (whether autonomous or not), whether of the United Kingdom or of the European Union, which has, in respect of this Agreement, jurisdiction over either of the Parties, any of the Contractors or the subject matter of this Agreement;

"Completion of the Works" means completion of the Works in accordance with the Works Requirements, the accepted drawings, agreed specification, Variations and design and Network Rail having certified to tie to that effect;

"Confidential Information" means, in relation to any Party ("**Provider**"), all information of a confidential nature relating to it or its Affiliates which is supplied by or on behalf of the Provider (whether before or after the Commencement Date), either in writing, orally or in any other form or which is obtained through observations made by the Party receiving such information and includes all analyses, compilations, notes, studies, memoranda and other documents which contain or otherwise reflect or are derived from such information, but excludes information which:

- (a) the Provider confirms in writing is not required to be treated as confidential;
or

- (b) the receiving Party can show was in its possession or known to it (by being in its use or being recorded in its files or computers or other recording media) prior to receipt from the Provider and was not previously acquired by the receiving Party from the Provider under an obligation of confidence; or
- (c) was developed by or for the receiving Party at any time independently of this Agreement;

"Contractor" means the Infraco and any person to whom a contract for the whole (or any part) of the design and construction of the Works is let and for whom **tie** or CEC is the employer;

"Contractor's Assurance Case" has the meaning ascribed to that term in Standard RT/LS/P/016;

"Control Period " means the a review period (normally 5 years) to which an access charges review by ORR pursuant to Schedule 4A of the Act relates (the terms "review period" and "access charges review" having the meanings given in said Schedule 4A);

"Defects Liability Period" means the period of 12 months after Completion of the Works;

"Depot Access Agreement" means any access agreement incorporating the Depot Access Conditions;

"Depot Access Conditions" means the National Depot Access Conditions (December Standard Scotland) (as amended from time to time) together with the Supplementary Depot Access Conditions applicable to the relevant depot the subject of the Works or any replacement of the same;

"Depot Change" means the procedure contained in part C of the Depot Access Conditions;

"Design Data" means all drawings, reports, documents, plans, software, formulae, calculations and other data whatsoever in any medium prepared by or on behalf of CEC, or **tie** relating to the design and construction of the Works;

"Direct Costs" means direct costs reasonably incurred by **tie**, Network Rail or CEC in relation to the Edinburgh Tram Network which, for the avoidance of doubt,

includes direct costs (including those arising from relevant Compensation Events (as defined in the Works Contract between tie and Infracore)) reasonably incurred in respect of the Works Contracts but excludes any loss of production, loss of profit, loss of revenue, loss of contracts or any indirect or consequential loss and any losses or liabilities under the Works Contracts which arise from provisions thereof not disclosed to Network Rail prior to the Commencement Date (and provided that in the case of direct costs of tie and CEC there shall be no double-counting);

"Direction" means any direction, requirement, instruction or rule legally binding on either of the Parties, and includes any modification, extension or replacement of any such direction, requirement, instruction or rule for the time being in force, but shall not include:

- (a) the exercise of a discretion under any contract or other obligation binding on the Party in question or the enforcement of any such contract or obligation; or
- (b) any direction issued by the ORR pursuant to section 16A of the Act;

"Dispute" means any dispute or difference of whatsoever nature arising under, out of, in connection with or in relation (in any manner whatsoever) to this Agreement;

"Dispute Resolution Procedure" means the procedure referred to in Clause 24 (*Dispute Resolution*);

"Edinburgh Tram Network" means Edinburgh Tram Line 1 and Edinburgh Tram Line 2 (or part thereof) or either of them, as may be amended from time to time together with any modification, line extension, spur, interconnection and any additional line which may be developed and implemented by CEC or by tie on instruction from CEC and as authorised by the Tram Acts;

"Environment Plan" has the meaning ascribed to it in International Standard ISO14001;

"Existing Asset Obligation" means any statutory or contractual obligation as at the Commencement Date for Network Rail to carry out works in relation to any land or asset owned by Network Rail;

"Force Majeure Event" means any of the following events (and any circumstance arising as a direct consequence of any of the following events):

- (a) an act of the public enemy or terrorists or war (declared or undeclared), threat of war, revolution, riot, insurrection, civil commotion, demonstration or sabotage;
- (b) acts of vandalism or accidental damage or destruction of machinery, equipment, track or other infrastructure;
- (c) natural disasters or phenomena, including extreme weather or environmental conditions (such as lightning, earthquake, hurricane, storm, fire, flood, drought or accumulation of snow or ice);
- (d) nuclear, chemical or biological contamination;
- (e) pressure waves caused by devices travelling at supersonic speeds;
- (f) discovery of fossils, antiquities or unexploded bombs; and/or
- (g) strike or other industrial action which is a single circumstance and which also is a strike or industrial action in sectors of the economy other than the railway industry;

"Freight Access Agreement" means any agreement entered into between Network Rail and an Operator for the movement of freight trains incorporating the Network Code;

"Functional Specification" means the functional specification for the Works as set out in Schedule Part 1 (*Functional Specification*);

"Good Industry Practice" means, in relation to the performance of any activity to which this standard is applied, the exercise of that degree of skill, diligence, prudence and foresight as would reasonably be expected from a skilled and competent person engaged in carrying out works or services of a similar scope, type, nature and complexity to the works or services being carried out, complying with all Legal Requirements and applicable British, European and International standards and published codes of practice;

"Group Standards" means:

- (a) technical standards to which railway assets or equipment used on or as part of the Network must conform; and

(b) operating procedures with which the operators of railway assets must comply, in each case as issued by the Rail Safety and Standards Board Limited and authorised pursuant to the Railway Group Standard Code;

"Infraco" means the infrastructure provider to be appointed or appointed by tie in relation to the Edinburgh Tram Network;

"Infrastructure Controller" means a person who controls railway infrastructure (having the meaning given to it in the Railways (Safety Case) Regulations 2000);

"Insolvent" in relation to any Party means:

- (a) such Party stopping or suspending or threatening to stop or suspend payment of all or a material part of its debts, or becoming unable to pay its debts, or being deemed unable to pay its debts under section 123(1) or (2) of the Insolvency Act 1986, except that in the interpretation of this paragraph section 123(1) of the Insolvency Act 1986 shall have the effect as if for "£750" there were substituted "£10,000";
- (b) any step being taken by any person with a view to the winding up of such Party or any person presenting a winding-up petition which is not dismissed within five Working Days;
- (c) a receiver, manager, administrative receiver or administrator being appointed in respect of such Party;
- (d) such Party ceasing or threatening to cease to carry on all or a material part of its business, except for the purpose of and followed by a reconstruction, amalgamation, reorganisation, merger or consolidation on terms approved by the other Party before that step is taken (which approval shall not be unreasonably withheld or delayed);
- (e) in the case of CEC, being sequestrated under the Bankruptcy (Scotland) Act 1985; or
- (f) any event occurring which, under the law of any relevant jurisdiction, has an analogous effect to any of the events listed above;

"Interest Rate" means 2% *per annum* above the base rate from time to time of HSBC Bank plc;

"Interfacing Project" means the Airdrie-Bathgate Railway and Linked Improvements Project, the Edinburgh to Glasgow Electrification Project and any Edinburgh to Glasgow Route Enhancements or maintenance and renewals activities on the Network adjacent to the areas of the Works notified to tie by the Commencement Date;

"Key Sub-Contractor" means any Sub-Contractor engaged in the Works in the fields of design, system integration, track installation, testing and commissioning, overhead line installation, ground stabilisation, telecoms and signalling or civils works;

"Land Compensation Limit" means ten thousand pounds sterling (£10,000);

"Land or Noise Claim" means a claim against Network Rail made for common law nuisance or pursuant to the Land Compensation Act 1973 or any regulation made pursuant to that Act (including the Noise Insulation (Railways and Other Guided Transport Systems) Regulations 1996) and which is attributable to the carrying out or completion of the Works or the subsequent operation of the completed Works as part of the Railway;

"Lease" means the lease to be entered into between CEC and Network Rail in respect of certain Network Rail Property within parts of the Edinburgh and Glasgow Line between Haymarket and Edinburgh Park for the purposes of the Edinburgh Tram Network ;

"Legal Requirement" means any of the following:

- (a) any enactment to the extent that it applies to that Party;
- (b) any regulation made by the Council or the Commission of the European Union to the extent that it applies to that Party or a decision taken by the Commission which is binding on that Party to the extent that it is so binding;
and
- (c) any interpretation of law, or finding, contained in any judgement given by a court or tribunal of competent jurisdiction in respect of which the period for

making an appeal has expired, which requires any legal requirement falling within paragraphs (a) or (b) above to have effect in a way which is different to that in which it previously had effect;

"Losses" means costs, claims, demands, losses, expenses, liabilities, damages or proceedings incurred by the relevant person;

"Mandatory Variation" means any change or variation to the Works Requirements necessitated by:

- (a) any Specific Change in Law; and/or
- (b) any Change in Standards for safety reasons;

"Minor Modification" means the partial closure of a station which is eligible to be treated as a minor modification in terms of sections 34 and 35 of the Railways Act 2005;

"Necessary Consents" means all approvals, permissions, consents, licences, certificates, registrations and authorisations (whether statutory or otherwise) which are required from time to time for the purposes of carrying out the Works, whether required in order to comply with any Legal Requirement or as a result of any rights of any third party, including the Network Rail Consents, consents in respect of any Regulated Change and any consents required from any third party to enter and remain upon that third party's land;

"Network" means the railway network of which Network Rail is the facility owner (as defined in section 17(6) of the Act);

"Network Code" means the document now known as the Network Code and formerly known as the Railtrack Track Access Conditions 1995;

"Network Licence" means the licence to operate the Network granted to Network Rail pursuant to section 8 of the Act;

"Network Operation Issue" means:

- (a) any Safety Critical Event;
- (b) any Operational Emergency;

- (c) any Legal Requirement;
- (d) any Direction of a Competent Authority;
- (e) any requirement of the Network Licence;
- (f) any contractual commitment of Network Rail existing on or prior to the Commencement Date (including under any Freight Access Agreement); or
- (g) any requirement to utilise the original copy held by a Contractor of any relevant approved engineering record, drawing or any other document in respect of the Network, which is immediately necessary to address an issue arising under any of paragraphs (a) to (f) above;

provided that in each case:

- (a) Network Rail acts reasonably (but in its sole discretion in respect of its statutory obligations or safety issues);
- (b) such issue affects or is affected by the Works; and
- (c) in the case of paragraph (f), Network Rail has used its reasonable endeavours to notify ~~tie~~ before the Commencement Date as to whether there are any such commitments which are likely to conflict with the Works;

"Network Rail Cap" means two hundred and sixty thousand pounds sterling (£260,000);

"Network Rail Consents" means those consents to be given by Network Rail as set out in part 1 of Schedule Part 4 (*Network Rail approvals, acceptances and consents*);

"Network Rail Costs" has the meaning given to that term in Schedule Part 6 (*Network Rail costs*);

"Network Rail Property" means any property belonging to Network Rail including property forming part of the Network, any railway infrastructure, station, depot, buildings, lands, works, apparatus and equipment belonging to Network Rail or a relevant associated company connected therewith and includes any land held or used by Network Rail, including any servitude or other property interest held or used by

Network Rail for the purposes of such railway, Network, or station, depot, buildings, lands, works, apparatus or equipment;

"Network Rail Requirements" means the Health and Safety Management of Third Party Projects (RT/LS/P/043) as may be updated from time to time, plus the further requirements specified in Schedule Part 3 (*Network Rail requirements*);

"Network Rail Standard" means a standards document (or the equivalent of such document) issued by Network Rail for its own use as amended by Network Rail from time to time in relation to the Network as a whole which applies to the performance of the Works under this Agreement;

"Operating Agreement" means the document to be entered into between Network Rail, CEC, tie and others relating to operational procedures to be adopted by the parties thereto in respect of the Network and the Edinburgh Tram Network

"Operational Emergency" means any situation or circumstance which Network Rail reasonably considers requires immediate or urgent action in order to maintain or restore the effective operation of the Network or any part of it;

"Operational Track" means the part of the Railway upon which train services operate in the vicinity of the Works;

"Operator" means an operator of passenger or freight trains which has entered into a Track Access Agreement or Freight Access Agreement (respectively) with Network Rail;

"ORR" means the Office of Rail Regulation established pursuant to section 15(1) of the Railways and Transport Safety Act 2003;

"Payment Period" means the period of up to 28 days (to be notified by Network Rail) commencing on the Commencement Date and each period of 28 days thereafter, provided that the length of the first and last such period in any Network Rail financial year may be varied by up to seven days on reasonable prior notice from Network Rail to tie;

"Plans" means the two plans contained in Schedule Part 8;

"Possession" means planned safety arrangements which control or prevent the normal movement of rail traffic on the Network between defined locations and for a pre-defined period (including any speed restriction);

"Possession Plan" means the plan agreed in accordance with Clause 8 (*Programming of Works and Obtaining Possessions*) as revised from time to time in accordance with Clause 8 (*Programming of Works and Obtaining Possessions*);

"PPA Indemnity" means an indemnity under Clause 9(2) or Clause 9(3) of the Protective Provisions Agreement;

"Premises" shall have the meaning given in the Lease;

"Procedures" shall have the meaning given to such term in the Operating Agreement, provided that the operational procedures to be agreed for the purposes of execution of the Operating Agreement under Clause 12.10.1 need only be those upon which agreement is reasonably required for the purposes of trial running of the Edinburgh Tram Network;

"Proposal for Depot Change" has the meaning ascribed to "Proposal for Change" in the Depot Access Conditions;

"Proposal for Station Change" has the meaning ascribed to "Proposal for Change" in the Station Access Conditions;

"Protective Provisions Agreement" means the agreement in respect of the Edinburgh Tram Network among tie, CEC and Network Rail dated 17th and 21st June 2005 (as amended by Supplemental Agreement dated on or about the date of this Agreement);

"Quality Plans" means the design quality assurance procedures and the works quality assurance plan, each as referred to in the Standards (subject to Clause 7.2.2.2);

"Railway" means the Network and Network Rail's operation of it;

"Regulated Change" means any Depot Change, Minor Modification and/or Station Change, to the extent each is required in connection with the Works;

"Related Contracts" means in respect of the Edinburgh Tram Network, the agreements entered into or to be entered into in respect of *inter alia* the procurement, delivery, operation and maintenance thereof;

"Relief Event" has the meaning specified in Clause 14.1;

"Rules of the Route" has the meaning set out in the Network Code;

"Safety Case" means Network Rail's safety case, as amended from time to time (as defined in the Railways (Safety Case) Regulations 2000);

"Safety Critical Event" means risk to the health and safety of any individual or risk of damage or destruction to any Network Rail Property, or any incident which may reduce the safety integrity levels of any item of infrastructure;

"Safety Plan" means the documented management system by which the relevant Contractor demonstrates how it will conduct the Works in compliance with the relevant Contractor's Assurance Case and the requirements of this Agreement;

"Schedule" means the schedule in 10 Parts annexed to and forming part of this Agreement;

"Sector" means any one of the sectors A to N forming part of the Works and identified in Schedule Part 1 (*Functional Specification*);

"Sector Completion" means completion of a Sector in accordance with the Works Requirements, the accepted drawings, agreed specification, Variations and design (in each case as applicable to that Sector) and Network Rail having certified to **tie** to that effect;

"Services" means the services to be performed by or on behalf of Network Rail pursuant to this Agreement as set out in Schedule Part 2 (*Services to be provided by Network Rail*);

"Site" means any land forming part of the Network on which Works are to be carried out;

"Specific Change in Law" means any Change in Law which applies expressly to:

- (a) the railway industry, a particular section of the railway industry or the provision of services to the railway industry and not to other transport modes or industries including any changes to either Network Rail's Safety Case or tie's safety case or Standards required by any Change in Law; or
- (b) the Works or a Contractor and not to other works or other contractors

which in the case of paragraph (a) occurs in respect of each specific element of the Works, after the date that such element of the Works has achieved Stage Gate 4 and in the case of paragraph (b) occurs after the Works Commencement Date, and which in either case is not reasonably foreseeable as at such date;

"Stage Gate 4" means the approval stage reached following Network Rail's Guide to Railway Investment Projects when approval in principle is required, as may be amended from time to time;

"Standards" means Group Standards, Network Rail Standards and any equivalent standards or any standards replacing or superseding any of them;

"Station Access Agreement" means any access agreement incorporating the Station Access Conditions;

"Station Access Conditions" the National Station Access Conditions 1996 (Scotland) (as amended from time to time) together with the supplementary Station Access Conditions applicable to the relevant station, the subject of the Works or any replacement of the same;

"Station Change" means the procedures contained in Parts B and C (as applicable) of the Station Access Conditions;

"Station Works" means that part of the Works (if any) constituting Works to a station which Network Rail requires to be the subject of a lease;

"Sub-Contractor" means any contractor or consultant (including all Key Sub-Contractors) appointed by a Contractor with a third party for the design, construction, or design and construction of the Works or any part thereof;

"Taking into Use" means the act of taking into use of the Works or part thereof by Network Rail, and the taking out of use of other assets by Network Rail on the basis that Network Rail is satisfied that the assets in question have been inspected, tested and commissioned, as applicable, in accordance with the Works Requirements and the requirements set out in Clause 11 (*Completion of the Works and taking into use*) and **"Take Into Use"** and **"Taken Into Use"** shall be construed accordingly;

"Track Access Agreement" means any agreement entered into between Network Rail and an Operator for the movement of passenger trains incorporating the Network Code or any access option in relation to the movement of passenger trains on the Network;

"Tram Acts" has the meaning given to it in Recital (A);

"Variation" means any change or variation to the Works, the Services and/or the Project;

"Working Day" means any day (other than a Saturday or Sunday) on which banks are open for business in Glasgow and Edinburgh;

"Works" means the design and construction of the works described in the Functional Specification;

"Works Commencement Date" means the latest of:

- (a) the Commencement Date;
- (b) the date upon which all Necessary Consents (subject to any waivers agreed between the Parties) have been obtained;
- (c) the date of completion of any preliminary works required to be carried out by CEC pursuant to Clause 3.1;
- (d) the date on which all the requirements of Clauses 7.4 (other than Clauses 7.4.3 and 7.4.6 to 7.4.9) and 9.2.1 have been satisfied; and
- (e) the date of receipt of evidence confirming that CEC has taken out or has procured that tie has taken out the insurances required by Clause 16 (*Insurance*).

and the Parties agree that, for the purposes of paragraph (b) above, the requirement to obtain Necessary Consents in respect of the Regulated Change process is waived to the extent which will enable works commencement in respect of those Sectors which do not form part of the subject matter of the Regulated Change. Such Necessary Consents must be obtained prior to works commencement in respect of those Sectors which are the subject matter of the Regulated Change;

"**Works Contracts**" means the documents which form a contract between the or CEC and a Contractor in respect of the carrying out of the whole (or any part) of the design and construction of the Works;

"**Works Programme**" means the programme for the carrying out and completion of the Works to be approved by Network Rail in accordance with this Agreement; and

"**Works Requirements**" means the specification which sets out a description of the Works, the technical description of the new assets and Network Rail's requirements in respect of the Works, as set out in the document so entitled contained in Part 10 of the Schedule and the documents referred to by reference number therein, as amended from time to time in accordance with this Agreement.

- 1.2 In this Agreement, unless the context otherwise requires:
- 1.2.1 references to a statute, treaty or legislative provision or to a provision of it shall be construed, at any particular time, as including a reference to any modification, extension or re-enactment at any time then in force and to all subordinate legislation made from time to time under it;
 - 1.2.2 references to any agreement or document include its Schedules and Schedule Parts and attachments and references to "paragraphs", "Clauses", "recitals" or "Schedules" or "Schedule Parts" are references to such provisions or parts of this Agreement;
 - 1.2.3 references in the singular shall include references in the plural and *vice versa*, words denoting any gender shall include any other gender and words denoting natural persons shall include any other persons;
 - 1.2.4 headings are for ease of reference only and shall not be taken into consideration in the interpretation or construction of this Agreement;

- 1.2.5 references to an agreement, deed, instrument, licence, code or other document (including this Agreement), or to a provision contained in any of these, shall be construed, at the particular time, as a reference to it as it may then have been amended, varied, supplemented, modified, suspended, assigned or novated;
- 1.2.6 the words "include" and "including" are to be construed without limitation;
- 1.2.7 a reference to a "law" includes common or customary law and any constitution, decree, judgment, legislation, order, ordinance, regulation, statute, treaty or other legislative measure (and "lawful" and "unlawful" shall be construed accordingly);
- 1.2.8 a reference to a "**Party**" means a party to this Agreement and includes its successors in title, permitted assignees and permitted transferees and "**Parties**" shall be construed accordingly;
- 1.2.9 reference to a "person" includes any person, firm, body corporate, corporation, government, state or agency of a state or any association, trust or partnership (whether or not having separate legal personality) or two or more of the foregoing;
- 1.2.10 a "regulation" includes any regulation, rule or official directive of any governmental, intergovernmental or supranational body, agency, department or regulatory, self-regulatory or other authority or organisation;
- 1.2.11 a reference to "writing" includes a facsimile transmission and any means of reproducing words in a tangible and permanently visible form; and
- 1.2.12 the words in this Agreement shall bear their natural meaning.
- 1.3 Unless expressly stated to the contrary, any reference in this Agreement to the right of consent, approval or agreement shall be construed such that such consent, approval or agreements shall not be unreasonably delayed or withheld. The Parties acknowledge that:
- 1.3.1 the withholding or delaying of the giving of consent, approval or agreement by CEC or tie under this Agreement which would place Network Rail in breach of the law, the Network Licence or any Standard (subject to Clause 7.2.2.2) would be unreasonable;

- 1.3.2 nothing in this Agreement shall require Network Rail to give or procure the giving of any consent or approval which would be contrary to the protection, safety and efficient operation of the Railway and the safety of Network Rail Property or persons on or near the Railway; and
- 1.3.3 notwithstanding any other provision of this Agreement, in performing its obligations and exercising its rights under this Agreement Network Rail shall retain sole discretion in relation to safety issues.

2. REGULATED CHANGE

- 2.1 Where it is identified that Necessary Consents are required, the Parties shall discuss and agree who is to undertake them.
- 2.2 Prior to the Works Commencement Date CEC shall provide Network Rail with:
 - 2.2.1 a draft form of application for any Regulated Change which may be required in respect of the Works; and
 - 2.2.2 if relevant, a Proposal for Station Change and/or Depot Change (which for the avoidance of doubt shall make reference to all relevant consequential documentation required in respect of the Works, including any lease(s) of the sites of the Works) which may be required in respect of the Works,

for approval by Network Rail.
- 2.3 Where CEC is a party to a Track Access Agreement or Station Access Agreement, it shall be responsible for applying for any relevant Regulated Change unless otherwise agreed by Network Rail. If it is agreed that Network Rail shall apply for Regulated Change (or if CEC is not a party to a Track Access Agreement or Station Access Agreement), Network Rail shall administer:
 - 2.3.1 any application for Regulated Change in accordance with the procedure (if any) set out in the Network Code; and
 - 2.3.2 any Proposal for Station Change in accordance with the procedures set out in the Station Access Conditions and any Proposal for Depot Change in accordance with the procedures set out in the Depot Access Conditions,

subject to CEC having provided the documents referred to in Clause 2.2 and necessary supporting information required to enable Network Rail to effectively administer the application or proposal.

- 2.4 Network Rail shall not object to the Regulated Change in the formal procedure for approval of the same which Network Rail has approved under Clause 2.2.
- 2.5 Except to the extent that **tie** or CEC incurs Direct Costs as a result of the failure of Network Rail to comply with Clause 5.4, Network Rail shall have no liability whatsoever to **tie** or CEC if approval of the Regulated Change is not granted or is the subject of delay in being granted or for the terms upon which the same may be granted, provided that Network Rail shall be obliged to appeal against any decision in respect of Regulated Change if reasonably requested to do so by CEC.
- 2.6 CEC shall or shall procure that **tie** shall:
 - 2.6.1 reimburse Network Rail for any Losses reasonably incurred by Network Rail as a result of the implementation of any Regulated Change required in respect of the Works which are quantified prior to the Completion of the Works; and
 - 2.6.2 pay Network Rail an amount equal to Network Rail's reasonable estimate of any such Losses which are not so quantified.

3. GROUND MOVEMENT PRECAUTIONS AND PROTECTIVE WORKS

- 3.1 Prior to commencing construction of the Works, CEC shall take or procure that **tie** shall take all reasonable measures and carry out such protective works as may be reasonably specified by Network Rail as being necessary (subject to Clause 1.3.3):
 - 3.1.1 to protect the safety and continuity of the Railway;
 - 3.1.2 to protect Network Rail Property and Network Rail's works against instability or physical damage and the Operational Track against distortion arising from anticipated ground movement due to the construction of the Works; and/or
 - 3.1.3 to prevent, address, alleviate or comply with (as applicable) any Network Operation Issue.
- 3.2 CEC shall or shall procure that **tie** shall select such methods to be used for the execution of the Works as shall minimise ground movement so far as is reasonably

practicable during and after construction of the Works and avoid ground movement which would be anticipated to cause physical damage (other than damage of a superficial nature) to Network Rail Property and Network Rail's works.

- 3.3 If Network Rail or CEC reasonably apprehends that any ground consolidation works or the working of any mines or minerals is likely to cause damage to the Works or any adjoining Network Rail Property or Network Rail works by reason of subsidence or if such working causes damage to the Works or any such Network Rail Property or works, Network Rail and CEC (or tie acting on CEC's behalf) shall notify and consult with each other with a view to agreeing the measures necessary to be taken, before taking any steps to prevent, guard against or make good such damage.
- 3.4 At any time after the expiry of 15 Working Days of the issue of any notice under Clause 3.3, Network Rail may take such steps to prevent, guard against, limit or make good damage to the Works or Network Rail Property or works as Network Rail considers necessary for the protection and safety of the Railway.
- 3.5 Notwithstanding Clause 3.3, if Network Rail reasonably considers (subject to Clause 1.3.3) that immediate measures must be taken for the protection and safety of the Railway, it may take such measures without prior consultation with or notice to tie or CEC.
- 3.6 CEC shall or shall procure that tie shall reimburse Network Rail in respect of all Losses reasonably incurred by Network Rail in carrying out any measures agreed between Network Rail and CEC or considered necessary by Network Rail in accordance with the preceding provisions of this Clause 3 (*Ground Movement Precautions and Protective Works*) which Network Rail would not otherwise have incurred (unless Clause 13.10.2 applies), provided that neither tie nor CEC shall be liable to Network Rail for such Losses incurred in respect of measures taken under Clause 3.5 where and to the extent that the measures are determined to have not been necessary under the Dispute Resolution Procedure.

4. ACCESS TO THE NETWORK

4.1 Prior to the Works Commencement Date Network Rail shall provide CEC, its agents and employees (including **tie**) with reasonable access to areas of land in which Network Rail has an interest (subject to Clause 4.3 and Clause 4.4) solely for the purpose of:

- 4.1.1 carrying out site surveys relating to the Works and any protective works referred to in Clause 3.1;
- 4.1.2 carrying out a condition and defects survey using appropriate Sub-Contractors in respect of those parts of Network Rail Property which will not form part of the Premises (coloured pink on the Plans) in the joint names of CEC, **tie** and Network Rail at the cost of CEC or **tie**; and
- 4.1.3 the storage of materials on those areas notified by Network Rail to **tie** in writing prior to the Works Commencement Date (as may be varied by Network Rail in its absolute discretion from time to time).

Save as aforesaid neither **tie** nor CEC shall be allowed access to any land belonging to Network Rail for or in connection with the Works prior to the Works Commencement Date (except where **tie** and/or CEC already has access rights under the terms of an existing agreement).

4.2 From the Works Commencement Date until the earliest of:

- 4.2.1 the Completion of the Works (or in the case of a Sector, Sector Completion);
- 4.2.2 the date of abandonment of the Works; or
- 4.2.3 the termination of this Agreement;

Network Rail shall provide CEC, its agents and employees with access to areas of land in which it has an interest (subject to Clause 4.3 and Clause 4.4) for the purpose of carrying out the Works, provided that CEC shall in addition be entitled to continue to take such access for the purposes specified in Clause 11.7 and Clause 12 (*Ongoing Obligations in respect of the Works*).

- 4.3 The grant of any access by Network Rail is subject to:
- 4.3.1 CEC (or **tie** on CEC's behalf) first making prior arrangements with Network Rail (approval of such arrangements not to be unreasonably withheld or delayed); and
 - 4.3.2 CEC and **tie** complying with the Network Rail Requirements, any relevant Necessary Consents and any other conditions which Network Rail (acting reasonably, subject to Clauses 1.3.2 and 1.3.3) considers necessary to prevent, address, alleviate or comply with (as applicable) a Network Operation Issue.
- 4.4 Where any land in which Network Rail has an interest has been leased or licensed to a third party or is the subject of rights held by a third party, neither **tie** nor CEC shall be entitled to access pursuant to this Clause 4 until the written consent of the third party has been obtained by Network Rail (at the cost of CEC and **tie**). Network Rail shall liaise with any such third party with a view to procuring a right of access.
- 4.5 CEC (or **tie** on CEC's behalf) shall obtain Network Rail's prior written approval as to the nature and quantity of any plant, equipment and materials to be stored on the Network. The storage of such plant, equipment and materials shall be at the sole risk of CEC (and **tie** acting on CEC's behalf) and Network Rail shall have no liability to CEC or **tie** whether under this Agreement, in delict or howsoever arising in respect of any damage, theft or vandalism of such stored plant, equipment and materials. CEC shall or procure that **tie** shall take such security measures as Network Rail considers reasonably necessary to prevent such materials being used to vandalise the Railway.
- 4.6 Network Rail shall at all times have unlimited access to the land in which it has an interest for the purpose of monitoring the Works or as it may (acting reasonably, subject to Clause 1.3.3) consider necessary to prevent, address, alleviate or comply with (as applicable) a Network Operation Issue.
- 4.7 In exercising its rights under this Clause 4 Network Rail shall use its reasonable endeavours not to interfere, hinder or obstruct the carrying out of the Works by CEC, **tie**, its agents and employees. In exercising such rights Network Rail shall comply with any relevant safety requirements, rules and regulations in force from time to time as notified to Network Rail by **tie** or CEC.

5. OBLIGATIONS OF NETWORK RAIL

- 5.1 Network Rail shall at the cost of CEC make available to **tie** (acting on CEC's behalf), within a reasonable time, the data and information (except for data and information which is confidential or commercially sensitive or already in the public domain) which **tie** and/or CEC reasonably requires to carry out the Works. Where Network Rail is required by **tie** (acting on CEC's behalf) to provide **tie** with any information in relation to the design of the Works, it shall do so in good faith and shall notify **tie** of the status of the accuracy and completeness of such information on the date of delivery to the best of Network Rail's knowledge and belief.
- 5.2 If Network Rail determines subsequent to the date of delivery that such information was inaccurate or incomplete in any material respect, it shall promptly notify **tie** and shall use its reasonable endeavours to make any changes necessary to correct such inaccuracies or incompleteness. Notwithstanding the foregoing or any other provision in this Agreement, Network Rail does not warrant the accuracy or sufficiency of data and information provided to **tie** and/or CEC and **tie** and CEC shall be responsible for verifying the accuracy and assessing the sufficiency of all data and information provided.
- 5.3 Network Rail shall at the cost of CEC provide the Services to **tie** (acting on behalf of CEC).
- 5.4 Network Rail shall carry out or procure the carrying out of its obligations and the performance of the Services:
- 5.4.1 in accordance with Legal Requirements and such other statutory requirements and mandatory standards as may be applicable to the rail industry from time to time (including the Safety Case);
 - 5.4.2 in accordance with the terms of any Necessary Consents;
 - 5.4.3 in a timely, economic and efficient manner, having regard at any particular time to Network Rail's obligations, purposes and duties as operator, renewer, maintainer and developer of the Network;
 - 5.4.4 with that degree of skill, diligence and prudence which should be exercised by a skilled and experienced network operator and owner; and

5.4.5 in accordance with and subject to the terms of this Agreement.

The standards set out in Clauses 5.4.1 to 5.4.5 are in descending order of priority so that in the event of any conflict between two or more of such standards Network Rail's obligation will be to act in accordance with the standard listed higher above.

5.5 If Network Rail becomes aware of any matter which will prevent or impede it from performing the obligations on its part in this Agreement or will prevent or impede tie and/or CEC from carrying out the Works, Network Rail shall so notify tie promptly and in any event within five Working Days after becoming so aware.

6. NECESSARY CONSENTS AND DESIGN DATA

6.1 Network Rail shall act in good faith and in accordance with its Network Licence and its obligations as Infrastructure Controller and under the Network Code and Station Access Conditions (as appropriate) in considering in a timely manner CEC's applications for the Network Rail Consents. Network Rail shall use its reasonable endeavours to:

- 6.1.1 obtain or issue (as appropriate) the Network Rail Consents as soon as reasonably practicable; and
- 6.1.2 liaise with all relevant third parties to ensure, so far as practicable, that the Network Rail Consents are granted on reasonable terms.

Network Rail's obligation to use reasonable endeavours to obtain the Network Rail Consents is conditional upon Network Rail receiving in full the documentation and assistance it may reasonably require from tie and/or CEC.

6.2 Subject to the relevant lessee acting in good faith, Network Rail agrees to use its reasonable endeavours to negotiate, agree and (subject to the relevant parties reaching agreement on the terms and conditions) grant any leases of the sites of the relevant part of the Works.

6.3 CEC shall or shall procure that tie shall prepare a Works Programme for approval in accordance with Clause 8.2 and shall notify Network Rail not less than 25 Working Days prior to a Design Data submission, in line with the Works Programme, giving sufficient detail of the content of the submission and the amount of documentation to

be included with the submission for Network Rail to determine the resources required to carry out its obligations under this Clause 6.

- 6.4 On submitting Design Data CEC shall or shall procure that **tie** shall provide a list of the Standards, Legal Requirements and other guidance and codes of practice CEC and/or **tie** has complied with in preparing the Design Data.
- 6.5 CEC shall or shall procure that **tie** shall submit any further information, data and documents that Network Rail reasonably requires in order to determine whether Network Rail has a basis for raising comments or making objections to any element of Design Data in accordance with Clause 6.8.
- 6.6 Subject to Clause 6.7, if Network Rail fails to return any Design Data identified as on the Works Programme critical path within 25 Working Days from receipt of such Design Data (or within such longer period as is specified in Network Rail's programme for a complex approval), Network Rail will pay **tie** liquidated damages at the rate of £1,000 for each Working Day thereafter up to (but excluding) the date on which that Design Data is returned to CEC or **tie** (if, and to the extent that, the late return of such Design Data is shown to have delayed Completion of the Works).
- 6.7 Network Rail will not be liable to pay liquidated damages if:
- 6.7.1 CEC or **tie** have not complied with Clauses 6.3 to 6.5; or
- 6.7.2 the Design Data was not submitted in accordance with the detailed procedures and requirements notified by Network Rail to **tie** from time to time.
- 6.8 Network Rail may approve any element of Design Data subject to the inclusion of comments or withhold approval only if:
- 6.8.1 Network Rail reasonably believes that the relevant element of Design Data would (on the balance of probabilities) breach any Legal Requirement;
- 6.8.2 the relevant element of Design Data does not comply with the Functional Specification; and/or
- 6.8.3 the requirements specified in Clause 7.2.2, the Contractor's Assurance Case and/or contract-specific addendum related thereto are not being complied with;

- 6.8.4 Network Rail reasonably believes that the implementation of the relevant element of Design Data will result in non-compliance with **tie** or CEC's obligations under Clause 7 (*Obligations of tie/CEC*) and/or Clause 9 (*Carrying out of the Works*) or non-compliance with the Works Programme;
- 6.8.5 the implementation of the element of Design Data would limit, qualify or override or purport to limit, qualify or override any obligation, right or entitlement of Network Rail which arises by reason of:
- 6.8.5.1 any Network Licence condition; or
 - 6.8.5.2 the terms and conditions of any Track Access Agreement;
- 6.8.6 Network Rail reasonably believes that the designs submitted are unlikely to result in the Works carried out in accordance with such designs being Taken Into Use by Network Rail; and/or
- 6.8.7 insufficient information, data and/or documents have been provided to enable Network Rail to determine whether it has a legitimate basis for commenting or objecting.
- 6.9 If CEC, or **tie** on CEC's behalf, do not submit such information, data and documents in accordance with Clauses 6.3 to 6.5, Network Rail shall be entitled to comment on the Design Data on the basis of the information, data and documents which have been provided (without prejudice to Clause 6.8).
- 6.10 If Network Rail raises comments on any element of Design Data on its return or withholds approval of any element of Design Data, it shall state the ground(s) upon which such comments or the withholding of approval are based and shall provide the supporting evidence or other information where appropriate.
- 6.11 Any element of Design Data which is returned by Network Rail endorsed "Level 1 - Approved, work may proceed" shall be complied with or implemented (as the case may be) by CEC and **tie**. The endorsement "Level 1 - Approved, work may proceed" shall mean that the relevant element of Design Data is technically approved as defined in Group Standard GC/RT5101 and associated Network Rail Company Standard RT/E/P/02009.

- 6.12 Where Network Rail has endorsed any element of Design Data "Level 2 - Approved with comments, work may proceed subject to inclusion of comments", CEC (or **tie** on CEC's behalf) shall proceed to construct (or proceed to the next level of design of) the part of the Works to which the element of Design Data relates but shall take into account any amendments required by Network Rail in its comments. The means of achieving compliance with Network Rail's comments shall be documented and filed for later retrieval on request by Network Rail.
- 6.13 Where Network Rail has endorsed any element of Design Data "Level 3 - Not approved with minor comments, resubmit" or "Level 4 - Not approved with major comments, resubmit", neither **tie** nor CEC shall act upon the Design Data but CEC shall or shall procure that **tie** shall amend the element of Design Data in accordance with Network Rail's comments and resubmit the same to Network Rail. Network Rail (acting reasonably, subject to Clauses 1.3.2 and 1.3.3) shall determine whether the comments on any element of Design Data (taking into account individual comments, or the cumulative number of comments) are major or minor.
- 6.14 Where Network Rail has endorsed the element of Reviewable Design Data "Level 5 - Technical Approval not required", CEC shall, or shall procure that **tie** shall, submit the next element of Design Data in accordance with the Works Programme.
- 6.15 Following the return of Design Data, CEC shall, or shall procure that **tie** shall, amend the design criteria for the Works to take account of any comments properly made by Network Rail in respect of the relevant Works on such submission and submit further Design Data submissions to Network Rail as may be required by Network Rail.
- 6.16 CEC shall not authorise, and shall procure that **tie** shall not authorise, the commencement of the detailed design of the Works until the Design Data submission has been approved by Network Rail and the Works have been allocated a checking category.
- 6.17 Notwithstanding any approval, consent, comment or confirmation which Network Rail may be required to provide pursuant to this Agreement, the responsibility for the design and construction of the Works shall remain solely at the risk and cost of CEC (and **tie** acting on CEC's behalf) and Network Rail shall have no liability whatsoever, whether in contract, delict or otherwise for such design and construction or for any errors or omissions contained in the documents relating thereto.

7. OBLIGATIONS OF TIE/CEC

- 7.1 CEC shall procure, or shall ensure that tie shall procure, that each Contractor and Sub-Contractor meets the requirements of Network Rail's Link Up Accreditation for all relevant classes of work to be carried out by that Contractor. If so required by Network Rail at anytime, CEC shall, or shall procure that tie shall, demonstrate to Network Rail that such Contractor and/or Sub-Contractor (as the case may be) holds a certificate from Network Rail confirming that the Contractor and/or the Sub-Contractor (as the case may be) has a Contractor's Assurance Case.
- 7.2 CEC shall, or shall procure that tie shall, be responsible for designing and carrying out and completing the Works and shall:
- 7.2.1 exercise all reasonable skill, care and diligence to be expected of a prudent and competent person experienced and skilled in works of a similar size, scope and complexity as the Works;
 - 7.2.2 design, procure and carry out the Works in accordance with:
 - 7.2.2.1 all Legal Requirements;
 - 7.2.2.2 all Standards, in respect of each specific element of the Works, as at the date that such element of the Works pass Stage Gate 4 and any Change in Standards for safety reasons thereafter (without prejudice to Clause 13.10.1) or such derogations from the Standards as Network Rail and/or the relevant Competent Authority may approve or consent in writing and by expressly referring to it being aware that its approval or consent to the matter in question constitutes a derogation;
 - 7.2.2.3 all other relevant current British, European and international codes and standards;
 - 7.2.2.4 Network Rail's Requirements;
 - 7.2.2.5 all Necessary Consents and so as not to prejudice the renewal of any such Necessary Consents;

- 7.2.2.6 the requirements of any other consents, permissions, orders and approvals obtained in respect of the Works; and
- 7.2.2.7 the Safety Case;
- 7.2.3 design and carry out the Works in accordance with:
 - 7.2.3.1 such other conditions as Network Rail may reasonably consider necessary to prevent, address, alleviate or comply with (as applicable) a Network Operation Issue; and
 - 7.2.3.2 such other conditions as Network Rail may reasonably consider necessary relating to the efficiency, whole life cost and safety of the Works and the Railway;
- 7.2.4 ensure that the design of the Works is such as to enable construction of the Works in a manner which minimises disruption to the Railway and enables future construction or maintenance to be carried out on the Network constituting the Works (as far as reasonably possible) in a way which minimises costs and disruption to the Network; and
- 7.2.5 meet with Network Rail as reasonably required during the design and construction of the Works.
- 7.3 CEC shall, or shall procure that **tie** shall:
 - 7.3.1 prepare a Works Programme for approval in accordance with Clause 8.2;
 - 7.3.2 obtain Network Rail's prior written approval to the appointment of any CDM co-ordinator (as defined in the CDM Regulations), such approval not to be unreasonably withheld or delayed;
 - 7.3.3 not appoint a Contractor to provide design services without obtaining Network Rail's prior written approval, such approval not to be unreasonably withheld or delayed;
 - 7.3.4 prior to commencing the design or construction of the Works, procure that each relevant Contractor produces a Quality Plan, Environmental Plan, and a Safety Plan specific to the Works (as part of the requirements under the Contractor's Assurance Case);

- 7.3.5 obtain the prior approval of Network Rail (not to be unreasonably withheld or delayed) before appointing a Checker appropriate to the checking category allocated to the Works by CEC (or tie on CEC's behalf); and
 - 7.3.6 prepare (in accordance with any requirements which Network Rail may have and at the appropriate times within the design and construction processes) all the documentation required to enable Network Rail to make submissions for the Network Rail Consents and when necessary modify the design or construction processes to ensure that such consent is obtained and provide Network Rail with a copy of all such relevant documents so prepared.
- 7.4 CEC shall, or shall procure that tie shall:
- 7.4.1 supply drawings relevant to the Works to Network Rail for comment and approval in writing;
 - 7.4.2 procure that each Contractor and, where required by Network Rail, Key Sub-Contractor shall provide Network Rail with a Collateral Warranty for design and construction prior to the Works Commencement Date;
 - 7.4.3 procure the attendance of the Infracore on reasonable notice at all project meetings reasonably required between the Parties;
 - 7.4.4 supply to Network Rail copies of the approved drawings together with supporting design and check certificates and contract documents for Network Rail's use during the carrying out of the Works;
 - 7.4.5 satisfy itself in relation to the existence of any service media in the vicinity of the Works;
 - 7.4.6 in respect of any Sector after Sector Completion, without delay remove from and leave such completed Sector clear of all plant, equipment and materials not reasonably required for the purposes described in Clause 12 (*Ongoing Obligations in respect of the Works*) and maintain the completed Sector in a condition in accordance with this Agreement;
 - 7.4.7 ensure that, during the construction of the Works and thereafter until the date of entry under the Lease (without prejudice to CEC's obligations in respect thereof under the Lease), neither CEC, tie nor any Contractor or Sub-Contractor shall

interfere with the availability of suitable access and egress to and from Haymarket Depot for all necessary purposes at all times to the reasonable satisfaction of Network Rail;

- 7.4.8 not do or allow or permit or suffer anything to be done by CEC, **tie** or any Contractor or Sub-Contractor which would adversely affect the continuous operation of train fuelling equipment and fuel tanks at Haymarket Depot and ensure that during the construction of the Works and thereafter until the date of entry under the Lease (without prejudice to CEC's obligations in respect thereof under the Lease), neither CEC, **tie** nor any Contractor or Sub-Contractor shall interfere with the safe and suitable access to such equipment and fuel tanks for all necessary purposes at all times to the reasonable satisfaction of Network Rail;
- 7.4.9 ensure that all elements of the Works which relate to new or existing overbridges and underbridges, including footbridges, will comply with the Standards (subject to Clause 7.2.2.2) and the requirements of Her Majesty's Railway Inspectorate; and
- 7.4.10 carry out prior to the commencement of the Works a condition and defects survey as referred to in Clause 4.1.2 at the cost of CEC or **tie**.
- 7.5 CEC shall pay and keep Network Rail indemnified against all rates, taxes and all assessments (to the extent that CEC have been able to verify the basis upon which they are assessable) and outgoings at any time from the Commencement Date until the date of entry under the Lease chargeable against the owner or occupier of the areas of land to which Network Rail have provided access pursuant to Clause 4 (*Access to the Network*) while the same are occupied by or on behalf of CEC or **tie** or any Contractor or used pursuant to Clause 12.10;
- 7.6 Without prejudice to CEC's obligations under the Lease, Network Rail confirms to CEC and **tie** that it shall not (unless by way of a Variation) instruct or require CEC or **tie** to undertake any works in respect of clearing contamination or improving the current state of the land which will form the Premises and other land to be used in carrying out the Works, save to the extent that such works are necessary (a) to deliver the desired functionality in relation to the Edinburgh Tram Network or (b) to clear contamination which arises as a consequence of the carrying out of the Works.

8. PROGRAMMING OF WORKS AND OBTAINING POSSESSIONS

- 8.1 The Parties shall co-operate as set out in this Clause 8 in the planning and development of a Works Programme, including the utilisation of Possessions to facilitate both the safe and efficient execution of the Works and the safe and efficient operation of the Network.
- 8.2 Prior to the Works Commencement Date CEC shall or shall procure that **tie** shall submit a detailed programme for such Works for approval in principle by Network Rail. Such programme shall include:
- 8.2.1 all submission dates for approval of Design Data;
 - 8.2.2 submission dates for work package plans;
 - 8.2.3 an initial proposed Possessions Plan;
 - 8.2.4 details of all survey works;
 - 8.2.5 Works inspection and testing plans;
 - 8.2.6 taking into use and commissioning plans;
 - 8.2.7 details of any Interfacing Projects; and
 - 8.2.8 identification of the critical path activities.
- 8.3 If a Works Programme is not sufficiently developed prior to the Works Commencement Date for approval, CEC will, or shall procure that **tie** will, as soon as reasonably practicable submit a Works Programme in compliance with Clause 8.2 and Network Rail shall review such Works Programme within 20 Working Days from receipt.
- 8.4 If Network Rail does not approve the proposed Works Programme or any section of it pursuant to Clause 8.2, CEC shall or shall procure that **tie** shall consult further with Network Rail and submit a revised proposed Works Programme for approval by Network Rail.
- 8.5 CEC shall or shall procure that **tie** shall consult with Network Rail regarding the availability of Possessions. Network Rail shall notify **tie** on the programming

implications of Possessions required to carry out the Works together with the cost implications of Possessions in respect of compensation and penalty payments rates payable by Network Rail under any relevant Track Access Agreement and/or Freight Access Agreement.

- 8.6 CEC shall and shall procure that tie shall minimise the disruptive possessions requirements in consultation with Network Rail. Once a proposed Possession Plan is established, Network Rail will undertake consultation on behalf of CEC in accordance with Part D of the Network Code to gain approval for the relevant Possessions. Network Rail's obligations under Clauses 8.7 to 8.10 (inclusive) shall be subject at all times to its compliance with its obligations under the Network Code and any relevant Track Access Agreement and/or Freight Access Agreement.
- 8.7 Network Rail shall use all reasonable endeavours to obtain and make available to CEC the Possessions necessary in order to carry out the Works in accordance with the Works Programme (subject and without prejudice to Network Rail's requirements in respect of the timing of applications therefor).
- 8.8 For stand-alone disruptive possessions Network Rail shall review the Possessions requirements and, subject to the availability of such Possessions, shall consult with relevant Operators by formally proposing an update or supplement to the Rules of the Route, as appropriate. Following the relevant timescales for consultation and having received no adverse comments from Operators, Network Rail shall enter the Possession in the Possession Planning System and give it a confirmed reference number, and shall add the Possession to the relevant version of the Rules of the Route and subsequently enter it into the confirmed period possession plan.
- 8.9 For disruptive Possessions linked to an Interfacing Project ("piggy-back" possessions) Network Rail shall establish whether the Possessions already planned for site activities in relation to the Interfacing Project are potentially compatible with the further separate site activities proposed by CEC (provided, for the avoidance of doubt, that if a Possession previously planned in relation to an Interfacing Project is no longer required for such Interfacing Project, but is required for site activities proposed by CEC, CEC shall be liable for the Possessions-Related Costs (as defined in Schedule Part 6) in respect of that Possession).

- 8.10 Where proposed Possessions are confined to periods when there is no scheduled train service, Network Rail shall enter such Possessions into the Possession Planning System.
- 8.11 Network Rail shall keep **tie** advised of the progress of the procedures referred to in Clauses 8.8 to 8.10 (inclusive) and in particular shall advise **tie** as soon as reasonably practicable of any objections to the overall programme of Possessions in which any affected Operator persists and in the light of which CEC may wish to revise the Works specification or intended method of working or to revise the Possessions Plan.
- 8.12 Within 20 Working Days after completion of the consultation on the proposed Possessions Plan, Network Rail shall confirm in writing to **tie**:
- 8.12.1 that the relevant Possessions have been obtained, whereupon the Possessions Plan shall be deemed to be agreed and the Possessions shall be deemed to be Booked; or
- 8.12.2 that the relevant Possessions have not been obtained, in which case Network Rail shall furnish **tie** with details where the Possessions Plan and as a consequence the Works Programme or any section of it has not been approved and a supporting analysis (including as to the merits of bringing an appeal), following which CEC (or **tie** on CEC's behalf) shall consult further with Network Rail and submit a revised proposed Works Programme for approval by Network Rail.
- 8.13 CEC shall, or shall procure that **tie** shall, make the detailed arrangements for the Possessions, their management, interface with Interfacing Projects and the procurement of all necessary resources to facilitate their availability to the Contractor. CEC shall, or shall procure that **tie** shall, attend all relevant planning meetings, including train movements meetings for the approved Possessions.
- 8.14 **tie** and CEC shall furnish such further details and information in respect of the planning and programming thereof as Network Rail may reasonably require at any time during the carrying out of the Works.
- 8.15 Network Rail and CEC (or **tie** on CEC's behalf) shall jointly review the approved Works Programme from time to time and shall agree what (if any) action needs to be taken in order to achieve the agreed dates for Possessions and the completion of the Works or any part thereof. If in the reasonable opinion of Network Rail the actual

progress of the Works or any part thereof does not conform to the approved Works Programme or the Booked Possessions dates for the relevant part of the Works are unlikely to be achieved, CEC shall, or shall procure that tie shall, (if Network Rail so requires) produce a revised programme (subject to the approval of Network Rail where the revisions are material) in order to achieve the agreed Possession dates and to ensure completion of the Works or the relevant part thereof.

8.16 If:

8.16.1 Network Rail and CEC (or tie on behalf of CEC) agree pursuant to Clause 8.15 that the agreed dates for Possessions cannot be achieved; or

8.16.2 Network Rail fails to make available (or cancels) any Possession

CEC (or tie on CEC's behalf) shall consult with Network Rail regarding the availability of further Possessions and submit a revised Works Programme for approval. When the relevant Possessions have been obtained, Network Rail shall revise the Possessions Plan accordingly.

8.17 The provisions of Clauses 8.2 to 8.12 (inclusive) shall apply *mutatis mutandis* to any revised programme submitted for approval, provided that CEC and tie shall act with expedition in respect of further consultation with Network Rail and the submission of any further revisions.

8.18 CEC and tie recognise in relation to any Possessions not forming part of the Possessions Plan that:

8.18.1 the availability of such Possessions is confined to periods when there is no scheduled train service, unless (by exception) longer periods can be made available; and

8.18.2 in the event of any additional Possessions not being available, the Works Programme may require revision.

8.19 Network Rail shall give tie as much notice as is reasonably practicable in respect of any cancellation or alteration of any Booked Possession in order to enable CEC, tie, and each Contractor to minimise or mitigate any wasted costs. Network Rail shall provide to tie the reasons for any cancellation or alteration. If as a result of a

cancellation or alteration of a Possession any additional Possession shall be required, Clause 8.16 shall apply.

8.20 If Network Rail cancels or alters a Booked Possession, Network Rail shall compensate **tie** and/or CEC in accordance with Clause 14 (*Compensation and Relief*).

9. CARRYING OUT OF THE WORKS

9.1 CEC shall not, and shall procure that **tie** shall not, instruct commencement of construction of the Works prior to the Works Commencement Date.

9.2 CEC shall be responsible for construction of the Works at its own risk and cost and shall, or shall procure that **tie** shall:

9.2.1 obtain Network Rail's prior written approval to the Works Programme and method statement for the carrying out and completion of the Works and the movement of materials, plant and equipment on or near the Railway (not to be unreasonably withheld or delayed, save that Network Rail's decision shall be final where its approval is withheld in order to prevent, address, alleviate or comply (as applicable) with a Network Operation Issue);

9.2.2 prior to commencing construction of the Works obtain all Necessary Consents required for the carrying out and Completion of the Works, forward copies of all such approvals to Network Rail and obtain a written acknowledgement of receipt of the same from Network Rail, provided that in the case of the Regulated Change only, CEC shall be entitled to commence construction of the Works which are the subject of the Regulated Change (but without prejudice to the general obligation to obtain the Regulated Change and provided that the Network Rail Consents have first been obtained) if:

9.2.2.1 the application for Regulated Change has been notified to all relevant third parties in accordance with the Network Code and/or Station Access Conditions (as the case may be);

9.2.2.2 all relevant third parties have agreed to the Regulated Change subject to them receiving (where applicable) adequate compensation; and

9.2.2.3 in the case of Station Change only, where a lease of any part of the Works is to be granted to a person other than CEC, then either:

- (a) such person or another person has unconditionally and irrevocably agreed in writing to pay Network Rail an additional "Long Term Charge" (as defined in the Station Access Conditions); or
- (b) CEC agrees to indemnify Network Rail against all costs of repairing, maintaining, replacing, renewing and operating the Works if and to the extent that Network Rail is unable to recover such costs by virtue of an adjustment to relevant access charges as a consequence of the implementation of an access charges review (as defined in the Act); and

9.2.2.4 the relevant period for objection to the Regulated Change has expired in accordance with the documents described in Clause 9.2.2.1 above;

and (where the application for Regulated Change has been made by CEC) CEC shall provide Network Rail with written evidence of the matters referred to in Clauses 9.2.2.1 to 9.2.2.3 above;

- 9.2.3 take all steps to ensure that the Works are carried out to minimise disruption to the Railway and any third party using or with an interest in or a right over any part of the Railway or any other land and buildings affected by the Works;
- 9.2.4 establish and maintain a robust procedure to ensure safe access for all personnel to the Railway in connection with the Works which recognises the existing points of emergency access to the Railway;
- 9.2.5 submit in writing for Network Rail's approval (such approval not to be unreasonably withheld or delayed) all its proposals for the provision of personnel to supervise possessions or site works;
- 9.2.6 not interfere (and ensure that no Contractor interferes) with existing points of emergency access to the Network without the prior written agreement of Network Rail;

- 9.2.7 immediately take all action required by Network Rail pursuant to Clause 10.2;
- 9.2.8 carry out the Works with all reasonable dispatch at times and in such a way as to minimise insofar as is reasonably practicable any interference with the traffic operating on the Network;
- 9.2.9 carry out the Works to the satisfaction of Network Rail in respect of the protection, safety and efficient operation of the Railway and the safety of persons on or near the Railway;
- 9.2.10 superintend the Works and cause the Works to be completed with all reasonable dispatch and in any event by 30 June 2011 as such date may be extended by any delay arising from the breach of contract or negligence of Network Rail;
- 9.2.11 carry out the Works in accordance with the specifications set out in the Works Requirements and the requirements of any consents, permissions, orders and approvals obtained in respect of the Works;
- 9.2.12 carry out the Works in a manner which is not likely to be injurious to health or cause damage to property;
- 9.2.13 arrange with all relevant third parties for any necessary temporary or permanent diversion of any sewers, pipes, cables or other media;
- 9.2.14 arrange for the relocation to a suitable environment of any flora and fauna which is subject to conservation and which may be affected by the Works;
- 9.2.15 to the extent that Network Rail (acting reasonably) considers appropriate, during the carrying out of the Works at its own cost and to the satisfaction of Network Rail, temporarily erect fencing to protect Network Rail from trespass and vandalism;
- 9.2.16 provide for such barriers, watching and lighting of the Works as may be necessary during the carrying out of the Works;
- 9.2.17 comply with the requirements of Network Rail with regard to Network Rail's signalling arrangements and the prevention of any adverse effects which may be caused by the lighting of the Works;

- 9.2.18 procure that all materials and goods used in the Works shall be new, of good quality, suitable for their purpose, in compliance with all applicable Standards (subject to Clause 7.2.2.2) and not generally known in the railway industry to be deleterious at the time of incorporation;
- 9.2.19 give Network Rail reasonable notice in writing of any inspections or testing of the Works by CEC, **tie** or their Contractor and allow Network Rail to attend such inspections, demonstrations or testing;
- 9.2.20 notify Network Rail in writing once **tie** considers that (a) a Sector has been completed in accordance with the agreed drawings, specification and design (subject to any Variation) in order to enable Network Rail to certify Sector Completion for that Sector, and (b) the Works have been completed in accordance with the agreed drawings, specification and design (subject to any Variation) in order to enable Network Rail to certify Completion of the Works;
- 9.2.21 take such action during the construction of the Works and the Defects Liability Period as Network Rail may reasonably require to remedy any deficiencies and defects in the Works identified by Network Rail; and
- 9.2.22 provide Network Rail with such information at such times and in such format as Network Rail reasonably requires about the Works to enable it to populate its asset register.
- 9.3 For the purposes of the Works under the CDM Regulations **tie** is the sole client (and CEC shall procure that **tie** shall make any election under Regulation 8 of the CDM Regulations to that effect) and shall fulfil all the roles and duties of such including procuring the necessary notification to the Health and Safety Executive under Regulation 21 of the CDM Regulations.
- 9.4 CEC shall procure that after consulting with Network Rail **tie** shall prepare a "Construction Phase Plan" (as defined in the CDM Regulations) for the Works and submit it to Network Rail. Network Rail shall examine and comment to **tie** on the elements of such Construction Phase Plan relating to works in the Railway environment. CEC shall procure that **tie** shall amend the Construction Phase Plan to take account of any reasonable comments made by Network Rail on the Construction Phase Plan and submit further Construction Phase Plans to Network Rail as necessary.

- 9.5 CEC shall procure that **tie** shall prepare a relevant data manual (including as-built drawings and such other information as Network Rail may reasonably stipulate) for the Works which shall in due course form part of the "Health and Safety File" as defined in the CDM Regulations. The manual shall be finalised and passed to Network Rail in such format and with such number of copies as Network Rail may reasonably require prior to the Completion of the Works .
- 9.6 CEC is responsible for the identification of any relationship between the Works and any Interfacing Projects and has a responsibility to mitigate and control such interface as far as reasonably practicable in the interests of economic and efficient network management and operations. Network Rail shall notify **tie** of any relationship of which it is aware between the Works and any Interfacing Projects.
- 9.7 Where **tie** and/or CEC is unable to fulfil any of its obligations under this Clause 9, Network Rail may take such steps as it reasonably considers appropriate to address the position (subject to giving **tie** reasonable prior notice of its intention to do so) and CEC shall reimburse Network Rail in respect of all resulting Losses.
- 9.8 If the whole or part of the Works fails to comply in all respects with this Agreement, the Network Rail Requirements or any relevant Standards (subject to Clause 7.2.2.2), CEC shall procure the carrying out of such remedial work of construction or design as may be required so that the Works do so comply. Network Rail may then require CEC to carry out or repeat any demonstrations or tests for the whole or any part of the Works or procure that the same are carried out or repeated.
- 9.9 During the construction of the Works, if Network Rail so requires, or on Completion of the Works or on Sector Completion and any subsequent repair or remedy of the Works or a Sector (as the case may be) CEC shall, or shall procure that **tie** shall, at its own cost and to the satisfaction of Network Rail, acting reasonably, make good any property of Network Rail which may have been damaged or interfered with and shall remove all surplus material brought on to Network Rail's land by CEC, **tie** or any Contractor.

10. SAFEGUARDING THE RAILWAY

- 10.1 Network Rail and CEC (or **tie** on CEC's behalf) shall liaise generally on all safety matters arising out of the Works if, and to the extent that, they affect the Railway.

- 10.2 Notwithstanding any other provision of this Agreement but subject to Clause 14 (*Compensation and Relief*), Network Rail may at any time take whatever action Network Rail (acting reasonably, subject to Clause 1.3.3) considers necessary to prevent, address, alleviate or comply with a Network Operation Issue, including requiring CEC, **tie** and any Contractor to suspend the carrying out of the Works for such period and/or take such measures as Network Rail may require, provided that:
- 10.2.1 Network Rail's decision to take such action at that time is reasonable, taking into account all relevant circumstances (subject to Clause 1.3.3);
- 10.2.2 Network Rail shall (if practicable) consult with **tie** prior to taking any such action; and
- 10.2.3 Network Rail shall in any event notify **tie** as soon as reasonably practicable after taking any such action.
- 10.3 Network Rail shall notify **tie** of any suspension pursuant to Clause 10.2 as soon as reasonably practicable. Such notification shall contain such relevant information relating to the suspension as is available, including an estimate of the period of suspension. Network Rail shall promptly provide **tie** with any further information it receives or becomes aware of which relates to the suspension and provide an update on the estimate of its duration, and shall notify **tie** as soon as practicable (and in any event within two Working Days) once the Works can be resumed.
- 10.4 If pursuant to Clause 10.2 Network Rail requires action to be taken by any Contractor, CEC shall procure that **tie** shall upon notification procure that the Contractor responsible for the relevant part of the Works complies with Network Rail's requirements. If **tie** is not immediately available for any reason, Network Rail shall be entitled for the purposes of Clause 10.2 to issue instructions directly to the Contractor and CEC shall procure that **tie** shall procure that any such direct instructions shall be treated as instructions from **tie** under the relevant contract. Network Rail shall supply to **tie** a copy of such instructions as soon as reasonably practicable following their issue.
- 10.5 Network Rail shall be entitled to take all steps it reasonably considers necessary to ensure that the Operational Track can be effectively used (including removing all or any part of the Works).

- 10.6 Network Rail and CEC (or **tie** on CEC's behalf) shall with reasonable diligence exchange information and otherwise co-operate with each other so far as it is necessary to enable Network Rail (acting reasonably) to review or revise its safety regime (as may be appropriate) relating to the maintenance, repair, improvement, alteration and operation of the Railway during the construction of the Works and for a period of 12 months thereafter.

11. COMPLETION OF THE WORKS AND TAKING INTO USE

- 11.1 Network Rail shall be entitled to inspect the Works (including ultrasonic examination of the Operational Track) at any time prior to Taking Into Use of the Works and shall inform **tie** of any areas requiring attention and the level of priority for such work. CEC shall procure the carrying out of such work within the timescales specified in the Standards (subject to Clause 7.2.2.2). If CEC fails to do so, Network Rail shall be entitled to undertake such work itself at CEC's expense and may require CEC and **tie** to cease to use the Works until such work has been completed by Network Rail and paid for by CEC provided that CEC shall be entitled to recover such costs where the measures and/or timescales are determined to have been disproportionate or unnecessary under the Dispute Resolution Procedure.
- 11.2 The procedures for the Taking Into Use of the Works shall be carried out in accordance with Network Rail Standard RT/D/P/088 (or such other Standard as may from time to time replace it). CEC shall not and shall procure that **tie** shall not bring the Works into use until the Network Rail Consents referred to in paragraph 1 and/or 2 of part 2 of Schedule Part 4 (*Network Rail approvals, acceptances and consents*) have been obtained.
- 11.3 The Taking Into Use of the Works by Network Rail (but excluding any Operational Track) shall be conditional upon the coming into force of a Regulated Change in respect of the Works in a form approved by Network Rail for the purposes of this Agreement.
- 11.4 Following receipt of a notification from CEC (or **tie** on CEC's behalf) pursuant to Clause 9.2.20 that all the Works in a particular Sector have been completed and provided that Network Rail is satisfied that the Works in that Sector comply in all respects with this Agreement, the Network Rail Requirements and all relevant Standards (subject to Clause 7.2.2.2), and that all deficiencies, snagging and defects

have been rectified in compliance with Clause 9.2.21, Network Rail shall issue to **tie** a certificate of Sector Completion for that Sector. If Network Rail considers that the whole or any part of the Works in that Sector do not comply as aforesaid, it shall notify **tie** in writing together with full details of its opinion why the certificate of Sector Completion should not be issued.

- 11.5 Following receipt of a notification from CEC (or **tie** on CEC's behalf) pursuant to Clause 9.2.20 that all the Works have been completed and provided that certificates of Sector Completion have been issued in respect of all Sectors, Network Rail shall issue to **tie** a certificate of Completion of the Works. If Network Rail considers that the whole or any part of the Works do not comply with the Agreement, it shall notify **tie** in writing together with full details of its opinion why the certificate of Completion of the Works should not be issued (provided that Network Rail shall not contend that a Sector or part thereof does not comply as aforesaid where a certificate of Sector Completion has already been issued in respect of that Sector).
- 11.6 Not used.
- 11.7 Following Completion of the Works CEC will, or procure that **tie** will, to the extent not already undertaken (notwithstanding that any Works may have been Taken into Use):
- 11.7.1 within two years (but not less than 18 months) repeat the condition and defects survey required under Clause 7.4.10 in adherence with the access requirements and procedures set out in Clause 4 (*Access to the Network*);
- 11.7.2 make good any damage caused to Network Rail Property by the carrying out and completion of the Works and shall, subject to intentional alterations arising as a consequence of the Works, reinstate all Network Rail Property so damaged to a condition substantially the same as existed at the Commencement Date (as evidenced by the condition and defects survey required under Clause 7.4.10) as soon as reasonably practicable to the satisfaction of Network Rail; and
- 11.7.3 carry out and complete all rectification or remedial works which may be necessary as a consequence of CEC, **tie** or any Contractor failing to carry out or complete the Works in accordance with this Agreement. In the event that such rectification or remedial works are not carried out within three months of

Completion of the Works, Network Rail may carry out such works and recover the cost thereof from CEC;

provided that in respect of any part of Network Rail Property which is or forms part of the Premises for the purposes of the Lease, this Clause 11.7 shall not apply after the date of entry under the Lease (without prejudice to CEC's obligations therein).

- 11.8 Network Rail shall be the Infrastructure Controller in respect of the Works following their Taking Into Use.
- 11.9 CEC shall not, and shall procure that **tie** shall not, use or operate or permit any third party to use or operate any Operational Track prior to the date the Operational Track is Taken into Use (other than for testing as agreed with Network Rail).
- 11.10 CEC and **tie** agree and acknowledge that no new track access rights are conferred upon CEC or **tie** as a result of the carrying out or completion of the Works, and that CEC and **tie** are carrying out and constructing the Works at their own risk in the full understanding that the grant of additional access rights and rights of use is subject to the procedures set out in the Act.

12. ONGOING OBLIGATIONS IN RESPECT OF THE WORKS

- 12.1 Without prejudice to Clauses 12.2 or 12.3, CEC shall at its sole cost and expense procure any repair, maintenance, renewal and replacement the Works and, in the case of those parts of the Works which are to be Taken Into Use, shall do so prior to the date the Works are Taken Into Use.
- 12.2 If the Works comprise any Operational Track:
- 12.2.1 Network Rail shall repair, maintain, replace and renew the Operational Track in accordance with the relevant Standards and its obligations under its Network Licence from and including the date that the Operational Track (or such part thereof (as applicable)) is Taken Into Use; and
- 12.2.2 the Parties intend that the costs and expenses incurred by Network Rail in repairing, maintaining, replacing, renewing and operating any Operational Track shall be payable by CEC to Network Rail pursuant to a supplemental Track Access Agreement to be entered into by the Parties in respect of the Track subject to obtaining the approval of the ORR.

12.3 In respect of any Station Works, the Parties intend that:

12.3.1 subject to the Station Access Conditions, the obligation to repair, maintain, replace and renew the Station Works shall be imposed as obligations on the part of the landlord and the tenant (which in the case of Station Works shall be in accordance with Appendix 4 (entitled "Station - Equipment Inventory") of Annex 1 of the Station Access Conditions as incorporated into the lease of the relevant part of the Works; and

12.3.2 the costs and expenses incurred by Network Rail in performing the obligations on its part as landlord under such lease are to be payable to Network Rail by the tenant under the relevant lease or by the tenant, CEC and/or other Operators by way of an additional "Long Term Charge" (as defined in the Station Access Conditions) in the case of any Station Works.

12.4 Without prejudice to Clause 12.3, Network Rail shall repair, maintain, replace and renew any Station Works in accordance with the Standards and its obligations under its Network Licence from and including the date that any Station Works (or such part thereof (as applicable)) are Taken Into Use until the date of the grant of the lease for the relevant Station Works. Subject to the grant of the lease (or other agreement) for the relevant Station Works, Network Rail agrees with CEC to:

12.4.1 observe and perform the obligations on its part in the lease of the relevant Station Works to repair and maintain the relevant Station Works in accordance with the terms thereof; and

12.4.2 procure that the tenant (if an entity other than CEC or an Affiliate of CEC) of the lease of the relevant Station Works observes and performs the obligations on its part to repair and maintain the relevant Station Works in accordance with the terms thereof.

12.5 In the case of those parts of the Works not constituting Operational Track or Station Works, Network Rail shall repair, maintain, replace and renew such Works in accordance with the relevant Standards and its obligations under its Network Licence from and including the date that such Works (or such part thereof (as applicable)) are Taken Into Use.

- 12.6 Subject to Clauses 12.2 to 12.5 (inclusive), if in consequence of the construction of the Works or the existence of the Works, Network Rail incurs additional cost and expense in connection with the repair, maintenance, improvement, operation or alteration of the Railway which would not have been incurred but for the construction of the Works or the existence of the Works (“**Additional Expense**”), such Additional Expense shall be paid to Network Rail by CEC in accordance with Clause 18 (*Network Rail Costs and Payments to tie/CEC*) and Schedule Part 6 (*Network Rail Costs*) (except to the extent that:
- (a) the Additional Expense is paid for by a third party in the manner contemplated by Clause 12.2.2 or 12.3; or
 - (b) the Additional Expense is incurred after the end of the Control Period in which the date of Completion of the Works occurs (or, where the Additional Expense relates to a Sector, the date of Sector Completion for that Sector).
- 12.7 If the existence of the Works results (directly or indirectly) in there being a greater risk of acts of trespass or vandalism occurring on or from the site of the Works or its approaches, for the first 12 months after the date of Taking Into Use CEC shall at its own expense take such preventative and/or defensive action as Network Rail and CEC (or tie on CEC's behalf) may agree (such agreement not to be unreasonably withheld) having regard to the incidence and nature of the acts of trespass or vandalism and the cost of such preventative and/or defensive measures.
- 12.8 In the event of acts of trespass or vandalism occurring on or from the Works or its approaches which endanger safety on the Railway or the safety of Network Rail Property or persons on or near the Railway, Network Rail may take immediate action at the cost of tie/CEC to safeguard the Railway and/or such persons and Network Rail in accordance with Clauses 10.2.1 to 10.2.3 of Clause 10.2.
- 12.9 From the date of Sector Completion of the relevant Sector until (a) in the case of those parts of the Works which are to be Taken into Use, the date that relevant Sector or part thereof is Taken into Use; (b) in the case of those parts of the Works or of Network Rail Property which shall be the subject of any of the Bridge Agreements, the date of execution of the relevant Bridge Agreement (without prejudice thereafter to CEC's obligations under the Bridge Agreement); and (c) in the case of those parts of the Works (if any) which are not to be Taken into Use or form part of the Premises,

the date of Completion of the Works (such parts of the Works or of Network Rail Property being in each case hereinafter referred to as "the Completed Areas"):

- 12.9.1 CEC shall be responsible for maintaining the Completed Areas in good and substantial order and repair to the reasonable satisfaction of Network Rail and shall secure the Completed Areas against acts of trespass or vandalism;
- 12.9.2 CEC shall assume all risk and responsibility for loss, or damage to or destruction of the Completed Areas (howsoever caused or arising) and for the costs of rectifying or reinstating such loss, damage or destruction, and shall free and relieve Network Rail of and from all liability which may be sustained as a consequence of such loss, damage or destruction provided that Network Rail shall remain responsible for loss, damage or destruction caused or arising as a result of the acts or omissions of Network Rail of any person for whom Network Rail is responsible;
- 12.9.3 Network Rail shall provide CEC with such access as may be reasonably required for the purposes of this Clause 12.9, and CEC shall be relieved of its obligations under this Clause 12.9 to the extent that Network Rail does not provide such access.
- 12.10 In the case of those parts of the Works or of Network Rail Property which shall form the Premises CEC shall, subject to the terms of this Clause 12.10 be entitled to occupy and to use the Premises and that on the same terms and conditions as are contained within the Lease, which shall be deemed to be incorporated herein, mutatis mutandis, save to the following extent:-

12.10.1 the right to occupy and use the Premises shall subsist from:

12.10.1.1 the date of Sector Completion for each Sector in respect of the purposes set out in Clause 12.10.3.1; and

12.10.1.2 the date which is the later of (a) the date of Completion of the Works and (b) the date upon which the Operating Agreement has been executed by all of the parties thereto and the Procedures are agreed between such parties in respect of the purposes set out in Clause 12.10.3.2,

until the date of entry under the Lease; declaring however that if at any time, Network Rail and CEC both agree, acting reasonably, for whatever reason, that the Edinburgh Tram Network will not commence revenue generation, the right to occupy and use the Premises granted hereby shall terminate with immediate effect;

12.10.2 no rent shall be due by CEC in respect of the right to occupy and use the Premises hereby granted.

12.10.3 the right to occupy and to use the Premises hereby granted is for the purposes only of:

12.10.3.1securing the Premises, reasonable inspection, maintaining, rectification of damage, and rectification of defects arising in relation to a completed Sector; and

12.10.3.2testing, commissioning and trial running of the passenger tramway within the Edinburgh Tram Network (including driver training),

but for no other purpose whatsoever other than as expressly permitted under this Agreement and in particular, CEC shall have no right to operate or permit the operation of the tramway on the Premises for commercial or revenue generating purposes (save where Network Rail agree in writing that the execution and delivery of an agreement for lease is acceptable to allow such use). Nothing in the foregoing shall be construed as a warranty by Network Rail that the Premises are capable of being used for such permitted use.

12.10.4 CEC shall not be entitled to assign the right to occupy and use the Premises hereby granted to any other party, provided that **tie**, the Infraco and any Sub-Contractor shall be entitled to occupy and use the Premises for the purposes permitted under this Agreement.

12.11 Subject to Network Rail using all reasonable endeavours to mitigate any loss, CEC binds and obliges itself to indemnify and keep Network Rail indemnified from legal liability in respect of all claims and expenses of whatever nature at the instance of third parties (including liability for death or personal injury and liabilities arising out of statutory duty) arising in any way directly or indirectly out of, the state of repair or

condition of, or the existence of any alteration to, or of the occupancy or use of the Premises or the exercise of any of the rights under Clause 12.10 or any act, failure, negligence or omission of CEC or its agents or employees, contractors or operators and from and against all proceedings, costs and demands of whatever nature in respect of such liability or alleged liability.

13. VARIATIONS

13.1 If, prior to Completion of the Works either Network Rail or CEC (or ~~tie~~ acting on CEC's behalf) reasonably believes that a Mandatory Variation is required, it shall notify the other Party of that fact, together with full details of the reason why it believes that a Mandatory Variation is required. Within 18 Working Days of the receipt of such written notice, the recipient shall either:

13.1.1 notify the other Party that the recipient agrees such Mandatory Variation is required; or

13.1.2 notify the other Party of any reason why the recipient does not believe such Mandatory Variation is required (and in such case the Party believing that a Mandatory Variation is required may refer the matter to the Dispute Resolution Procedure).

13.2 Following a notice under Clause 13.1.1 or where it has been determined under the Dispute Resolution Procedure that a Mandatory Variation is required:

13.2.1 CEC shall notify, or shall procure that ~~tie~~ notifies, Network Rail of the steps that they and the Contractor propose to take to implement the Mandatory Variation and details of any Necessary Consents that must be amended for the Mandatory Variation to be implemented;

13.2.2 within 15 Working Days of CEC's notice under Clause 13.2.1, Network Rail shall either:

13.2.2.1 notify ~~tie~~ that it objects to the steps that CEC (or ~~tie~~ on CEC's behalf) proposes to take to implement the Mandatory Variation on the grounds that such steps will not comply with the Specific Change in Law or the Change in Standards giving rise to the Mandatory Variation; or

- 13.2.2.2 notify **tie** that it has no objection to the steps that CEC (or **tie** on CEC's behalf) proposes to take to implement the Mandatory Variation;
- 13.2.3 Following a notice by Network Rail under Clause 13.2.2.2, Network Rail and CEC (or **tie** on CEC's behalf) shall promptly meet and seek to agree the matters listed in Clauses 13.8.1 to 13.8.4 insofar as they arise from the Mandatory Variation;
- 13.2.4 Upon agreement or determination of the matters referred to in Clause 13.2.3, Network Rail and CEC (or **tie** on CEC's behalf) shall confirm in writing that they agree to the implementation of the Mandatory Variation in accordance with such agreement or determination (subject to obtaining or amending any Necessary Consents).
- 13.2.5 Subject to Clauses 13.10 and 14.1.2, CEC shall be responsible for all costs incurred as a consequence of the Mandatory Variation and of implementing the Mandatory Variation.
- 13.3 Without prejudice to Clause 13.1, at any time prior to the Completion of the Works either Network Rail or CEC (or **tie** acting on CEC's behalf) may issue a request for a Variation ("**Variation Request**"). Where the Party making the request is CEC or **tie** the request shall be issued to Network Rail and where the Party making the request is Network Rail the request shall be issued to **tie**. The Variation Request shall state that the Party making the request will be responsible for funding the Variation, except where Network Rail are making a request which is required in any event in order to deliver the desired functionality in relation to the Edinburgh Tram Network. Any Variation Request may be withdrawn by the requesting Party at any time prior to:
- 13.3.1 the agreement or determination of all matters set out in Clause 13.8 below; or
- 13.3.2 if the proposed Variation requires the obtaining of, or an amendment to, any Necessary Consent, the date when the last such Necessary Consent is obtained or amended
- whichever shall be later. If the requesting Party is Network Rail and it withdraws a Variation Request, it shall reimburse CEC and/or **tie** for all Direct Costs reasonably and properly incurred by CEC and/or **tie** in relation to the proposed Variation prior to

its withdrawal. If the requesting Party is CEC or **tie** and it withdraws a Variation Request, CEC shall reimburse Network Rail for all Direct Costs reasonably and properly incurred by Network Rail in relation to the proposed Variation prior to its withdrawal.

13.4 **tie** and CEC shall include the following information in any Variation Request that either issues:

13.4.1 the steps that **tie**, CEC, and the relevant Contractor propose to take to implement the proposed Variation; and

13.4.2 details of any Necessary Consent that must be obtained or amended for the proposed Variation to be implemented.

13.5 Any Variations considered by **tie** or CEC (acting reasonably) not to be of a material nature and which are valued at less than £25,000 shall be communicated to Network Rail by a Variation Request in advance of the Variation being effected, and if Network Rail are unable to provide a full and final response to the Variation Request within three Working Days, it may be effected by **tie** or CEC and then retrospective approval given in writing by Network Rail as soon as reasonably practicable thereafter (and if Network Rail retrospectively object to such Variation on the grounds set out in Clause 13.6.1 within 15 Working Days of it being communicated to them, **tie** or CEC shall undertake rectification works to Network Rail's reasonable satisfaction at CEC's cost).

13.6 Subject to Clause 13.5, within 18 Working Days of the receipt of a Variation Request (or such longer period as may be agreed by Network Rail and CEC (or **tie** on CEC's behalf) acting reasonably), the recipient shall either:

13.6.1 where the recipient is CEC or **tie**, notify Network Rail, and where the recipient is Network Rail notify **tie**, that it objects to the proposed Variation on one or more of the following grounds:

13.6.1.1 that the implementation of the Variation:

- (a) would infringe any law or existing contractual obligation;
- (b) would cause any existing Necessary Consent (which is not capable of modification) to be revoked; or

(c) would require a new Necessary Consent, which the recipient (using all reasonable endeavours) cannot obtain;

13.6.1.2 that the proposed Variation, if implemented, would result in a change to the essential nature of the Works;

13.6.1.3 (in the case of Variations proposed by Network Rail which are not required in any event in order to deliver the desired functionality in relation to the Edinburgh Tram Network) that the proposed Variation, if implemented, would increase the anticipated cost of the Works by more than 2% (unless Network Rail has given an undertaking to meet any additional costs) and/or have a material adverse impact on the timetable for carrying out the Works under this Agreement; or

13.6.1.4 that the information contained in the Variation Request is inadequate to enable the recipient to respond;

13.6.2 where the recipient is CEC or **tie**, notify Network Rail, and where the recipient is Network Rail notify **tie**, that it has no objection in principle to the proposed Variation and give details of any new or modified Necessary Consent for which the recipient is responsible and its reasonable assessment of the date this will be obtained.

13.7 If CEC or **tie** notifies Network Rail in accordance with Clause 13.6.2, it shall within a further 15 Working Days (or such longer period as may be agreed by Network Rail and CEC (or **tie** on CEC's behalf) acting reasonably) notify Network Rail of its estimated Direct Costs in relation to the proposed Variation and the matters referred to in Clause 13.4. If Network Rail notifies **tie** in accordance with Clause 13.6.2, it shall within a further 15 Working Days (or such longer period as may be agreed by Network Rail and CEC (or **tie** on CEC's behalf) acting reasonably) notify **tie** of its estimated Direct Costs in relation to the proposed Variation.

13.8 Following the issue of a notice by a Party pursuant to Clause 13.6.2, Network Rail and CEC (or **tie** on CEC's behalf) shall promptly meet and seek to agree the following matters:

13.8.1 any alteration to the Works Programme (in accordance with Clause 8 (*Programming of Works and Obtaining Possessions*)) and/or the projected date for completion of the Works;

13.8.2 the requirement for any additional Possessions;

13.8.3 the impact on the Direct Costs of CEC, **tie**, affected Contractors and Network Rail in respect of the implementation of the proposed Variation (which may be a positive or negative value); and

13.8.4 the terms of any amendment to the Works Requirements in order to give effect to the Variation and/or the amendment of the as-built drawings and specifications,

provided that such a meeting shall not be required in respect of a Variation under Clause 13.5 unless reasonably requested by Network Rail or CEC (or **tie** on CEC's behalf).

13.9 Upon the agreement or determination of all the matters referred to in Clause 13.8, Network Rail and CEC (or **tie** on CEC's behalf) shall confirm in writing that they agree to the implementation of the Variation in accordance with such agreement or determination (subject to obtaining or amending any Necessary Consents as identified in accordance with Clause 13.4.2 or 13.6.2).

13.10 CEC shall, or shall procure that **tie** shall, reimburse Network Rail for all Direct Costs which Network Rail incurs in connection with any Variation, provided that:

13.10.1 neither **tie** nor CEC shall be liable for any costs which Network Rail incurs in connection with any Mandatory Variation;

13.10.2 neither **tie** nor CEC shall be liable to make any payment in respect of any Variation to the extent that such Variation is necessary due to any Existing Asset Obligation;

- 13.10.3 if and to the extent that the costs for any part of the Works have already been included in Network Rail's Business Plan (and approved for the Works by or on behalf of Network Rail's Board) for the financial year in which such works are actually carried out (or any earlier financial year), neither **tie** nor CEC shall be liable to make any payment in respect of such part of the Works;
- 13.10.4 if and to the extent that such costs have already been included in Network Rail's Business Plan (and approved for the Works by or on behalf of Network Rail's Board) for a financial year later than that in which the relevant part of the Works are actually carried out, CEC (or **tie** on CEC's behalf) shall only be liable to pay the financing expenses incurred by Network Rail in respect of such part of the Works, such expenses to be calculated at the Interest Rate for the period from the date such costs are actually incurred up to the first day of the Network Rail financial year in which such costs were forecast to have been incurred;
- 13.10.5 neither **tie** nor CEC shall be liable in respect of any costs relating to any Variation proposed by Network Rail except where Network Rail can reasonably demonstrate that the Variation is required in order to deliver the desired functionality in relation to the Edinburgh Tram Network or where the costs are otherwise dealt with in accordance with Clause 13.2; and
- 13.10.6 neither **tie** nor CEC shall be liable in respect of any costs which result from Network Rail failing to comply with Clause 5.4.
- 13.11 Subject to Clause 13.2, Network Rail shall reimburse **tie** and CEC for all Direct Costs which **tie** or CEC incurs in connection with any Variation proposed by Network Rail which Network Rail cannot, or do not seek to, reasonably demonstrate is required in order to deliver the desired functionality in relation to the Works.
- 13.12 Where a Variation or Mandatory Variation requires that additional Works are required in respect of a Sector for which Sector Completion has been certified, the Parties shall comply with the procedure set out in Clause 11.4 so that Sector Completion can be certified by Network Rail to be compliant with the Variation or Mandatory Variation;
- 13.13 If agreement on any matter under this Clause 13 (*Variations*) is not reached within a reasonable period of time, Network Rail or CEC (or **tie** on CEC's behalf) may refer any matter for resolution in accordance with the Dispute Resolution Procedure.

14. COMPENSATION AND RELIEF

14.1 CEC and tie shall (without double counting) be:

14.1.1 entitled to claim compensation for additional Direct Costs reasonably incurred by tie or CEC as a result of any delay or disruption to the Works Programme to the extent that such delay is a result of any event described under this Clause 14.1 (“Relief Event”) (but only to the extent that such additional Direct Costs relate to the Works, and excluding for the avoidance of doubt, any Direct Costs arising as a consequence of any such delay or disruption to the remainder of the Edinburgh Tram Network); and

14.1.2 relieved from their obligation to pay additional Network Rail Costs incurred

if any of the following Relief Events occurs:

- (1) Network Rail takes or requires any action to be taken pursuant to Clause 10.2;
- (2) any delay to the Works is caused by a Network Operation Issue (or would have been caused in the absence of remedial action taken by CEC or tie to avoid any such delay);
- (3) any works contractor on any Interfacing Project:
 - (a) interferes with, hinders or obstructs a Contractor from carrying out the Works in accordance with the Works Programme; or
 - (b) prevents, hinders or obstructs a Contractor in respect of its access to the Works and/or the Network

provided that CEC and tie (to the extent such responsibilities have been delegated to tie) has carried out its responsibilities under Clause 9.6 in accordance with Good Industry Practice;

- (4) any Booked Possession is cancelled or altered (including as a result of any default by any Operator); or
- (5) a Mandatory Variation is implemented in accordance with Clause 13 (*Variations*)

provided that such additional costs exceed £10,000 in aggregate in respect of the relevant Relief Event. Neither CEC nor tie shall (in respect of both CEC and tie together) be entitled to such compensation or relief to the extent that any delay or cost incurred is due to the negligence, breach or default of either of them, or the breach or default of any Contractor under any Works Contract (and for the avoidance of doubt CEC and tie shall be responsible for the negligence, breach or default of each other). In the case of a claim in respect of paragraph (4) which arises out of Network Rail's breach of this Agreement, compensation for Direct Costs shall be included in the calculation of Network Rail's maximum aggregate liability under Clause 19.4. If Network Rail is able to recover compensation from a third party in relation to any of the events described in paragraphs (1) to (5) above, it shall account to tie and/or CEC (as appropriate) for all such compensation so received (to the extent that such compensation relates to CEC's or tie's direct costs).

14.2 CEC shall procure that tie shall:

14.2.1 as soon as reasonably practicable, and in any event by the Notification Date (as defined below) notify Network Rail of the relevant Relief Event including:

14.2.1.1 details of all Direct Costs claimed by each of CEC and tie (including evidence, on an open book basis, of the calculation of the Direct Costs);

14.2.1.2 any relief claimed in respect of each of CEC's and tie's obligations under this Agreement; and

14.2.1.3 a revised Works Programme under Clause 8 (*Programming of Works and Obtaining Possessions*) (if appropriate); and

14.2.2 provide evidence to Network Rail that:

14.2.2.1 the Relief Event was the cause of the Direct Costs and/or any delay in the progress of the Works; and

14.2.2.2 the Direct Costs, time lost and relief from the obligations under this Agreement claimed (as the case may be) could not reasonably be expected to be mitigated or recovered by the affected Contractor and its sub-contractors acting in accordance with Good Industry Practice.

- 14.3 If CEC fails to give or to procure that Network Rail is given written notice of the claim by CEC and tie by the Notification Date, neither tie nor CEC shall be entitled to claim compensation or relief in respect of that Relief Event. For the purposes of this Clause 14.3, "**Notification Date**" means the date falling 30 Working Days after:
- 14.3.1 the relevant Relief Event has caused delay, breach of an obligation under this Agreement and/or caused a Contractor to incur costs; or
 - 14.3.2 (if earlier) the date on which tie, CEC or a Contractor becomes aware (or ought reasonably to have become aware) that the Relief Event is likely to have such an effect.
- 14.4 Subject to Clause 14.3, in respect of each Relief Event the Parties shall agree the Direct Costs and the revised Works Programme on the basis of the details and evidence provided by CEC or tie pursuant to Clause 14.2, taking into account the likely effect of delay in the progress of the Works having regard to a reasonable level of ongoing programming contingency.
- 14.5 Promptly following the agreement (or determination pursuant to the Dispute Resolution Procedure) of the amount of the Direct Costs, CEC shall, or shall procure that tie shall, deliver an invoice to Network Rail and Network Rail shall pay that sum to CEC (or to tie if directed in writing by CEC) within 30 Working Days. Should any amount not be paid within such period (except any amount determined not to be payable pursuant to the Dispute Resolution Procedure), such amount due shall bear interest thereon at the Interest Rate from and including the due date for payment to and including the date of actual payment.
- 14.6 Save as set out in Clause 14.2 and without prejudice to Clause 19.5, neither Party shall have any other right or remedy whether under or in connection with this Agreement against the other for any Relief Event.

15. **FORCE MAJEURE EVENTS**

- 15.1 Subject to Clauses 15.2 to 15.6, each Party shall be relieved from liability for non-performance of its obligations under this Agreement (other than any obligation to make payment) to the extent that it is not able to perform its obligations under this Agreement by reason of a Force Majeure Event.

- 15.2 Each Party shall at all times following the occurrence of a Force Majeure Event:
- 15.2.1 take all reasonable steps to prevent and mitigate the consequences of such an event upon the performance of its obligations under this Agreement, resume performance of its obligations affected by the Force Majeure Event as soon as practicable and use all reasonable endeavours in accordance with Good Industry Practice to remedy its failure to perform; and
 - 15.2.2 not be relieved from liability under this Agreement to the extent that it is not able to perform, or has not in fact performed, its obligations under this Agreement due to any failure to comply with its obligations under Clause 15.2.1.
- 15.3 On the occurrence of a Force Majeure Event, the affected Party shall (in the case of CEC or **tie**) serve notice on Network Rail or (in the case of Network Rail) serve notice on **tie**, in each case as soon as reasonably practicable and in any event within 10 Working Days of it becoming aware of the relevant Force Majeure Event. Such notification shall give sufficient details to identify the particular event claimed to be a Force Majeure Event and shall contain such relevant information relating to the failure to perform (or delay in performing) as is available, including the date of occurrence of the Force Majeure Event, the effect of the Force Majeure Event on the ability of the affected Party to perform, the action being taken in accordance with Clause 15.2.1 and an estimate of the period of time required to overcome the effects of the Force Majeure Event. The affected Party shall (in the case of CEC or **tie**) provide Network Rail or (in the case of Network Rail) provide **tie** with any further information it receives or becomes aware of which relates to the Force Majeure Event and provide an update on the estimate of the period of time required to overcome its effects.
- 15.4 The affected Party shall, in the case of CEC or **tie**, notify Network Rail, or, in the case of Network Rail, notify **tie**, as soon as practicable once the performance of its affected obligations can be resumed (performance to continue on the terms existing immediately prior to the occurrence of the Force Majeure Event).
- 15.5 As soon as practicable following the notification described in Clause 15.3, Network Rail and CEC (or **tie** on CEC's behalf) shall use all reasonable endeavours to agree appropriate terms or modifications to the Works Programme to mitigate the effects of the Force Majeure Event and to facilitate the continued performance of this

Agreement and Clause 8 (*Programming of Works and Obtaining Possessions*) shall apply in respect of any additional Possessions which are consequently agreed.

- 15.6 If no such terms or modifications are agreed between Network Rail and CEC (or **tie** on CEC's behalf) on or before the date falling three months after the date of the commencement of the Force Majeure Event and such Force Majeure Event is continuing or its effects remain, then Network Rail or CEC (or **tie** on CEC's behalf) may terminate this Agreement with immediate effect by written notice in the case of Network Rail, to **tie** or, in the case of CEC or **tie**, to Network Rail. Upon termination the provisions of Clause 22 (*Consequences of Termination*) shall apply.

16. INSURANCE

- 16.1 **tie**, on behalf of CEC, shall take out and maintain or procure that the Contractor takes out and maintains a policy of insurance (naming Network Rail as joint insured) for Construction All Risks insurance for the full reinstatement value of the Works together with design works and services (excluding the cost incurred to improve the original material, workmanship, design plan or specification) and shall maintain such policy up to and including the earlier of the date of termination of this Agreement and the date of Completion of the Works.
- 16.2 **tie**, on behalf of CEC, shall take out and maintain or procure that the Contractor takes out and maintains Professional Indemnity insurance of not less than £5million to cover any one claim and in the aggregate during any one period of insurance (which period shall not be more than one year) against **tie** for any negligent act, error or omission in the carrying out of the Works for a period of 12 years from Completion of the Works provided that such insurance continues to be generally available in the insurance market on commercially reasonable terms. **tie** shall ensure that all Contractors and Sub-Contractors of any tier having a design responsibility for the Works have Professional Indemnity insurance to the same value or a credit rating of no less than BBB by Standard and Poor's or equivalent.
- 16.3 **tie**, on behalf of CEC, shall take out and maintain or procure that the Contractor takes out and maintains Public Liability insurance (naming Network Rail as a joint insured) of not less than £155 million to cover any loss, cost, expense, liability, action, demand, claim or proceeding under any statute or at common law in respect of personal injury or material damage to any property (and shall include bodily injury,

death, disease, illness, arrest, assault, shock, mental anguish or mental injury, invasion of privacy, libel and slander) (subject to the terms of the policy) and shall maintain such policy up to and including the earlier of the date of termination of this Agreement and the date of entry into the Lease.

- 16.4 Whenever reasonably requested by Network Rail, CEC shall or procure that **tie** shall provide evidence to the reasonable satisfaction of Network Rail that the insurances referred to in this Clause are being maintained in accordance with provisions of this Clause, and that the credit rating of any relevant Contractor or Sub-Contractor remains equal to or greater than BBB rating by Standard and Poor's or equivalent.

17. NOT USED

18. NETWORK RAIL COSTS AND PAYMENTS TO TIE/CEC

- 18.1 CEC shall pay, or shall procure that **tie** shall pay, the Network Rail Costs to Network Rail in accordance with this Clause 18 (*Network Rail Costs and Payments to tie/CEC*) and Schedule Part 6 (*Network Rail costs*). The Personnel Costs (as defined in Schedule Part 6 (*Network Rail Costs*)) shall not exceed £850,000 without CEC's prior written consent (or the written consent of **tie** on CEC's behalf), except to the extent that such Personnel Costs relate to any Variation affecting an element of the Works which have passed Stage Gate 4.
- 18.2 Within 10 Working Days after the end of each Payment Period, Network Rail shall submit an invoice (with an attached breakdown, including any supporting information reasonably requested by **tie**) to **tie** (or to CEC if so requested in writing by **tie**) in respect of the Network Rail Costs and any other sums payable by CEC to Network Rail under this Agreement and relating to the relevant Payment Period. Subject to Clause 18.4 below, CEC shall procure that payment by CEC or by **tie** to Network Rail shall be without set-off, retention, counterclaim, abatement or any other deduction and shall be due 10 Working Days after the date of the invoice, and the final date for payment of that invoice shall be 20 Working Days from the date of the invoice.
- 18.3 Not later than five Working Days after the due date of the invoice, CEC shall, or shall procure that **tie** shall, give notice to Network Rail stating the amount which CEC (or **tie** on CEC's behalf) proposes to pay and the basis on which that amount is

calculated. Where no such notice is given, the amount to be paid is that stated in the invoice.

- 18.4 Where CEC (or **tie** on CEC's behalf) intends to withhold payments of any amount claimed by Network Rail in the invoice, notice must be given to Network Rail not later than five Working Days before the final date for payment under Clause 18.2. The notice shall state the amount to be withheld and the grounds for withholding payment.
- 18.5 Should any amount not be paid by the final date for payment in accordance with Clause 18.2 (except any payment determined not to be payable pursuant to the Dispute Resolution Procedure), such amount due shall bear interest thereon at the Interest Rate from and including the due date for payment to and including the date of actual payment.
- 18.6 Payment shall be subject to the addition of Value Added Tax at the rate currently in force at the date the application for payment is made if and where applicable on production of a Value Added Tax invoice.
- 18.7 If CEC is in default over payments of amounts properly due in respect of the Network Rail Costs or other amounts payable to Network Rail under this Agreement, and no notice of intention to withhold such amounts has been given pursuant to Clause 18.4, Network Rail may suspend performance of any or all of the obligations on its part in this Agreement. This right is subject to Network Rail first giving **tie** on behalf of CEC not less than five Working Days' notice of such intention and stating the grounds for suspension. The right to suspend performance shall cease once CEC makes or procures payment of the amount due.
- 18.8 Save to the extent otherwise expressly provided for in this Agreement, where CEC reasonably considers that it or **tie** is entitled to receive any sums from Network Rail under this Agreement, **tie** shall submit an invoice (with an attached breakdown, including any supporting information reasonably requested by Network Rail) to Network Rail in respect of the such sums payable under this Agreement and relating to the relevant Payment Period. Subject to Clause 18.10 below, payment by Network Rail to **tie** on CEC's behalf shall be without set-off, retention, counterclaim, abatement or any other deduction and shall be due 10 Working Days after the date of

the invoice, and the final date for payment of that invoice shall be 20 Working Days from the date of the invoice.

- 18.9 Not later than five Working Days after the due date of the invoice, Network Rail shall give notice to **tie** on CEC's behalf stating the amount which Network Rail proposes to pay and the basis on which that amount is calculated. Where no such notice is given, the amount to be paid is that stated in the invoice.
- 18.10 Where Network Rail intends to withhold payments of any amount claimed by CEC in the invoice, notice must be given to Network Rail to **tie** on CEC's behalf not later than five Working Days before the final date for payment under Clause 18.8. The notice shall state the amount to be withheld and the grounds for withholding payment.
- 18.11 Should any amount not be paid by the final date for payment in accordance with Clause 18.8 (except any payment determined not to be payable pursuant to the Dispute Resolution Procedure), such amount due shall bear interest thereon at the Interest Rate from and including the due date for payment to and including the date of actual payment.
- 18.12 Any payment which is properly subject to Value Added Tax shall be subject to the addition of Value Added Tax at the rate currently in force at the date the application for payment is made if and where applicable on production of a Value Added Tax invoice.

19. LIMITATION OF LIABILITY

- 19.1 Save as otherwise expressly provided in this Agreement, Network Rail shall not be liable to CEC or **tie**, and neither CEC nor **tie** shall be liable to Network Rail in respect of any breach of any of their respective obligations under this Agreement (other than under Clauses 6.6, 19.3, or a failure to make a payment which is otherwise properly due under this Agreement) unless the aggregate amount of all claims for which the respondent would otherwise be liable to the claimant exceeds £10,000.
- 19.2 Save as set out in Clauses 6.6 and 14 (*Compensation and Relief*), Network Rail shall have no liability to either **tie** or CEC for any costs or delays occasioned by:
- 19.2.1 the terms of or failure to obtain or receive timely Possessions, Network Rail Consents (save in respect of consents of Network Rail as landlord, to the extent under the control of Network Rail), consents, permissions, orders and approvals;

19.2.2 any reallocation by Network Rail of its resources from performing the Services if Network Rail (acting reasonably, subject to Clause 1.3.3) considers it necessary to prevent, address, alleviate or comply with (as applicable) a Network Operation Issue (provided that, in the case of a Network Operation Issue which falls within limb (f) of the definition thereof and does not fall within any other limb of the definition, the reallocation is required as a result of an emergency arising in respect of that existing contractual commitment); or

19.2.3 any delay in relation to the Works Programme

except to the extent that completion of the Works Programme is delayed by more than 60 calendar days as the result of the negligence of Network Rail or the breach by Network Rail of its obligations under this Agreement.

19.3 In the event of any such delay which is not due to a Relief Event, Network Rail's liability shall be satisfied in full by the payment of liquidated damages by Network Rail to **tie** at the rate of £2,500 per day of delay (only accruing after the period of 60 calendar days has expired). Any damages for delay shall be adjusted to the extent that the relevant delay is caused by the negligence of **tie** or CEC or the breach by **tie** or CEC of their respective obligations under this Agreement (and each of **tie** and CEC shall be responsible for the negligence and breach of the other).

19.4 Without prejudice to Clause 19.2 or 19.3, Network Rail's maximum aggregate liability to both CEC and **tie** together in respect of this Agreement shall not exceed an amount equal to the Network Rail Cap, provided that such limitation shall not apply to:

19.4.1 any liability in respect of death or personal injury resulting from the negligence of Network Rail or any person for whom Network Rail is responsible;

19.4.2 any Losses caused by the fraud or negligence of Network Rail; or

19.4.3 Network Rail's obligation to pay compensation for any Relief Event under Clause 14 (*Compensation and Relief*) except any obligation to pay compensation under Clause 14.1 Paragraph (4) which arises out of Network Rail's breach of this Agreement.

19.5 The Parties agree that damages may not be an adequate remedy for any breach of this Agreement and the Parties shall be entitled to seek the remedy of an injunction or

other equitable relief (without prejudice to Clause 1.3) provided that Network Rail shall not be required to rework any Services where:

19.5.1 Network Rail considers, at its sole discretion, that reworking the Services has potential to conflict with its statutory obligations or undertakings as network operator, including its Safety Case obligations; or

19.5.2 neither **tie** nor CEC has confirmed that it will meet the costs of any rework where such costs exceed Network Rail's limit of liability in Clause 19.4.

19.6 **tie** and CEC's aggregate liability in respect of this Agreement shall not exceed an amount equal to the CEC/**tie** Cap, provided that such limitation shall not apply to:

19.6.1 the payment obligations under Clauses 2.6, 3.6, 9.7, 11.1, 12.6, 13.3, 16 (*Insurance*), 18 (*Network Rail Costs and Payments to tie*) and 22.2 and under Schedule Part 6 (*Network Rail costs*);

19.6.2 the indemnities under Clauses 9.2.2.3, 12.11, 20.1.4 and 20.1.5;

19.6.3 any liability in respect of death or personal injury resulting from the negligence of CEC, **tie**, any Contractor or any person for whom either **tie** or CEC is responsible;

19.6.4 any Losses caused by the fraud or negligence of **tie**, CEC or any Contractor;

19.6.5 any Losses in respect of which **tie** or CEC is entitled to compensation as a result the breach or default of any Contractor under any Works Contract (or would be so entitled but for **tie**'s or CEC's own default) and for these purposes the entitlement of **tie** or CEC to recover shall be deemed not to be affected by this Clause; or

19.6.6 any Losses in respect of which **tie** or CEC is entitled to recovery from its insurers (or would be so entitled but for **tie** or CEC's own default) and for these purposes the entitlement of **tie** to recover shall be deemed not to be affected by this Clause.

19.7 CEC and **tie** shall not be liable in respect of Land and Noise Claims except as set out in Clause 20.1.8 unless:

19.7.1 the Works have been designed by CEC, **tie** or any designer appointed by CEC or **tie** (other than Network Rail); and

19.7.2 such claims arise due to breach by **tie** or CEC of Clause 7.2.

19.8 In no event shall Network Rail, CEC or **tie** be liable to one another for any loss of production, loss of profit, loss of revenue, loss of contracts, liabilities incurred under other agreements or any indirect or consequential loss arising out of or in connection with this Agreement (without prejudice to any express payment or indemnity obligation of any Party under this Agreement).

20. INDEMNITY

20.1 Subject to Clause 19.6 CEC shall indemnify Network Rail and keep Network Rail indemnified against any Losses arising from:

20.1.1 claims against Network Rail by any third party in relation to the carrying out of the Works and/or the subsequent existence and/or operation of the completed Works prior to the date of entry into the Lease (where ownership of the Works is not transferred to Network Rail);

20.1.2 any damage caused to the Network and any consequential effects on the operation of the Network arising as a result of the rights granted to CEC and/or **tie** under this Agreement;

20.1.3 any liability in respect of death or personal injury resulting from the negligence of CEC, **tie**, any Contractor or any person for whom either **tie** or CEC is responsible;

20.1.4 all reasonable costs, charges, and expenses incurred in respect of the effect of electromagnetic interference from the Edinburgh Tram Network on the Network during and after construction of the Works ;

20.1.5 all monies, claims and costs due to be paid by Network Rail to any competent party under the Depot Access Conditions, the Station Access Conditions, any Depot Access Agreement, Station Access Agreement or Track Access

Agreement, the Network Code or the Act arising as a consequence of the Edinburgh Tram Network or the Works (including any claim for compensation by any such party under or arising out of a Regulated Change);

- 20.1.6 any provisions of this Agreement being, or being alleged to be, void, voidable, unenforceable, invalid or ineffective due to lack of capacity on the part of CEC or **tie**;
- 20.1.7 CEC or **tie** or any of its employees, agents or sub-contractors infringing or being held to have infringed any intellectual property rights in the course of or in connection with this Agreement; or
- 20.1.8 any Land or Noise Claim (in the case of claims relating to the Network, only up to the Land Compensation Limit).

In respect of any Losses subject to the indemnity in this Clause 20.1, Network Rail shall take all reasonable steps to prevent, mitigate and restrict the circumstances which have given or may give rise to such Losses.

- 20.2 Network Rail, upon becoming aware of any claim in respect of which it may be entitled to indemnification under Clause 20.1, shall give written notice to CEC as soon as reasonably practicable, and in any event within 15 Working Days of it reasonably appearing that Network Rail may be entitled to indemnification pursuant to this Clause.
- 20.3 Subject to Network Rail obtaining the prior written consent of its insurers, CEC shall be entitled to resist any such claim in the name of Network Rail and shall have the right to conduct any defence, dispute, compromise or appeal of such claim or negotiations. Network Rail shall give CEC all reasonable co-operation, access and assistance for the purpose of considering and resisting such claim.

- 20.4 Where CEC is responsible for conducting any claim pursuant to Clause 20.3, it shall keep Network Rail fully informed and consult with it about the conduct of such claim and shall not pay or settle such claim without the consent of Network Rail, provided that Network Rail shall be entitled to pay or settle any claim on such terms as it in its absolute discretion considers fit without prejudice to any other rights or remedies Network Rail may have if:
- 20.4.1 CEC fails to notify Network Rail of its intention to dispute any claim within 15 Working Days after receipt of the notice referred to in Clause 20.2;
 - 20.4.2 CEC fails to comply in any material respect with the provisions of this Clause 20; or
 - 20.4.3 Network Rail waives the indemnity contained in this Clause 20 by notice in writing to CEC.
- 20.5 The obligations of CEC under Clause 20.1:
- 20.5.1 are, subject to Clause 20.6, in addition to and not in substitution for any other indemnity, guarantee or any security which Network Rail may at any time hold; and
 - 20.5.2 may, subject to Clause 27.8 be enforced by Network Rail at its discretion without first having recourse to any other such indemnity, guarantee or security, without taking any steps or proceedings against CEC or any other person, and without resorting to any other means of payment.
- 20.6 To the extent that a PPA Indemnity includes Losses which arise prior to the date of entry into the Lease and for which recovery by Network Rail under this Agreement is available (or would be available but for the application of the CEC/tie Cap or the exceptions expressly specified in this Agreement), the provisions of this Agreement shall supersede the PPA Indemnity and the PPA Indemnity shall not apply to those Losses; provided that, for the avoidance of doubt, in respect of all Losses which arise on or after the date of entry into the Lease and all Losses for which recovery by Network Rail under this Agreement is not available (other than as a consequence of the application of the CEC/tie Cap or the exceptions expressly specified in this Agreement) each PPA Indemnity shall remain in full force and effect.

21. TERMINATION

- 21.1 In this Clause a "**Customer Termination Event**" means:
- 21.1.1 a material breach of this Agreement by **tie** or CEC;
 - 21.1.2 CEC (or **tie** on CEC's behalf) failing to obtain any approval or consent required from Network Rail under the terms of this Agreement (save where such approval or consent is expressed not to be unreasonably withheld or delayed and is so withheld or delayed by Network Rail, or where such failure can be remedied by CEC, or where there is an outstanding appeal);
 - 21.1.3 CEC (or **tie** on CEC's behalf) failing to commence construction of the Works within 12 months from the Commencement Date (other than due to the breach by Network Rail of its obligation under Clause 5.4);
 - 21.1.4 abandonment of the whole or any part of the Works by CEC (or **tie** on CEC's behalf) at any time after commencement of the carrying out of the Works for a period of at least 15 Working Days; or
 - 21.1.5 (save in relation to a disputed payment in respect of which a notice of intention to withhold payment has been given pursuant to Clause 18.4) CEC (or **tie** on CEC's behalf) failing to pay Network Rail any sum in excess of £10,000 which is payable to Network Rail under this Agreement.
- 21.2 In the event of a Customer Termination Event, Network Rail may inform **tie** and CEC by notice ("**First Notice**") providing full details of the Customer Termination Event. If within 20 Working Days of receipt of the First Notice CEC does not take satisfactory steps to rectify the Customer Termination Event, Network Rail may by a further notice ("**Second Notice**") terminate this Agreement. Any termination pursuant to the Second Notice shall become effective on a date to be specified therein, not being more than 20 Working Days after the date of service of the Second Notice.
- 21.3 If the Customer Termination Event is not (in the reasonable opinion of Network Rail) capable of being rectified, Network Rail shall in the First Notice terminate this Agreement without being required to serve a Second Notice, provided that the First Notice shall in such case state that the termination is being made without any further notice being served.

- 21.4 If CEC or **tie** becomes Insolvent, Network Rail shall be entitled by notice in writing to CEC and **tie** to terminate this Agreement with immediate effect and if Network Rail becomes Insolvent, CEC (or **tie** on CEC's behalf) shall be entitled by notice in writing to Network Rail to terminate this Agreement with immediate effect.
- 21.5 If there is a material breach of this Agreement by Network Rail, CEC may inform Network Rail by notice ("**First Notice**") providing full details of such breach. If within 20 Working Days of receipt of the First Notice Network Rail does not take satisfactory steps to rectify such breach, CEC may by a further notice ("**Second Notice**") terminate this Agreement. Any termination pursuant to the Second Notice shall become effective on a date to be specified therein, not being more than 20 Working Days after the date of service of the Second Notice.
- 21.6 If the breach by Network Rail is not (in the reasonable opinion of CEC) capable of being rectified, CEC may in the First Notice terminate this Agreement without being required to serve a Second Notice provided that the First Notice shall in such case state that the termination is being made without any further notice being served.
- 21.7 If the whole or substantially the whole of the Works is suspended otherwise than:
- 21.7.1 as a result of a material breach of this Agreement by Network Rail; or
- 21.7.2 in circumstances where Clause 10.3 or 15.1 applies;

and that suspension continues for an uninterrupted period of three months or in aggregate for a period of six months, Network Rail shall be permitted to give notice to **tie** and CEC of its intention to terminate this Agreement. If the performance of the Works has not been resumed on or before the expiry of 20 Working Days after delivery of such notice, Network Rail shall be permitted to terminate this Agreement with immediate effect by further notice in writing to **tie** and CEC, provided such failure to resume the performance of the Works is not due to the circumstances set out in Clauses 21.7.1 or 21.7.2 above.

22. CONSEQUENCES OF TERMINATION

- 22.1 Upon termination of this Agreement the obligations of the Parties under this Agreement shall cease except for:
- 22.1.1 any obligations arising as a result of any antecedent breach of this Agreement or any accrued rights;
 - 22.1.2 any obligation on the part of CEC or **tie** to pay Network Rail any sum payable to it under this Agreement or to indemnify Network Rail and keep Network Rail indemnified pursuant to any indemnity contained in this Agreement; and
 - 22.1.3 Clauses 19 (*Limitation of Liability*), 22 (*Consequences of Termination*) and 23 (*Confidentiality*) along with any other Clauses of or Schedules to this Agreement which are necessary to give effect to them.
- 22.2 Subject to Clause 22.3, if this Agreement is terminated and the Works (or part thereof) have not been completed, CEC agrees to pay Network Rail within 20 Working Days of demand in writing to **tie** the costs and expenses incurred by Network Rail in removing all plant, equipment and those materials not incorporated into the Works and:
- 22.2.1 in reinstating or procuring the reinstatement of the Works (or such part or Sector thereof as may be required by Network Rail and which exists as at the date of termination) and the relevant part or parts of the Railway affected by the Works; or
 - 22.2.2 completing the Works in whole or in respect of a Sector or part thereof, to the extent necessary to make the same safe and/or secure and enable Network Rail to meet its contractual, statutory and Network Licence obligations. If so requested by Network Rail, CEC (or **tie** on CEC's behalf) shall give reasonable assistance to Network Rail in relation to making good the Site. Network Rail shall account to CEC for the value of any unused materials so removed.
- 22.3 CEC will not be liable to make any payment under Clause 22.2 where termination is due to Network Rail's insolvency under Clause 21.4 or default under Clause 21.5 or a Force Majeure Event under Clause 15.6.

22.4 Save as set out in Clauses 22.1 and 22.2 neither Party shall be entitled to any payment or compensation or other rights or remedies in respect of loss of profits, revenue or goodwill in connection with the termination of this Agreement for any cause whatsoever.

23. CONFIDENTIALITY

23.1 Subject to Clauses 23.2 and 23.5 the Parties shall:

23.1.1 at all times keep all Confidential Information confidential to the Party receiving it and shall not disclose such Confidential Information to any other person; and

23.1.2 procure that its Affiliates and its/their respective officers, employees and agents shall keep confidential and not disclose to any person any Confidential Information

except in the case of disclosure by Network Rail, with **tie**'s prior written consent, and in the case of disclosure by CEC or **tie**, with Network Rail's prior written consent.

23.2 Each Party shall, without the prior written consent of the other Parties, be entitled to disclose Confidential Information:

23.2.1 that is reasonably required by that Party in the performance of its obligations pursuant to this Agreement, including the disclosure of any Confidential Information to any employee, consultant, agent, officer, sub-contractor (of any tier) or adviser to the extent necessary to enable that Party to perform its obligations under this Agreement;

23.2.2 to enable a determination to be made under the Dispute Resolution Procedure;

23.2.3 to its lenders or their professional advisers, any rating agencies, or its insurance advisers but only to the extent reasonably necessary to enable a decision to be taken on the proposal;

23.2.4 to the extent required by the Act or any other applicable Legal Requirement or pursuant to an order of any court of competent jurisdiction, any parliamentary obligation or the rules of any stock exchange or governmental or regulatory authority having the force of law;

- 23.2.5 to register or record any Necessary Consents and to effect any property registration that may be required;
- 23.2.6 for the purpose of the examination and certification of any Party's accounts;
- 23.2.7 in relation to disclosure by Network Rail, in order to fulfil its Network Licence obligations or assist in the planning or execution of other maintenance, renewal or enhancement projects;
- 23.2.8 to the Health and Safety Executive;
- 23.2.9 to CEC;
- 23.2.10 to any Affiliate of either party; or
- 23.2.11 to the extent it has become available to the public other than as a result of any breach of an obligation of confidence;
- provided that any such disclosure is made in good faith.
- 23.3 Where disclosure is permitted under Clauses 23.2.1, 23.2.3 23.2.9 or 23.2.10, the Party making such disclosure shall ensure that the recipient of the information is subject to the same obligation of confidentiality as that contained in this Agreement.
- 23.4 Subject to Clauses 23.2.3 to 23.2.8 (inclusive) and 23.2.11, no Party shall make use of any information arising out of the Works issued or provided by or on behalf of another Party in connection with this Agreement otherwise than for the purposes of this Agreement, except with the prior written consent of the Party by whom or on whose behalf the information was provided.
- 23.5 Nothing in this Clause 23 shall be deemed to prohibit, prevent or hinder, or render either Party liable for, the disclosure of any information by that Party to the ORR, the Parliamentary Commissioner for Administration, a Minister of the Crown, the Scottish Ministers, or any department of the Government of the United Kingdom, the European Commission, Parliament, the Scottish Parliament, the National Assembly of Wales, the Mayor of London, the Greater London Authority or any department or officer of any of them or of information which is otherwise disclosed for the purpose of facilitating the carrying out of its functions.
- 23.6 The Parties acknowledge that:

- 23.6.1 pursuant to the provisions of section 1(1) of the Freedom of Information Act 2000 and section 1(1) of the Freedom of Information (Scotland) Act 2002, all regulations made under them, and the Environmental Information Regulations 2004 and the Environmental Information (Scotland) Regulations 2004, and any amendment or re-enactment of any of them issued by the information Commissioner, the Department for Constitutional Affairs, and DEFRA in relation to such legislation (the “**Information Acts**”), any person has a right to request information in any form from any of the other Parties who is or becomes a public authority under the Information Acts (for the purpose of this Clause 23.6 a “**Public Authority**”);
- 23.6.2 a Public Authority has a duty (to the extent required by and subject to any exemptions in the Information Acts) to disclose the information requested and subsequently to communicate it to the person making the request; and
- 23.6.3 the publication scheme which a Public Authority is required to adopt and maintain under the Information Acts may refer to information relating to the Works or disclosed in tendering for, the negotiation of, or pursuant to this Agreement (“**Project Information**”).
- 23.7 In the event that a Public Authority receives a request under the Information Acts relating to Project Information, it shall comply with such a request in accordance with the Information Acts and any applicable code of practice made thereunder provided that:
- 23.7.1 the Public Authority shall comply with any such request only if none of the exemptions from disclosure in the Information Acts applies and the other Party shall provide reasonable assistance and co-operation to the Public Authority to enable the Public Authority to comply with such request; and
- 23.7.2 in the event that a Public Authority is in doubt whether any such exemption applies, it shall inform the other Party of the request as soon as possible and shall consult with the other Party as to the potential application of any exemption;
- 23.7.3 the Public Authority shall inform the other Party of any Project Information it has disclosed as soon as possible after such disclosure; and

- 23.7.4 if the request relates to Confidential Information the Public Authority shall, where practicable, consult with the other Party in advance of making any disclosure under the Information Acts and shall, acting reasonably, take due account of all reasonable representations by the other Party that such Confidential Information is exempt information.
- 23.8 For the purposes of section 43(2) of the Information Act, the Public Authority acknowledges and agrees that the disclosure by it of any commercially sensitive Project Information is likely to prejudice the commercial interests of the Parties.
- 23.9 If this Agreement is terminated, each Party shall:
- 23.9.1 return to the others all of the Confidential Information then within its possession or control; or
 - 23.9.2 destroy such Confidential Information using a secure and confidential method of destruction; or
 - 23.9.3 unless reasonably requested to return it, retain such Confidential Information but so that the Party in question shall only be required to return any such information if it can readily identify and locate such information. If a Party elects to retain any such Confidential Information the provisions of this Clause 23 shall remain in full force and effect in relation to such Confidential Information notwithstanding the termination of this Agreement.
- 23.10 Save as required by law or regulation, no Party shall issue any press release in relation to the matters contemplated by this Agreement without, in the case of issue by Network Rail, the prior written consent of **tie**, and in the case of issue by CEC or **tie**, the prior written consent of Network Rail (such consent in each case not to be unreasonably withheld or delayed) as to both the content and the timing of the issue of the press release.

24. DISPUTE RESOLUTION

- 24.1 The Parties agree that this Clause 24 (*Dispute Resolution*) shall have effect for the resolution of any Dispute.
- 24.2 Any Dispute shall, in the first instance, be referred to the internal resolution procedure (the "**Internal Resolution Procedure**") in accordance with Clause 24.5.

- 24.3 None of the Parties shall commence any court proceedings until the Dispute Resolution Procedure has been completed, under exception that the Dispute Resolution Procedure shall not apply so as to prevent any of the Parties seeking an interim order, or interim relief, in the Scottish courts.
- 24.4 Subject to CEC's discretionary rights set out in paragraph 1.42 to paragraph 1.44 of Schedule Part 9 require that a Dispute and a Related Dispute (as defined in paragraph 1.42) be dealt with together at an appropriate stage of the Dispute Resolution Procedure, the provisions of this Clause 24 and the Dispute Resolution Procedure are mandatory and binding upon the Parties.
- 24.5 The following procedure is the Internal Resolution Procedure referred to in Clause 23.2:
- 24.5.1 in the event of any Dispute arising, the representatives of the Parties shall seek to resolve the Dispute at a meeting to be convened within three Working Days of written notification by one Party to the other Parties to initiate the Internal Resolution Procedure in respect of that Dispute ("**Notification**");
- 24.5.2 further meetings may follow the meeting referred to in Clause 24.5.1, but in any event, if the Dispute is not resolved within seven Working Days of Notification, each Party shall, before the expiry of the period of 10 Working Days from Notification, serve a written position paper ("**Position Paper**") upon the other Parties. Each Party's Position Paper shall state in reasonable detail that Party's position and required objectives in relation to the Dispute, any required redress, and, where possible, any comment on the position of the other Parties;
- 24.5.3 upon such service of the Position Paper by the Party initiating or pursuing the Dispute, the chief executive of CEC and the Regional Director (Scotland) of Network Rail (or their respective deputies in the event of their unavailability) shall seek to resolve the Dispute by meeting in good faith to discuss and negotiate upon the Dispute without recourse to legal or other proceedings;
- 24.5.4 in the event that resolution of the Dispute is achieved by the chief executive of CEC and the Regional Director (Scotland) of Network Rail, the resolution shall be reduced to writing and, once it is signed by the duly authorised representatives of the Parties, shall be binding on the Parties.

- 24.5.5 unless concluded by a written legally binding agreement, all discussions and negotiations connected with the Dispute shall be conducted in confidence and without prejudice to the rights of the Parties to the Dispute in any future legal or other proceedings, nor may such matters be produced or relied upon in evidence in any such proceedings.
- 24.6 Subject to the provisions of Clause 24.9, in the event that any Dispute is not resolved by the Internal Resolution Procedure within a period of 30 Working Days from Notification (or longer if so agreed by the parties) then the following provisions of this Clause 24.6 shall apply:
- 24.6.1 the chief executive of CEC and the Regional Director (Scotland) of Network Rail (or their respective deputies in the event of their unavailability) shall, within a further period of five Working Days, seek to agree that the Dispute shall be resolved by any one of the following procedures:
- 24.6.1.1 adjudication in accordance with the provisions of Schedule Part 9 in which event the Referring Party must give its Notice of Adjudication to the other parties within five Working Days of the date of expiry of the period of 35 Working Days from Notification (or longer if so agreed by the Parties); or
- 24.6.1.2 litigation before the Court of Session, Scotland, in which event the Summons or Petition in any such litigation shall be signetted and served within 10 Working Days of the date of expiry of the period of 35 Working Days from Notification (or longer if so agreed by the parties to the Dispute).
- 24.7 Subject to the provisions of Clause 24.9, in the event that the chief executive of CEC and the Regional Director (Scotland) of Network Rail (or their respective deputies in the event of their unavailability) are unable to agree that the Dispute be resolved by the procedures described in Clauses 24.6.1.1 and 24.6.1.2 , the Party initiating or pursuing the Dispute shall refer the Dispute to adjudication in accordance with Schedule Part 9 (*Adjudication Procedure*).
- 24.8 In the event that a Party refers a Dispute to adjudication, whether in pursuance of the exercise of a statutory right available to it (if any) under the Housing Grants Construction & Regeneration Act 1996 or otherwise, to raise adjudication

proceedings, such adjudication shall be conducted in accordance with the Adjudication Procedure.

- 24.9 Any Dispute concerning the interpretation of the occurrence of "Safety Critical Event", "Operational Emergency" and/or "efficient operation of the Railway" shall not be subject to the Adjudication Procedure but may be referred to the ORR for determination.

25. NOTICES

- 25.1 Any notice, objection or communication to be given under this Agreement shall be in writing and shall be duly given if signed by a duly authorised person on behalf of the Party giving such notice, objection or communication and delivered by hand, by first class post or by facsimile transmission to the relevant address or facsimile number set out in Schedule Part 7 (*Notice Details*).
- 25.2 Any Party shall be entitled to amend in any respect the communication particulars which relate to it and which are set out in Schedule Part 7 (*Notice Details*). Any such amendment shall be made only by notice given to the other Parties in accordance with this Clause 24 (*Dispute Resolution*).
- 25.3 Notices, objections or communications given under this Agreement shall be deemed to have been received as follows:
- 25.3.1 if sent by hand or by recorded delivery, at the time of delivery (and for the purpose of this Clause 25 delivery by hand shall include delivery by a reputable firm of couriers);
- 25.3.2 if sent by prepaid first class post, from and to any place within the United Kingdom, two Working Days after posting unless otherwise proven; and
- 25.3.3 if sent by facsimile before 5.00pm on a Working Day, upon sending (subject to confirmation of uninterrupted transmission by a transmission report), and in any other case at 9.00pm hours on the first Working Day following the day of transmission.
- 25.4 If in Schedule Part 7 (*Notice details*) there is specified any person to whom copies of notices shall also be sent the Party serving a notice shall send a copy of the notice in question to such person at the address for serving copies as specified in Schedule Part

7 (*Notice details*). Such copy notice shall be sent at the same time as the original notice.

26. AUTHORITY OF TIE AND CEC'S RESPONSIBILITIES

- 26.1 CEC and **tie** each warrant to Network Rail that **tie** has full authority to act on behalf of and as agent for CEC for all purposes of this Agreement. Network Rail shall be entitled to treat any act of **tie** in connection with this Agreement as being expressly authorised by CEC and Network Rail will not be required to determine whether any express authority has been given.
- 26.2 CEC acknowledges and undertakes to Network Rail that **tie** is an agent for CEC and that CEC acts as principal in respect of all acts and omissions of **tie** under or in connection with this Agreement and that, as such principal it is bound by and responsible for and liable to Network Rail for all acts, omissions, negligence, breach of contract or default on the part of **tie** and is responsible as principal for the proper and punctual performance of all obligations and liabilities owed to Network Rail under this Agreement, whether stated to be the obligations of CEC or **tie** (including all payment obligations, indemnities and liabilities for breach of contract).
- 26.3 Without prejudice to the foregoing generality, CEC acknowledges that **tie** has authority to accept notices, certifications or other written communications on its behalf and that any notices, certifications or other written communications made by Network Rail under this Agreement to **tie** shall be treated (except where this Agreement expressly provides otherwise) as valid and effective notices, certifications and/or communications to CEC.
- 26.4 In enforcing performance of the obligations of either CEC or **tie** under this Agreement, Network Rail shall be entitled to raise proceedings (including under the Dispute Resolution Procedure) against CEC or **tie** without the necessity in each case of Network Rail enquiring as to responsibility between CEC and **tie** for any failure to perform such obligations.
- 26.5 CEC and **tie** each acknowledge and undertake to Network Rail that payment by Network Rail to either or CEC or **tie** shall be treated as being in full satisfaction and discharge of the claims of both CEC and **tie** to which such payment relates.
- 26.6 Network Rail acknowledges and undertakes to CEC and **tie** that:

- 26.6.1 payment to Network Rail under any provision of this Agreement may be made by either CEC or **tie** to Network Rail and shall be treated as being in full satisfaction and discharge of the claims to which such payment relates;
- 26.6.2 obligations and actions expressed to be for either **tie** or CEC to execute under any provision of this Agreement may be satisfied by either CEC or **tie** and shall be treated as being in full satisfaction and discharge of such obligation as between CEC and **tie**.

27. MISCELLANEOUS

- 27.1 This Agreement is personal to the Parties and no Party shall assign all or any part of the benefit of, or its rights or benefits under, this Agreement without the prior written consent of the other Parties (not to be unreasonably withheld or delayed) provided that such consent shall not be required in respect of any assignation by any Party to a statutory successor of the rights, obligations and interests of such Party.
- 27.2 No amendment to or variation of this Agreement shall be effective unless in writing and signed by or on behalf of each Party. No general terms and conditions contained in any purchase order or other document customarily required by any Party in connection with a request for works or services shall be binding on the Parties except to the extent that such a document is signed by or on behalf of the Parties, makes specific reference to this Agreement and specifically amends the terms thereof.
- 27.3 Nothing in this Agreement confers or purports to confer on a third party who is not a Party to this Agreement any benefits or rights to enforce a term of this Agreement.
- 27.4 Subject and without prejudice to Clause 26 (*Authority of tie and CEC's responsibilities*), nothing in this Agreement shall create a partnership, association or joint venture or establish a relationship of principal and agent. CEC and **tie** shall not have any authority (unless expressly conferred in writing by virtue of this Agreement or otherwise and not revoked) to bind Network Rail as its agent or otherwise and Network Rail shall not have any authority (unless expressly conferred in writing by virtue of this Agreement or otherwise and not revoked) to bind CEC or **tie** as its agent or otherwise.
- 27.5 No waiver by any Party of any default or defaults by another in the observance or performance of any of the provisions of this Agreement shall operate or be construed

as a waiver of any other or further default or defaults whether of a like or different character. No failure or delay by any Party in exercising any right, power or privilege under this Agreement shall operate as a waiver thereof nor shall any single or partial exercise by that Party of any right, power or privilege preclude any further exercise thereof or the exercise of any other right, power or privilege.

- 27.6 If at any time any provision of this Agreement is or becomes illegal, invalid or unenforceable in any respect neither the legality, validity or enforceability of the remaining provisions nor the legality, validity or enforceability of such provisions under the law of any other jurisdiction will, in any way, be affected or impaired and the legality, validity and enforceability of the remainder of this Agreement shall not be affected.
- 27.7 This Agreement constitutes the entire agreement between the Parties relating to the subject matter of this Agreement and supersedes and extinguishes any prior drafts, undertakings, representations, warranties and arrangements of any nature whether in writing or oral relating to such subject matter except that the Framework Development Agreement dated 30 November 2005, the Protective Provisions Agreement, the Works Contract dated 13 and 24 March 2006, and the Development Services Agreement dated 5 December 2007 already entered into by all or any of the parties and the Framework Agreement dated on or about the date of this Agreement shall, subject to Clause 20.6, each continue in full force and effect.
- 27.8 Network Rail shall not be entitled to make a claim against CEC or **tie** which would, if successful, constitute double recovery for, or receive double recovery in respect of, any costs or losses for which a claim has previously been raised against either CEC or **tie** under any provision of this Agreement or those agreements referred to in Clause 27.7. Neither **tie** nor CEC, shall be entitled to make a claim against Network Rail which would, if successful, constitute double recovery for, or receive double recovery in respect of, any costs or losses for which a claim has previously been raised by either CEC or **tie** under any provision of this Agreement or those agreements referred to in Clause 27.7.
- 27.9 Each Party acknowledges that it has not been induced to enter into this Agreement by any representation, warranty or undertaking not expressly incorporated into it.

27.10 This Agreement shall be governed by and construed in accordance with Scots law. Save as expressly provided otherwise the Parties irrevocably agree that the Scottish courts shall have exclusive jurisdiction to settle any Disputes that may arise out of or in connection with this Agreement.

IN WITNESS WHEREOF these presents consisting of this and the preceding 80 pages together with the annexed Schedule are executed as follows:

EXECUTED for and on behalf of NETWORK RAIL INFRASTRUCTURE LIMITED at EDINBURGH

on 13TH MARCH 2008 by:

Authorised Signatory

Full Name

Witness Signature

Full Name

Address

[Redacted] ROYAL WILLIAM M'CAULAY
[Redacted]
Allan Laurie Macdonald
Excel House 30 Sempie Street
Edinburgh

EXECUTED for and on behalf of TIE LIMITED at EDINBURGH

on 13 MARCH 2008 by:

Authorised Signatory

Full Name

Witness Signature

Full Name

Address

[Redacted] WILLIAM GALLAGHER
[Redacted]
ARASDAIR SIM
[Redacted]
BURTISLAND PIFE

EXECUTED for and on behalf of **CITY OF EDINBURGH COUNCIL** at

on 14 March 2008 by:

Authorised Signatory

_____ 

Full Name

_____ COLIN D WILSON

Witness Signature

_____ 

Full Name

_____ PHILIP WELT

Address

_____ COLINS HOUSE, RUTLAND SQUARE
_____ EDINBURGH EH1 2AA

**THIS IS THE SCHEDULE REFERRED TO IN THE FOREGOING ASSET
PROTECTION AGREEMENT AMONG NETWORK RAIL INFRASTRUCTURE
LIMITED, TIE LIMITED AND CITY OF EDINBURGH COUNCIL**

SCHEDULE PART 1

Functional specification

1. Description of the works

The Works form part of the construction of the Edinburgh Tram Network running from Leith in the East to Edinburgh Airport in the West.

The Edinburgh Tram Network either runs adjacent to or crosses Network Rail Property in the section of the route from Haymarket Station to Edinburgh Park and at a discrete location to the East at Leith Walk. For the purposes of this Agreement the Works cover that section of the proposed tram route where the works in respect of that route fall within the clearance criteria detailed within Network Rail document "Requirements for Constructional Work On or Near Railway Operational Land" (October 2007).

A brief description of Works is detailed below:

- the construction of a viaduct and alteration of access and car-parking at Haymarket Station.
- Works at Haymarket Depot to alter access routes, car parking and fuelling point location.
- The design and construction of structures (bridges and retaining walls) at various locations along the route as detailed in Section 2 (Scope) below.
- Works to an existing overbridge at Leith Walk.
- The design and construction of the Edinburgh Tram Network on the north side of the East Coast North line from approximately 1 mile 440 yards to 3 miles 340 yards and to the South of the Edinburgh to Glasgow line from approximately 44 miles 130 yards to 42 miles 460 yards.
- System electrical immunisation works (but only where it is expressly agreed by Network Rail that this should form part of the Works).

2. Scope

For the purposes of project control, the Works will be divided into Sectors which will have staggered completion certificates. The main works in each Sector are described below. The tram route itself in relevant Sectors will also be included in the Works where the route falls within the clearance criteria detailed within Network Rail document "Requirements for Constructional Work On or Near Railway Operational Land" (October 2007).

These Sectors and scope of Works are as follows.

Sector A

- **Lineside Fencing-** Provision of new or altered lineside fencing at locations along the tram route where the Edinburgh Tram Network interfaces with the operational railway.
- **Lineside Access Routes-** Provision of new or altered lineside access routes at locations along the tram route where the Edinburgh Tram Network interfaces with the operational railway.

Sector B

- **Haymarket Depot** - The tram route will pass through the Haymarket Train Maintenance Depot, owned by Network Rail and currently leased to First Scotrail. Works will be required within the depot to amend carparking, access and walking routes. Depot Change arrangements will have to be progressed to facilitate this work.

Sector C

- **Haymarket Station Viaduct-** A new viaduct is to be constructed through the existing Haymarket Station carpark to carry the tram West of Haymarket Station. This will require changes to the station carpark, station access and arrangements at the station itself for taxi and other vehicular access. Station Change arrangements will have to be progressed to facilitate this work in consultation with the Train and Freight Operating Companies and other stakeholders.

Sector D

- **Russell Road Bridge-** This bridge carries the proposed tram over existing Russell Road. The bridge does not cross Network Rail Property, but is to be constructed adjacent to the existing Network Rail underbridge at Russell Road.
- **Russell Road Retaining Walls-** 2 No retaining walls will be constructed at Russell Road to the north side of Haymarket depot. The walls themselves are outwith the operational railway track area.

Sector E

- **Murrayfield Tramstop Retaining Wall-** this retaining wall is required to facilitate construction of Murrayfield Tramstop to the West of Haymarket depot.

Sector F

- **Roseburn Street Viaduct-** This bridge carries the proposed tram across Roseburn Street from the West side of Haymarket Depot to the south of Murrayfield Stadium. The bridge is adjacent to the existing Network Rail underbridge at Roseburn Street.
- **Murrayfield Stadium Retaining Walls-** two retaining walls are proposed, one adjacent to Murrayfield stadium and one adjacent to the Murrayfield training pitches. The walls are required to support the proposed tram line adjacent to the stadium and training pitches. The line of the retaining walls runs parallel to the East Coast North and Edinburgh to Glasgow train lines. The west head shunt for Haymarket depot is also affected.
- **Murrayfield Underpass-** A pedestrian underpass is to be constructed at Murrayfield. This underpass is to join up with an existing underpass which passes beneath the operational railway (on the ECN line, approximate mileage 2 miles 260 yards).

Sector G

- **Water of Leith Bridge-** This proposed structure will carry the tram over the Water of Leith and will lie to the north of and run to the existing Network Rail bridge over this waterway.

Sector H

- **Baird Drive Retaining Wall-** A retaining wall is proposed at Baird Drive adjacent the operational railway to the North of the East Coast North line.
- **Balgreen Road Retaining Wall-** a retaining wall adjacent to Balgreen Road is proposed.
- **Balgreen Road Bridge-** A new structure is proposed to carry the tram over Balgreen Road. The structure will be adjacent to and parallel with the existing rail network.
- **Balgreen Road Access Bridge-** The existing Network Rail access bridge will also be re-decked as part of the Works.

Sector I

- **Carrick Knowe Bridge-** This bridge will carry the tram from the North side of the existing railway to the south, crossing both the East Coast Main line North (at approximately 3 miles 340 yards) and the Edinburgh to Glasgow line (at 44 miles 130 yards).

Sector J

- **Saughton Road Underbridge-** modification to existing underbridge will be undertaken
- **Broomhouse Road Underbridge-** modification to existing underbridge will be undertaken.

Sector K

- **South Gyle Access Bridge-** new structure proposed at South Gyle to the East of proposed South Gyle tram stop.
- **Bankhead Drive Retaining Wall-** a new retaining wall is proposed to the North of the tram line at Bankhead Drive/ South Gyle.

Sector L

- **Edinburgh Park Bridge-** This bridge is proposed to carry the tram from the South to the North side of the Edinburgh to Glasgow railway line at approximate mileage 42 miles 460 yards.

Sector M

- **Leith Walk Railway bridge-** This is an existing structure which carries the Powderhall branch of the operational railway. The route of the tram will pass under this bridge.

Sector N

- **Network Rail System Electrical Immunisation-** the work required to mitigate the potential effects to Network Rail infrastructure of electromagnetic interference (EMI) or corrosion due to effects of coupled energy or stray current from the Edinburgh Tram traction system where it is expressly agreed by Network Rail that this work will be carried out by tie as part of the Works.

3. Drawings and Specifications

Drawings and specifications relevant to the above scope will be as detailed within the Works Requirements document defined in Clause 1.1 of this Agreement.

4. Programme

Specific programme dates relevant to the above scope will be submitted to Network Rail under clause 8.2 of this Agreement.

SCHEDULE PART 2

Services to be provided by Network Rail

1. Services of the Network Rail project sponsor, project management and associated support staff to support and provide guidance to **tie** during the initial stages of the Works.
2. Arrangement of third party asset management to superintend works on or near the line, including Possessions in line with the agreed Works Programme in compliance with the requirements of Network Rail Company Standard RT/LS/P/043 "Health and Safety Management of Third Party Works".
3. Administration and management of internal Network Rail procedures to consider the applications for the Network Rail Consents.
4. The appointment of a project manager and appropriate supporting resources to liaise with the project management organisation of CEC and **tie**.
5. Review of designs and work package plans with particular reference to protection of the Operational Track.
6. Provision of an agreed level of site management staff to interface with the site staff of **tie** on matters pertinent to Network Rail maintaining adherence to its statutory obligations, industry agreements and access contracts
7. Provision of site safety staff and a site safety consultant to provide safety inspection for the duration of the period of construction of the Works as notified to Network Rail by **tie** to ensure the safety and operation of the Network.
8. Provision of staff to carry out site management activities as and when reasonably required.
9. Appointment of key engineering personnel (including but not limited to a Designated Project Engineer and Project Engineers) for relevant engineering disciplines to undertake duties as and when reasonably required in compliance with applicable legislation, Technical Specifications for Interoperability (as published by the European Rail Agency), Railway Group Standards; Network Rail's Safety Management System and associated company standards and specifications.

10. Provision of asset protection services for the duration of the notified implementation period of the Works.
11. Administration of the Taking into Use procedures.
12. Administration and execution of any necessary Network Rail documentation, including but not limited to alterations to the sectional appendix, instructions to staff both maintenance and operational, or any impacts on unchanged infrastructure due to the proximity of the Edinburgh Tram Network.
13. Any additional design approvals and acceptance relevant to the Works identified under Schedule Part 4.

SCHEDULE PART 3**Network Rail requirements**

1. Compliance with the requirements of Network Rail specifications NR/SP/MTC/0056 and NR/SP/MTC/0086 in respect of planning timescales for access to work on Network Rail infrastructure.
2. Compliance with Network Rail publication "Requirements for Constructional Work On or Near Railway Operational Land" (October 2007) in respect of clearances to Network Rail operational property.
3. The areas of Network Rail land that CEC/Tie intends to temporarily occupy during construction of the Works shall be restricted to those highlighted in pink on the Plans.

SCHEDULE PART 4**Network Rail approvals, acceptances and consents**

Network Rail shall only be required to issue the approvals, acceptances and consents referred to in this Schedule Part 4 subject to all necessary requirements relating to the same being satisfied in full:

Part 1

Approvals and acceptances to be provided by Network Rail (subject to all necessary requirements for the approvals and/or acceptances being satisfied in full).

1. The approval of form A, form B and, where relevant, forms C and E as defined in Network Rail Company Standard NR/SP/CIV/003 or equivalent document current at the time of execution of this agreement for the following:

- 1.1 Structures comprising:

- Lineside fencing;
- Lineside Access Routes;
- Haymarket Station viaduct;
- Haymarket Station car Park;
- Russell Road bridge;
- Russell Road retaining wall 1;
- Russell Road retaining wall 2;
- Carrick Knowe bridge;
- Edinburgh Park bridge;
- Alteration to Leith Walk railway bridge;
- Baird Drive retaining wall;
- Balgreen Road retaining wall;
- Balgreen Road Bridge
- Balgreen Road Access Bridge
- Murrayfield Stadium retaining wall;
- Murrayfield Training pitches retaining wall;
- Murrayfield Tramstop Retaining Wall;
- Roseburn Street Viaduct;
- Alteration to Murrayfield underpass;
- Alteration to Balgreen Road bridge;
- South Gyle Access Bridge;
- Bankhead Drive Retaining Wall;
- Alteration to Water of Leith bridge;

- 1.2 Embankment Stabilisation works, where relevant.

- 1.3 As the line through Edinburgh Haymarket station is a conventional TEN, the relevant approval shall also include consideration of the requirements of the applicable Technical Specifications for Interoperability, and the requirements for Form D, where there may be any impact on any Network Rail asset which is subject to planning constraints.
- 1.4 System electrical immunisation works where it is agreed by Network Rail that this should form part of the Works.
2. Approvals pursuant to Clause 2 of this Agreement.
3. Technical approval of all designs for works which have the potential to change and interface with or export risks to Network Rail's boundaries or infrastructure in accordance with applicable legislation particularly including but not limited to the Tram Acts (as defined in Clause 1.1 of this Agreement), The Health and Safety at Work etc Act 1974 (and the associated ROGS regulations, CDM Regulations and EMC regulations), and construction industry and railway industry best practice.
4. Approval of designs for structures forming part of the Works and any other part of the Works notified to CEC/tie.
5. Acceptance of Designer, CDM Co-ordinator, and the Principal Contractor appointed by the client under the CDM Regulations.
6. Approval of Contractor's Construction Phase Plan (as defined in the CDM Regulations).
7. Safety Verification of any alterations to Network Rail infrastructure which arise from this Agreement under its written safety verification scheme in its approved Safety Management System current at the time of execution of this Agreement.
8. Acceptance of work package plans submitted by tie for the Works in accordance with Standard RT/LS/P/043.

Part 2

Consents to be obtained by Network Rail (subject to all necessary requirements for the consents being satisfied in full).

1. Confirmation from other duty holders (as defined in the ROGS regulations) operating on Network Rail's network in the vicinity of the Works that they have no concerns arising both under the Network Codes, and also the Duty of Co-Operation, Regulation 22 of ROGS.
2. Provision of landlord's consent.

SCHEDULE PART 5**Part 1: Form of Infraco Collateral Warranty****THIS AGREEMENT****BETWEEN:**

- (1) **INFRACO** comprising of **BILFINGER BERGER UK LIMITED**, a company incorporated in England and Wales under number 02418086 and having its registered office at 150 Aldersgate Street, London, EC1A 4EJ, and **SIEMENS PLC**, a company incorporated in England and Wales under number 00727817 and having its registered office at Faraday House, Sir Williams Siemens House, Frimley, Camberley, Surrey, GU16 8QD (the "**Infraco**"); and
- (2) **NETWORK RAIL INFRASTRUCTURE LIMITED** registered in England and Wales under company number 2904587 and having its registered office at 40 Melton Street, London NW1 2EE ("**Beneficiary**").

WHEREAS:

- A By an agreement in writing dated [◆] (the "**Infraco Contract**"), **tie Limited** ("**tie**") appointed the Infraco to provide the Infraco Works (as hereinafter defined) in connection with the Edinburgh Tram Network.
- B By an agreement in writing dated [◆] (the "**APA**"), **tie** agreed with Network Rail to ensure that certain additional terms would apply in respect of the Infraco APA Works (as hereinafter defined) in connection with the Edinburgh Tram Network.
- C It is a term of the APA and the Infraco Contract that the Infraco shall enter into this Agreement with Network Rail.

NOW IT IS AGREED AS FOLLOWS:**1. DEFINITIONS AND INTERPRETATION**

1.1 In this Agreement (including the recitals), except where the context otherwise requires, the following words and expressions shall have the following meanings:

"Edinburgh Tram Network" means the tramway which is to be designed, constructed and maintained in Edinburgh pursuant to the Infraco Contract in Phase 1a (forming part of Line One and Line Two as described in the Tram Legislation) and, if the Phase 1b option set out in the Infraco Contract is exercised, Phase 1b, or either of them (as may be amended from time to time together with any modification, line extension, spur, interconnection and any additional line which may be instructed), to be constructed in accordance with the Tram Legislation together with all associated works and facilities including all civil engineering and track works, Trams, infrastructure, plant, machinery and equipment installed or used for such tramway;

"Infraco APA Works" means that part of the works and services to be undertaken by the Infraco under the Infraco Contract which constitute the 'Works' as defined in the APA.

"Infraco Works" means the works and services to be undertaken by the Infraco under the Infraco Contract for the purpose of the Edinburgh Tram Network;

"Party" means each and any of the parties to this Agreement and Parties shall be construed accordingly;

"Phase 1a" means Edinburgh Airport to Newhaven (inclusive), together with the Depot at Gogar and the spur at Roseburn Junction;

"Phase 1b" means Roseburn Junction to Granton Square (inclusive);

"Trams" means the tram vehicles to be provided for operation on the Edinburgh Tram Network;

"Tram Legislation" means the Edinburgh Tram (Line One) Act 2006 and the Edinburgh Tram (Line Two) Act 2006, and such other legislation relative to the Edinburgh Tram Network as may be enacted from time to time;

- 1.2 In this Agreement unless the context otherwise requires:
- 1.2.1 words importing any gender include every gender;
 - 1.2.2 words importing the singular number only include the plural number and *vice versa*;
 - 1.2.3 words importing persons include firms, companies and corporations and *vice versa*;
 - 1.2.4 any reference to any statute (whether or not specifically named) shall include any statutory modification or re-enactment of it for the time being in force and any order, instrument, plan, regulation, permission and direction made or issued under it or under any statute replaced by it or deriving validity from it;
 - 1.2.5 references to Clauses are references to the relevant Clause in this Agreement;
 - 1.2.6 the words "include" and "including" are to be construed without limitation;
 - 1.2.7 where any obligation is undertaken by two or more persons jointly those persons shall be jointly and severally liable in respect of that obligation (and each of Bilfinger Berger UK Limited and Siemens PLC acknowledge and agree that in enforcing performance of the Infraco's obligations under this Agreement or in taking action for breach of such obligations, the Beneficiary shall be entitled to raise proceedings or raise an action against Bilfinger Berger UK Limited and Siemens PLC or either of them jointly and/or severally); and
 - 1.2.8 the headings to the Clauses are for convenience only and shall not affect the interpretation of this Agreement.

2. THE INFRACO'S OBLIGATIONS

- 2.1 The Infraco warrants and undertakes to the Beneficiary:
- 2.1.1 that in performing the Infraco APA Works it has exercised and will continue to exercise all the skill, care and diligence to be reasonably expected of an appropriately qualified and competent contractor which is experienced in carrying out projects of a similar, scope, nature, complexity and size to the Works;

- 2.1.2 that it has complied with and will comply with each and all of the obligations, duties and undertakings of the Infraco in relation to the Infraco APA Works under and pursuant to the Infraco Contract;
- 2.1.3 that it has exercised and will exercise the level of skill, care and diligence specified in clause 2.1.1 to see that on completion the Infraco APA Works will satisfy all performance specifications and requirements contained or referred to in the APA and the Infraco Contract; and
- 2.1.4 that the Beneficiary shall be deemed to have relied upon the Infraco's skill and judgment in respect of those matters relating to the Infraco APA Works as lie within the scope of the Infraco Contract and that the Infraco owes a duty of care in respect thereof to the Beneficiary (but not more onerous than that owed to **tie** under the Infraco Contract).

3. LIABILITY

- 3.1 No approvals, comments, instructions, consents, attendance at meetings relating to the Infraco APA Works or advices from the Beneficiary shall in any way relieve the Infraco from its obligations under this Agreement.
- 3.2 Notwithstanding anything that may be contained elsewhere in this Agreement, the Infraco shall have no greater liability (whether in quantum or in scope) to the Beneficiary than it would have had if the Beneficiary had been named as joint employer under the Infraco Contract (for the purposes of the Infraco APA Works only) provided that, in relying on this clause, the Infraco shall not be entitled to rely on any provision of the Infraco Contract which has not been disclosed to the Beneficiary prior to the date of execution of the APA.
- 3.3 The Infraco shall be entitled in any action or proceedings by the Beneficiary to rely on any limitation in the Infraco Contract and to raise the equivalent rights in defence of liability (except set-off and counterclaim) as it would have against **tie** under the Infraco Contract (but only to the extent that the provisions in the Infraco Contract which are relied on for such purposes have been disclosed to the Beneficiary prior to the Works Commencement Date (as defined in the APA)); Provided that the liability of the Infraco to the Beneficiary for any breach of the terms of this Agreement shall not be affected or diminished where **tie** have suffered no loss, or a loss different from the Beneficiary, by reason of such breach. The Infraco undertakes to the Beneficiary

not to contend that its liability to the Beneficiary is so affected or diminished, whether in defence of proceedings under this Agreement or otherwise.

- 3.4 No action or proceedings for any breach of this Agreement shall be commenced against the Infraco after the expiry of 12 years from the date of practical completion of the Infraco APA Works.
- 3.5 The Infraco shall not be liable to the Beneficiary (save as may be expressly provided under the Infraco Contract) for any delay in completing the Infraco APA Works.

4. INSURANCE

- 4.1 Except to the extent that ~~tie~~ have effected and maintained owner-controlled insurance in respect of the Infraco APA Works, the Infraco has either:
- 4.1.1 effected and will maintain professional indemnity insurance of not less than £5million to cover any one claim and in the aggregate during one period of insurance (which period shall not be more than one year) against the Infraco for any negligent act, error or omission in the carrying out of the Infraco APA Works for a period of 12 years from the date of the issue of the certificate of practical completion of the Works, provided that such insurance continues to be generally available in the insurance market on commercially reasonable terms; or
- 4.1.2 has a credit rating of no less than BBB by Standard and Poor's or the equivalent.
- 4.2 As and when reasonably requested to do so by the Beneficiary, the Infraco shall provide evidence to the reasonable satisfaction of the Beneficiary that the insurances referred to in this Clause are being maintained in accordance with the provisions of this Clause or that the credit rating of the Infraco remains equal to or greater than BBB rating by Standard and Poor's or the equivalent.

5. NOTICES

Any notices to be given under this Agreement shall be either delivered personally or sent by first class recorded delivery post. The address for service of the Beneficiary and of the Infraco shall be as stated in this Agreement or such other address for service as the party to be served may have previously notified in writing to the other party. A notice shall be deemed to have been served as follows:

- 5.1 if personally delivered, at the time of delivery; or
- 5.2 if posted, at the expiration of 48 hours after the envelope containing the same was delivered into the custody of the postal authorities.

In proving such service, it shall be sufficient to prove that personal delivery was made or that the envelope containing such notice was properly addressed and delivered into the custody of the postal authorities as a pre-paid first class recorded delivery letter.

6. GENERAL

- 6.1 The Infraco shall have no claim whatsoever against the Beneficiary in respect of any damage, loss or expense howsoever arising out of or in connection with the Infraco Contract or any amounts due to the Infraco thereunder.
- 6.2 Subject to written notice being served on the Infraco, the Beneficiary may assign the whole or any part of this Agreement on a maximum of two occasions without the consent of the Infraco and no further assignments shall be permitted. The whole or any part of this Agreement may also be assigned by way of security or charged without the consent of the Infraco to any mortgagee of the Beneficiary or its assignees on any number of occasions.
- 6.3 Nothing in this Agreement confers or purports to confer on a third party who is not a Party to this Agreement any benefits or rights to enforce a term of this Agreement.
- 6.4 If for any reason any Clause in this Agreement shall be found to be ineffective inoperable or unenforceable, it shall be severed and deemed to be deleted from this Agreement and in such event the remaining provisions of this Agreement shall continue to have full force and effect.

6.5 This Agreement shall be governed by and construed in accordance with the Scots law and any dispute or difference concerned with its terms shall be referred to the non-exclusive jurisdiction of the Scottish Courts.

IN WITNESS whereof these presents on this and the preceding 6 pages are executed as follows:

EXECUTED for and on behalf of)
NETWORK RAIL INFRASTRUCTURE)
LIMITED)
at)
on the day)
of 2008)
by)

Director/Authorised
Signatory

Name (block capitals)

Witness

Name (block capitals)

Address
.....

EXECUTED for and on behalf of)
BILFINGER BERGER UK LIMITED)
at)
on the day)
of 2008)
by)

Director/Authorised
Signatory

Name (block capitals)

Witness

Name (block capitals)

Address

EXECUTED for and on behalf of)
SIEMENS PLC)
at)
on the day)
of 2008)
by)

Director/Authorised
Signatory

Name (block capitals)

Witness

Name (block capitals)

Address

Part 2: Form of Collateral Warranty (non-Infraco)

THIS AGREEMENT

BETWEEN:

- (1) [CONTRACTOR/SUB-CONTRACTOR] (company number [◆]) whose registered office is at [◆] ("the Contractor") and
- (2) NETWORK RAIL INFRASTRUCTURE LIMITED registered in England and Wales under company number 2904587 and having its registered office at 40 Melton Street, London NW1 2EE ("Beneficiary").

WHEREAS:

- A By an agreement in writing dated [◆] (the "Contract"), tie Limited ("tie") appointed the Contractor to provide the Contractor APA Works (as hereinafter defined) in connection with the Edinburgh Tram Network.
- B By an agreement in writing dated [◆] (the "APA"), tie agreed with Network Rail to ensure that certain additional terms would apply in respect of the Contractor APA Works (as hereinafter defined) in connection with the Edinburgh Tram Network.
- C It is a term of the APA that the Network Rail may require that the Contractor shall enter into this Agreement with Network Rail.

NOW IT IS AGREED AS FOLLOWS:

1. DEFINITIONS AND INTERPRETATION

- 1.1 In this Agreement (including the recitals), except where the context otherwise requires, the following words and expressions shall have the following meanings:

"Contractor APA Works" means that part of the works and services to be undertaken by the Contractor under the Contract which constitute a part of the 'Works' as defined in the APA;

"Edinburgh Tram Network" means the tramway which is to be designed, constructed and maintained in Edinburgh in Phase 1a (forming part of Line One and Line Two as described in the Tram Legislation) and, if the Phase 1b option set out in

the Infraco Contract is exercised, Phase 1b, or either of them (as may be amended from time to time together with any modification, line extension, spur, interconnection and any additional line which may be instructed), to be constructed in accordance with the Tram Legislation together with all associated works and facilities including all civil engineering and track works, Trams, infrastructure, plant, machinery and equipment installed or used for such tramway;

"Party" means each and any of the parties to this Agreement and Parties shall be construed accordingly;

"Phase 1a" means Edinburgh Airport to Newhaven (inclusive), together with the Depot at Gogar and the spur at Roseburn Junction;

"Phase 1b" means Roseburn Junction to Granton Square (inclusive);

"Trams" means the tram vehicles to be provided for operation on the Edinburgh Tram Network;

"Tram Legislation" means the Edinburgh Tram (Line One) Act 2006 and the Edinburgh Tram (Line Two) Act 2006, and such other legislation relative to the Edinburgh Tram Network as may be enacted from time to time;

1.2 In this Agreement unless the context otherwise requires:

1.2.1 words importing any gender include every gender;

1.2.2 words importing the singular number only include the plural number and *vice versa*;

1.2.3 words importing persons include firms, companies and corporations and *vice versa*;

1.2.4 any reference to any statute (whether or not specifically named) shall include any statutory modification or re-enactment of it for the time being in force and any order, instrument, plan, regulation, permission and direction made or issued under it or under any statute replaced by it or deriving validity from it;

1.2.5 references to Clauses are references to the relevant Clause in this Agreement;

1.2.6 the words "include" and "including" are to be construed without limitation;

- 1.2.7 where any obligation is undertaken by two or more persons jointly those persons shall be jointly and severally liable in respect of that obligation; and
- 1.2.8 the headings to the Clauses are for convenience only and shall not affect the interpretation of this Agreement.

2. THE CONTRACTOR'S OBLIGATIONS

- 2.1 The Contractor represents, warrants and undertakes to the Beneficiary:
- 2.1.1 that in performing the Contractor APA Works it has exercised and will continue to exercise all the skill, care and diligence to be reasonably expected of an appropriately qualified and competent contractor which is experienced in carrying out projects of a similar, scope, nature, complexity and size to the Contractor APA Works;
- 2.1.2 that it has complied with and will comply with each and all of the obligations, duties and undertakings of the Contractor under and pursuant to the Contract;
- 2.1.3 that on completion the Contractor APA Works will satisfy all performance specifications and requirements contained or referred to in the APA and the Contract; and
- 2.1.4 that the Beneficiary shall be deemed to have relied upon the Contractor's skill and judgment in respect of those matters relating to the Contractor APA Works as lie within the scope of the Contract and that the Contractor owes a duty of care in respect thereof to the Beneficiary (but not more onerous than that owed to ~~tie~~ under the Contract).

3. LIABILITY

- 3.1 No approvals, comments, instructions, consents, attendance at meetings relating to the Contractor APA Works or advices from the Beneficiary shall in any way relieve the Contractor from its obligations under this Agreement.
- 3.2 Notwithstanding anything that may be contained elsewhere in this Agreement, the Contractor shall have no greater liability (whether in quantum or in scope) to the Beneficiary than it would have had if the Beneficiary had been named as joint employer under the Contract (for the purposes of the Contractor APA Works only).

- 3.3 No action or proceedings for any breach of this Agreement shall be commenced against the Contractor after the expiry of 12 years from the date of practical completion of the Contractor APA Works.

4 INSURANCE

- 4.1 Except to the extent that they have effected and maintained owner-controlled insurance in respect of the Contractor APA Works, the Contractor has effected and will maintain professional indemnity insurance in an amount of £◆million for each and every claim or series of claims arising out of the same event or circumstances in any one period of insurance (which period shall not be more than one year) for a period of 12 years from the date of the issue of the certificate of practical completion of the Works. As and when reasonably requested to do so by the Beneficiary, the Contractor shall produce for inspection documentary evidence that such insurance is being maintained and that payment has been made in respect of all premia due under it.

5. NOTICES

Any notices to be given under this Agreement shall be either delivered personally or sent by first class recorded delivery post. The address for service of the Beneficiary and of the Contractor shall be as stated in this Agreement or such other address for service as the party to be served may have previously notified in writing to the other party. A notice shall be deemed to have been served as follows:

- 5.1 if personally delivered, at the time of delivery; or
- 5.2 if posted, at the expiration of 48 hours after the envelope containing the same was delivered into the custody of the postal authorities.

In proving such service, it shall be sufficient to prove that personal delivery was made or that the envelope containing such notice was properly addressed and delivered into the custody of the postal authorities as a pre-paid first class recorded delivery letter.

6. GENERAL

- 6.1 The Contractor shall have no claim whatsoever against the Beneficiary in respect of any damage, loss or expense howsoever arising out of or in connection with the Contract or any amounts due to the Contractor thereunder.

- 6.2 The Beneficiary may assign the whole or any part of this Agreement on a maximum of four occasions without the consent of the Contractor. The whole or any part of this Agreement may also be assigned by way of security or charged without the consent of the Contractor to any mortgagee of the Beneficiary or its assignees on any number of occasions.
- 6.3 Nothing in this Agreement confers or purports to confer on a third party who is not a Party to this Agreement any benefits or rights to enforce a term of this Agreement.
- 6.4 If for any reason any Clause in this Agreement shall be found to be ineffective inoperable or unenforceable, it shall be severed and deemed to be deleted from this Agreement and in such event the remaining provisions of this Agreement shall continue to have full force and effect.
- 6.5 This Agreement shall be governed by and construed in accordance with the Scots law and any dispute or difference concerned with its terms shall be referred to the non-exclusive jurisdiction of the Scottish Courts.

IN WITNESS whereof these presents on this and the preceding [4] pages are executed as follows:

EXECUTED for and on behalf of)
NETWORK RAIL INFRASTRUCTURE)
LIMITED)
at)
on the day)
of 2008)
by)

Director/Authorised Signatory

Name (block capitals)

Witness

Name (block capitals)

Address
.....

EXECUTED for and on behalf of)
[CONTRACTOR])
at)
on the day)
of 2008)
by)

Director/Authorised
Signatory

Name (block capitals)

Witness

Name (block capitals)

Address
.....

SCHEDULE PART 6**Network Rail costs****1. DEFINITIONS**

1.1 The following terms shall have the following meanings when used in this Schedule Part 6:

"Agency Personnel" means those personnel who have entered into a contract for services with Network Rail to provide services in connection with the Works exclusively to Network Rail;

"Agency Costs" means the cost to Network Rail of any Agency Personnel engaged in connection with the Services multiplied by 1.5, plus the properly incurred expenses and disbursements charged to Network Rail by such Agency Personnel;

"Consultants' Costs" means the costs to Network Rail of any consultants or contractors engaged by Network Rail in connection with the observance and performance of its obligations in relation to the Works, plus the properly incurred expenses and disbursements of those consultants or contractors;

"Expenses and Disbursements" means the items referred to in paragraph 2.1;

"Fee" means an amount equal to the Network Rail Fee plus the Industry Risk Fee;

"Hourly Rate" means in respect of each member of Network Rail's Personnel in any particular role band the rate set out in paragraph 3 as the same may be adjusted from time to time in accordance with paragraph 4, which rate will be payable in respect of all worked hours spent by Network Rail's Personnel in connection with the Works;

"Industry Risk Fee" means an amount equal to 2% of Forty five Million pounds sterling (£45,000,000);

"Network Rail Fee" means an amount equal to 10% of the aggregate Agency Costs, Consultants' Costs and Personnel Costs;

"Network Rail Costs" means Agency Costs, Consultants' Costs, Expenses and Disbursements, Fee, Personnel Costs, and Possessions-Related Costs, plus:

- (a) costs associated with applying for or as a consequence of any Necessary Consents; and
- (b) such other costs, expenses and liabilities which are properly incurred by Network Rail in respect of the performance of Network Rail's obligations in respect of the Works

to the extent that they arise from or are a consequence of the Works;

"Network Rail's Personnel" means any employees and/or officers of Network Rail;

"Personnel Costs" means the sum of the relevant Hourly Rate multiplied by the number of hours spent by each member of Network Rail's Personnel in connection with the performance of Network Rail's duties and obligations in respect of the Works; and

"Possessions-Related Costs" means sums Network Rail will be obliged to pay to any train operator pursuant to Schedules 4 and/or 8 of the relevant Track Access Agreement or, where such train operator is party to a Freight Access Agreement, the equivalent provision of that agreement, including where such sums are payable as a result of any acts or omissions of a Contractor or tie or CEC in relation to the Works .

2. PAYMENT OF COSTS

2.1 CEC shall or shall procure that tie shall pay or reimburse Network Rail in respect of all Network Rail Costs and additional expenses reasonably and properly incurred by Network Rail in relation to the Works and the Services, including:

2.1.1 printing, reproduction and purchase of documents, drawings, office consumables, maps and records;

2.1.2 travelling expenses as follows:

2.1.2.1 for journeys by train or airplane by all staff - in accordance with Network Rail's then current personnel policies;

- 2.1.2.2 car hire for business journeys other than home to Network Rail's offices - actual costs;
- 2.1.2.3 taxi fares - actual costs;
- 2.1.2.4 additional costs of daily travel costs from Network Rail's offices to the designated project office; and hotel and restaurant bills and other subsistence expenses associated with such travel including costs on temporary assignments to tie, in accordance with Network Rail's then current personnel policies;
- 2.1.3 all costs incurred that are associated with consultants, subcontracts and other outside services and facilities to the extent not included elsewhere within this Schedule Part 6;
- 2.1.4 training courses specifically for the benefit of the Works;
- 2.1.5 any VAT chargeable;
- 2.1.6 all technical, commercial, professional and legal fees, costs and disbursements in connection with the Works;
- 2.1.7 all legal and other costs, charges, and expenses incurred by Network Rail in connection with the preparation, negotiation and enforcement of any supplemental leases, licences and other documentation entered into by Network Rail and relating to the Works (including this Agreement);
- 2.1.8 any sums payable by Network Rail pursuant to Conditions G or H of the Network Code where the same arise in connection with the carrying out or completion of the Works or the subsequent operation of the completed Works and arise prior to the end of the Control Period in which the last day of the Defects Liability Period occurs; and
- 2.1.9 any other disbursements or expenses reasonably and properly incurred by Network Rail in connection with the Works or the Services which are not expressly set forth herein.
- 2.2 For the avoidance of doubt, and notwithstanding the provisions of paragraph 2.1, tie shall not be liable in any circumstances for any costs, expenses or disbursements

incurred by Network Rail as a result of the negligence of Network Rail or arising after the end of the Control Period in which the last day of the Defects Liability Period occurs.

3. HOURLY RATES

Banding	Non London	London
1	£104.94	£107.65
2	£77.16	£79.88
3	£57.41	£60.12
4	£40.12	£42.84
5	£32.10	£34.82
6	£25.30	£28.03
7	£20.99	£23.70
8	£16.67	£19.38

4. ADJUSTMENT OF HOURLY RATES

- 4.1 Network Rail shall adjust the Hourly Rates from time to time as necessary to reflect actual changes in salary bands and other employment conditions that are made in accordance with Network Rail's personnel policies and salary plans.
- 4.2 Network Rail shall serve written notice on **tie** setting out any adjustment to the Hourly Rate and indicating the date from which the adjusted Hourly Rate will apply which date shall not be less than 20 Working Days after the date of such notice.

5. REVIEW

As from time to time requested by **tie**, Network Rail shall provide to **tie** reasonable access to and evidence and records of all amounts payable by **tie** under this Schedule Part 6 (other than the Hourly Rates), which may be reviewed and audited by or on behalf of **tie**.

SCHEDULE PART 7

Notice details

Network Rail's address for the service of notices is:

Network Rail Infrastructure Limited

40 Melton Street

London NW1 2EE

Tel: 020 7557 8000

Fax: 020 7557 9000

All written notices to be marked:

"URGENT: ATTENTION OF THE SOLICITOR AND COMPANY SECRETARY"

and copied to:

Network Rail Infrastructure Limited

Buchanan House

58 Port Dundas Road

Glasgow G4 0LQ

All written notices to be marked " URGENT: FOR THE ATTENTION OF THE REGIONAL DIRECTOR (SCOTLAND)

The address for service of notices for **tie** is:

City Point, 65 Haymarket Terrace, Edinburgh EH12 5HD

Tel: 0131 622 8300

Fax: 0131 622 8301

All written notices to be marked:

"URGENT: ATTENTION OF TRAM PROJECT DIRECTOR"

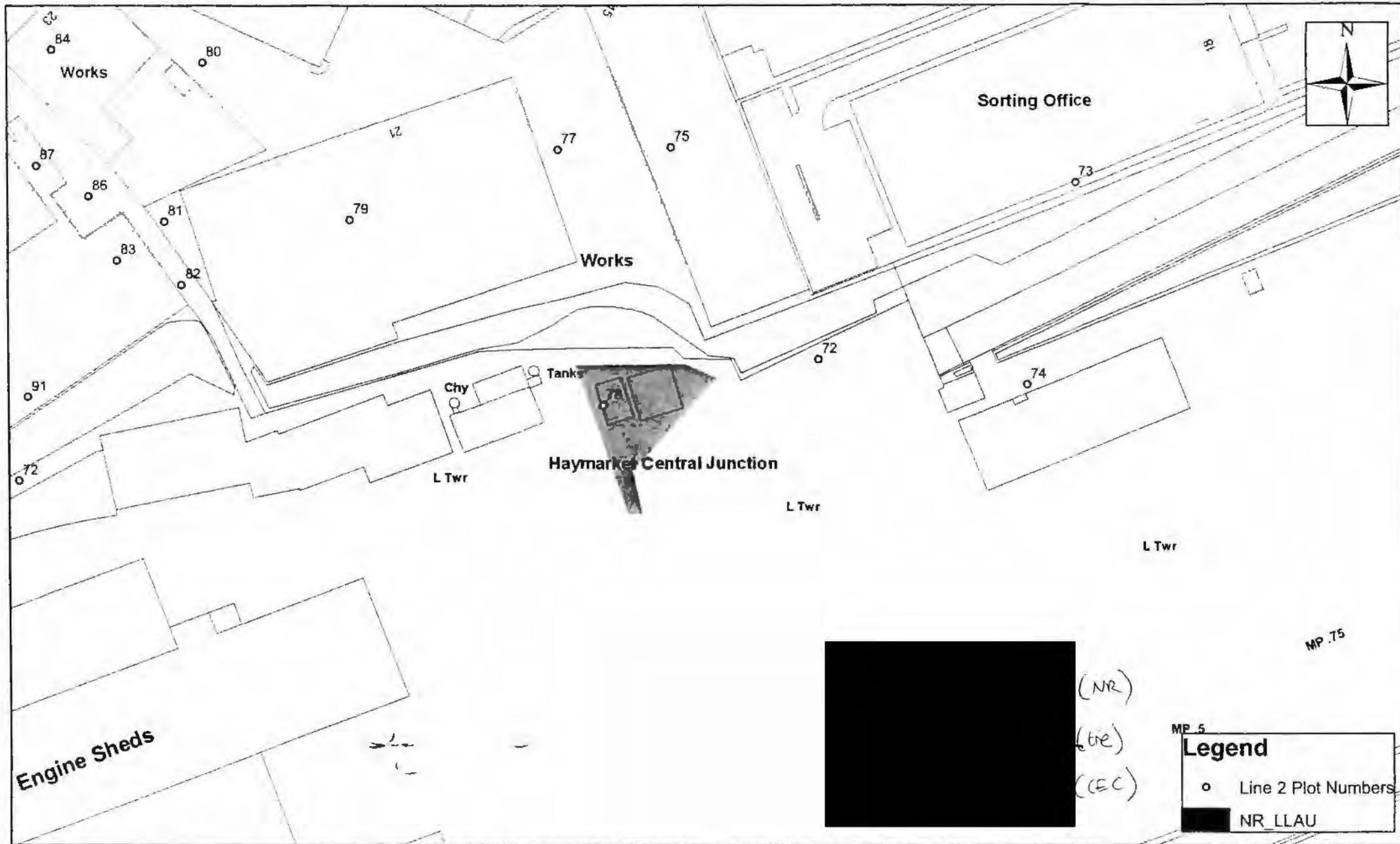
The address for service of notices for CEC is:

Director of City Development, Waverley Court, 4 East Market Street, Edinburgh, EH8 8BG

Tel: 0131 529 3595

SCHEDULE PART 8

PLANS



Trams for Edinburgh: NR LLAU Land - Haymarket Depot

0 15 30 60 Meters

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Date: Jan 08

Sheet No: 2@ A4

Version: 1

Trams for Edinburgh

...connecting our City

00899942_0124



SCHEDULE PART 10

Works Requirements

as he may require in order to reach a decision in respect of each of the Dispute and the Related Dispute at the same time. The parties shall agree to such request for an extension of time except in the event that the Dispute or the Related Dispute relates to "construction operations" within the meaning ascribed to that term by the Housing Grants, Construction and Regeneration Act 1996 (if applicable) (unless otherwise agreed by the parties, all parties to the Related Dispute and the adjudicator) ;

- 1.44.2 except in the event that the Dispute or the Related Dispute relates to "construction operations" within the meaning ascribed to that term by the Housing Grants, Construction and Regeneration Act 1996 (if applicable) (unless otherwise agreed by the Parties, all parties to the Related Dispute and the adjudicator), the adjudicator shall have power (if so requested by tie) to make his decisions or awards in the Dispute and the Related Dispute in such a manner as if the rules applicable in the Court of Session, Scotland as to the joining of one or more defenders or third parties or conjoining actions were applicable to the parties to the Dispute and the Related Dispute, and to the adjudicator;
- 1.44.3 as soon as practicable, tie shall give to Network Rail copies of the Related Contract, the Referral Notice in the Related Dispute and any other documentation provided to the adjudicator by any party to the Related Dispute.

Dispute is to be (but has not yet been) referred to adjudication under the Dispute Resolution Procedure, **tie** or Network Rail (in the case of Network Rail, subject to Network Rail obtaining the prior consent of **tie**) may refer the Dispute, or **tie** may by notice in writing to the other parties require that the Dispute be referred (as the case may be), to the adjudicator appointed under the Related Contract to decide upon the Related Dispute, and:

- 1.43.1 the adjudicator shall, if practicable, hear the Dispute at the same time as the Related Dispute and shall request such extension of time for producing his decision or award as he may require in order to reach a decision in respect of each of the Dispute and the Related Dispute at the same time. The parties shall agree to such request for an extension of time except in the event that the Dispute or the Related Dispute relates to "construction operations" within the meaning ascribed to that term by the Housing Grants, Construction and Regeneration Act 1996 (if applicable) (unless otherwise agreed by the parties, all parties to the Related Dispute and the adjudicator) ;
- 1.43.2 except in the event that the Dispute or the Related Dispute relates to "construction operations" within the meaning ascribed to that term by the Housing Grants, Construction and Regeneration Act 1996 (if applicable) (unless otherwise agreed by the parties, all parties to the Related Dispute and the adjudicator), the adjudicator shall have power (if so requested by **tie**) to make his decisions or awards in the Dispute and the Related Dispute in such a manner as if the rules applicable in the Court of Session, Scotland as to the joining of one or more defenders or third parties or conjoining actions were applicable to the parties to the Dispute and the Related Dispute, and to the adjudicator; and
- 1.43.3 **tie** shall procure that, as soon as practicable, the other party or parties to the Related Dispute shall give the other parties to the Dispute copies of the Related Contract, the Referral Notice in the Related Dispute and any other documentation provided to the adjudicator by any party to the Related Dispute.
- 1.44 In the event that a Dispute has already been referred to the decision of an adjudicator, and **tie** is of the opinion that a Related Dispute is to be (but has not yet been) referred to adjudication, **tie** may refer the Related Dispute to the adjudicator appointed under the Dispute Resolution Procedure to decide upon the Dispute, and:
- 1.44.1 the adjudicator shall, if practicable, hear the Related Dispute at the same time as the Dispute and shall request such extension of time for producing his decision or award

- 1.36 The adjudicator shall provide written reasons for his decision.
- 1.37 In his decision, the adjudicator may, if he thinks fit, order one or both of the parties (as the case may be) to comply peremptorily with his decision or any part of it. In the absence of any directions by the adjudicator relating to the time for performance of his decision, the parties shall be required to comply with any decision of the adjudicator immediately on delivery of the decision to the parties in accordance with paragraph 1.33.
- 1.38 The decision of an adjudicator properly appointed in accordance with this Agreement shall be binding on the parties, until the parties decide otherwise or the decision is referred to the courts for final determination.
- 1.39 The adjudicator shall be entitled to the payment of such reasonable amount as he may determine by way of fees and expenses incurred by him and the parties shall be jointly and severally liable to pay that amount to the adjudicator.
- 1.40 Without prejudice to the right of the adjudicator to effect recovery from the parties in accordance with paragraph 1.39, the parties to the Dispute shall each be liable to pay an equal share of the adjudicator's fees and expenses.
- 1.41 The adjudicator shall not be liable for anything done or omitted in the discharge or purported discharge of his functions as adjudicator unless the act or omission is in bad faith, and any employee or agent of the adjudicator shall be similarly protected from liability.
- 1.42 In the event that a dispute or potential dispute under, or in connection with any of the Related Contracts, has arisen or arises out of substantially the same issues of fact and/or law (as the case may be) as a Dispute under the Agreement (a "**Related Dispute**"), then providing that the Related Contract contains dispute resolution provisions in terms substantially the same as set out in this Dispute Resolution Procedure (save for necessary changes and subject to Clause 1.42A), **tie** may require and direct and Network Rail may (with the prior approval of **tie**) require and direct that the Dispute and the Related Dispute be dealt with together.
- 1.42A For the purposes of paragraph 1.42 hereof, it is agreed between the parties, that the process for selection and the identity of any adjudicator under a Related Contract, shall be disregarded in determining whether the dispute resolution provisions in a Related Contract are substantially the same as set out in this Dispute Resolution Procedure.
- 1.43 In the event that a Related Dispute has already been referred to the decision of an adjudicator in accordance with the provisions of the Related Contract, and **tie** is of the opinion that a

or is necessary for the purposes of, or in connection with, the adjudication, or the information is already in the public domain.

- 1.31 Unless otherwise agreed in accordance with paragraphs 1.43.1 and 1.44.1, the adjudicator shall reach his decision not later than:
- 1.31.1 twenty eight days after the date of the Referral Notice mentioned in paragraph 1.14;
 - 1.31.2 forty two days after the date of the Referral Notice if the Referring Party so consents;
or
 - 1.31.3 such period exceeding twenty eight days after the Referral Notice as the parties may, after the giving of that notice, agree.
- 1.32 Where the adjudicator fails, for any reason, to reach his decision in accordance with paragraph 1.31:
- 1.32.1 the other party may serve a fresh notice in accordance with paragraphs 1.5 to 1.7 and shall request an adjudicator to act in accordance with paragraphs 1.8 to 1.13; and
 - 1.32.2 if requested by the new adjudicator the parties shall supply him with copies of all documents which they had made available to the previous adjudicator.
- 1.33 As soon as possible after he has reached a decision, the adjudicator shall deliver a copy of that decision to each of the parties.
- 1.34 The adjudicator shall decide the matters in the Dispute and may make a decision on different aspects of the Dispute at different times.
- 1.35 The adjudicator may take into account any other matters which the parties agree should be within the scope of the adjudication or which are matters under the Agreement which he considers are necessarily connected with the Dispute and, in particular, he may:
- 1.35.1 open up, review and revise any decision taken or any notice certifying payment given by any person referred to in the Agreement, unless the Agreement states that the decision or notice certifying payment is final and conclusive;
 - 1.35.2 decide that any of the parties to the Dispute is liable to make a payment under the Agreement (whether in sterling or some other currency) and, subject to the terms of the Agreement, when that payment is due and the final date for payment.

- 1.25.8 issue other directions relating to the conduct of the adjudication.
- 1.26 The parties shall comply with any request or direction of the adjudicator in relation to the adjudication.
- 1.27 If, without showing sufficient cause, a party fails to comply with any request, direction or timetable of the adjudicator made in accordance with his powers, fails to produce any document or written statement requested by the adjudicator, or in any other way fails to comply with a requirement under these provisions relating to the adjudication, the adjudicator may:
- 1.27.1 continue the adjudication in the absence of that party or of the document or written statement requested;
 - 1.27.2 draw such inferences from that failure to comply as may, in the adjudicator's opinion, be justified in the circumstances;
 - 1.27.3 make a decision on the basis of the information before him, attaching such weight as he thinks fit to any evidence submitted to him outside any period he may have requested or directed;
 - 1.27.4 disqualify any part or parts of that party's submissions affected by the failure to comply; and
 - 1.27.5 grant the other party or parties proper opportunity to consider and respond to any evidence or representation made late.
- 1.28 Subject to any agreement between the parties to the contrary, the other party may be assisted by, or represented by, such advisers or representatives (whether legally qualified or not) as is considered appropriate.
- 1.29 The adjudicator shall consider any relevant information submitted to him by any of the parties and shall make available to them any information to be taken into account in reaching his decision.
- 1.30 The adjudicator and the parties shall not disclose to any other person any information or document provided in connection with the adjudication which the party supplying it has indicated is to be treated as confidential, except to the extent that disclosure is required by law

- 1.23 Where the revocation of the appointment of the adjudicator is due to the default or misconduct of the adjudicator, the parties shall not be liable to pay the adjudicator's fees and expenses.
- 1.24 The adjudicator shall:
- 1.24.1 act impartially in carrying out his duties and shall do so in accordance with any relevant terms of the Agreement and shall reach his decision in accordance with Scots law; and
 - 1.24.2 avoid incurring unnecessary expense.
- 1.25 The adjudicator may take the initiative in ascertaining the facts and the law necessary to determine the Dispute, and shall decide on the procedure to be followed in the adjudication. In particular, he may:
- 1.25.1 request any of the parties to supply him with such documents as he may reasonably require including, if he so directs, any written statement from any of the other parties supporting or supplementing the Referral Notice and any other documents given under paragraphs 1.14 to 1.16;
 - 1.25.2 conduct the adjudication in the English language and decide whether a translation of any document is to be provided and, if so, by whom, by when, and at whose cost;
 - 1.25.3 meet and question the parties and their representatives;
 - 1.25.4 subject to obtaining any necessary consent from a third party or the parties, make such site visits and inspections as he considers appropriate, whether accompanied by the parties or not;
 - 1.25.5 subject to obtaining any necessary consent from a third party or the parties, procure the carrying out of any tests or experiments, and make directions as to the conditions for and responsibility for the cost of the same;
 - 1.25.6 obtain and consider such representations and submissions as he requires, and, provided he has notified the parties of his intention, appoint experts, assessors or legal advisers;
 - 1.25.7 give directions as to the timetable for the adjudication, any deadlines, or limits as to the length of written documents or oral representations to be complied with; and

- 1.13 The person requested to act as adjudicator in accordance with the provisions of paragraph 1.8, paragraph 1.11 or paragraph 1.12 above shall indicate whether or not he is willing to act within two days of receiving the request.
- 1.14 Where an adjudicator has been selected in accordance with paragraph 1.8, 1.11 or 1.12 above, the Referring Party shall, not later than seven days from the date of the Notice of Adjudication, refer the Dispute in writing (the "Referral Notice") to the adjudicator.
- 1.15 A Referral Notice shall be accompanied by copies of, or relevant extracts from the Agreement and such other documents as the Referring Party intends to rely upon.
- 1.16 The Referring Party shall, at the same time as he sends to the adjudicator the documents referred to in paragraph 1.14 and paragraph 1.15, send copies of those documents to the Responding Party.
- 1.17 The adjudicator may, with the consent of the parties to those disputes, adjudicate at the same time on more than one Dispute under the Agreement.
- 1.18 The parties may agree to extend the period within which the adjudicator may reach a decision in relation to all or any of these Disputes.
- 1.19 An adjudicator may resign at any time on giving notice in writing to the parties.
- 1.20 An adjudicator must resign where the Dispute is the same or substantially the same as one which has previously been referred to adjudication, and a decision has been taken in that adjudication.
- 1.21 Where an adjudicator ceases to act under paragraph 1.19 or 1.20, or dies or becomes incapacax or ill to the extent of being unable to reasonably discharge his duties;
- 1.21.1 the Referring Party may serve a fresh notice in accordance with paragraphs 1.5 to 1.7 and shall in accordance with paragraphs 1.8 to 1.13 request an adjudicator to act; and
- 1.21.2 if requested by the new adjudicator, the parties shall supply him with copies of all documents which they had made available to the previous adjudicator.
- 1.22 The parties to a Dispute may at any time agree to revoke the appointment of the adjudicator and in such circumstances the fees and expenses of that adjudicator shall, subject to paragraph 1.23, be determined and payable in accordance with paragraphs 1.39 and 1.40

- 1.9 The request referred to in paragraph 1.8 above shall be accompanied by a copy of the Notice of Adjudication.
- 1.10 Any person appointed, requested or selected to act as adjudicator in accordance with paragraph 1.8 above shall be a natural person acting in his personal capacity. A person appointed, requested or selected to act as an adjudicator shall be wholly independent of tie, CEC, Network Rail, any Relevant Authority, any Approvals Body, or any party associated with the Edinburgh Tram Network and any successor to or subsidiary or parent of any of the aforementioned parties.

For the purposes of the preceding provisions of this paragraph 1.10:

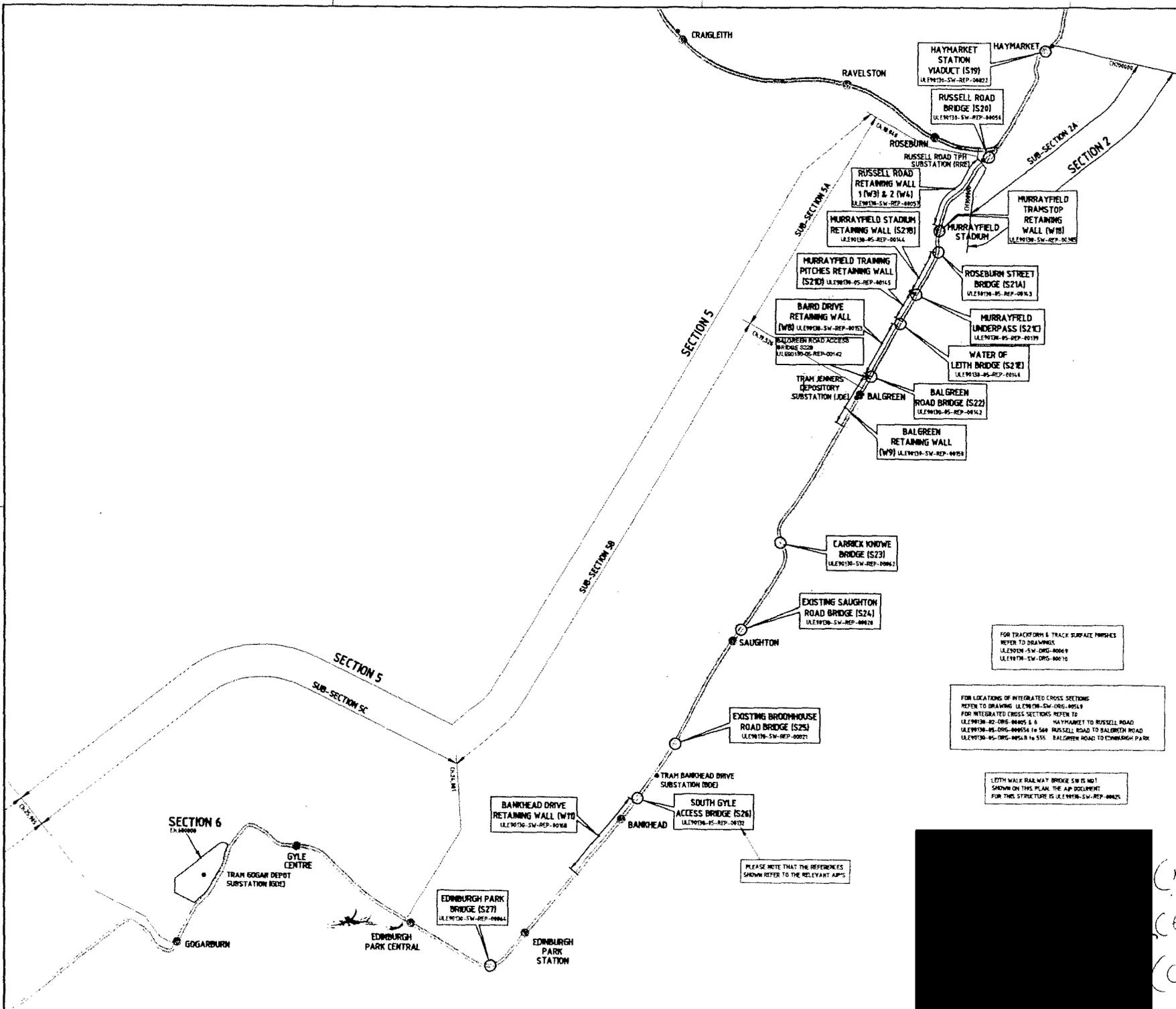
"Relevant Authority" shall mean any court with the relevant jurisdiction and any local authority, national authority or supra national agency, inspectorate, minister, Scottish Executive, body, official or public or statutory person of the government of the United Kingdom or of the European Union and "Relevant Authorities" shall be construed accordingly; and

"Approvals Body" means any Relevant Authorities, planning authorities, roads authorities, HMRI, and any other parties who are to issue consents which may be required for the construction, installation, commissioning, completion and opening of the Edinburgh Tram Network.

- 1.11 The Institution of Civil Engineers must communicate the selection of an adjudicator to the Referring Party within five days of receiving a request to do so.
- 1.12 Where the Institution of Civil Engineers fails to comply with paragraph 1.11 above, the Referring Party may:
- 1.12.1 agree with the other parties to the Dispute to request a specified person to act as adjudicator;
or
- 1.12.2 request any other adjudicator nominating body to select a person to act as adjudicator. An "adjudicator nominating body" shall mean a body (not being a natural person and not being a party to the Dispute) which holds itself out publicly as a body which will select an adjudicator when requested to do so by a Referring Party.

SCHEDULE PART 9**Adjudication Procedure**

- 1.1 Not used.
- 1.2 Not used.
- 1.3 Not used.
- 1.4 The courts shall have full power to open up, review and revise any certificate, opinion, decision, instruction, direction, valuation, requisition or notice given or made under this Agreement (unless the Agreement states that any of the foregoing is final and conclusive) and any determination of an adjudicator, including an award as to costs.
- 1.5 Any party to this Agreement may give written notice (the "**Notice of Adjudication**") of the intention to refer a Dispute to adjudication and the party giving such notice shall be the "Referring Party" for the purposes of this Agreement.
- 1.6 The Notice of Adjudication shall be given to the other party to the Dispute and the party receiving the Notice of Adjudication shall each be the "Responding Party"
- 1.7 The Notice of Adjudication shall set out briefly:
- 1.7.1 the nature and a brief description of the Dispute and the parties involved;
 - 1.7.2 details of where and when the Dispute has arisen;
 - 1.7.3 the nature of the redress which is sought; and
 - 1.7.4 the names and addresses of the parties (including the addresses which the parties have specified for the giving of notices).
- 1.8 The adjudicator shall be a person selected and agreed by the parties. In the event that no person has been selected as adjudicator or that none of the persons so selected are able or willing to act or the parties are unable to agree an adjudicator, the Referring Party shall request the President of the Institution of Civil Engineers to select a person to act as adjudicator.



NOTES
 1. DWG APPROVED REF. 0054
 2. DWG APPROVED REF. 0047

FOR TRACKFORM & TRACK SURFACE FINISHES
 REFER TO DRAWINGS
 ULEW130-SW-DRG-00069
 ULEW130-SW-DRG-00070

FOR LOCATIONS OF INTEGRATED CROSS SECTIONS
 REFER TO DRAWING ULEW130-SW-DRG-00519
 FOR INTEGRATED CROSS SECTIONS REFER TO
 ULEW130-02-DRG-00055 & ULEW130-02-DRG-00054 IN 560 RUSSELL ROAD TO BALGOREN ROAD
 ULEW130-05-DRG-00548 IN 555 BALGOREN ROAD TO EDINBURGH PARK

LEITH WALK RAILWAY BRIDGE SW IS NOT
 SHOWN ON THIS PLAN. THE APPOINTMENT
 FOR THIS STRUCTURE IS ULEW130-SW-REP-00045

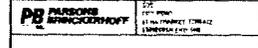
PLEASE NOTE THAT THE REFERENCES
 SHOWN REFER TO THE RELEVANT APPS

REV.	DATE	BY	CHK.	APP.	DATE
1					
2					

FOR INFORMATION ONLY



EDINBURGH TRAIN NETWORK



WORKS REQUIREMENTS

DESIGNED BY	DATE	DESIGNED BY	DATE
HUTTNER		SMUGLIE	
APPROVED BY	DATE	APPROVED BY	DATE
(Signature)		A1	

(NR)
 (5C)
 (5C)

TIE00899942-0136

BRIDGE AGREEMENT
between
NETWORK RAIL INFRASTRUCTURE LIMITED
and
CITY OF EDINBURGH COUNCIL

Relating to: A new bridge over the railway at
[] (being []
miles and [] chains between []
and []

macROBERTS

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AGREEMENT

between

- (1) **NETWORK RAIL INFRASTRUCTURE LIMITED**, incorporated under the Companies Acts (Company No. 2904587) and having its registered office at 40 Melton Street, London NW1 2EE (“**Network Rail**”); and
- (2) **CITY OF EDINBURGH COUNCIL**, the local authority for the City of Edinburgh, constituted in terms of the Local Government etc (Scotland) Act 1994 and having its principal administrative offices at City Chambers, High Street, Edinburgh EH1 1YJ (“**the Grantees**”)

WHEREAS:

- (1) The Grantees wish to design, construct and maintain a Bridge which crosses over and above the Railway Infrastructure at the Location;
- (2) Network Rail is prepared to permit the Grantees to design, construct and maintain a Bridge to be known by Network Rail as structure number [] [and by the Grantees as structure number []] over and above the Railway subject to the terms and conditions of this Agreement, which reflects the statutory obligations and framework within which Network Rail is obliged and entitled to operate the Railway; and
- (3) Network Rail is prepared to grant to the Grantees (i) a conveyance of parts of Network Rail's land on which parts of the abutments of the Bridge will be erected and (ii) a lease of the airspace over or upon its land for and in connection with the Bridge all upon terms agreed between Network Rail and the Council,

NOW IT IS AGREED by and between the parties hereto as follows:

1. DEFINITIONS AND INTERPRETATION

- 1.1 In this Agreement (which comprises this bridge agreement, the Schedule, the Plan and/or other items annexed to this agreement), unless the context otherwise requires:

Approved Drawings means any drawing approved by Network Rail in connection with the Works (in particular drawings submitted under clauses 2.2.2.(f) and 2.2.2.(i));;

Accepted Design means the design for the Works accepted by Network Rail in accordance with clause 2.2.2.(i);

Asset Protection Agreement means the agreement so entitled and entered into between Network Rail and the Grantees of even dates with the dates of this Agreement;

Bridge means the new bridge and associated structures to incorporate and carry the Road over and above the Railway Infrastructure at the Location, the same to be shown on an accurate, as built, plan to be annexed to the Bridge Lease;

Bridge Lease means the lease to be entered into between Network rail and the Grantees referable to the airspace to be occupied by the Bridge and the airspace to the extent of [] metres above the proposed tramline tracks within the Road the same to be generally in the terms and form of the draft lease annexed subject to such amendments as may be necessary to reflect any amendments or variations of a legal requirement or the updating, replacement, amendment or variation of any Codes of Practice or similar followed by Network Rail occurring in the period between the signing of this Agreement and the Term Commencement Date and to be completed in accordance with the terms of this Agreement.

Certificates for Design and Checking of Structures means certificates, each in such format as Network Rail shall require, in respect of those parts of the Works forming the permanent structure

of the Bridge;

Certificates for Design and Checking of Temporary Works means certificates, each in such format as Network Rail shall require, in respect of Temporary Works;

CDM Regulations means the Construction (Design and Management) Regulations 2007;

Competent Authority means any local, national or supra-national agency, authority, department, inspectorate, minister, ministry, official, court, tribunal or public or statutory person (whether autonomous or not) of the United Kingdom or of the European Union, which has, in respect of this Agreement, jurisdiction over or the power to bind any of the parties to, or the subject matter of, this Agreement,

Construction Works Commencement Date means the latest of:

- (a) the last date of signing of this Agreement by the parties to it;
- (b) grant of any conveyance and/or servitude rights referred to in Recital 3 above, unless the parties agree otherwise in writing;
- (c) the date of Network Rail's approvals pursuant to Clause 2.2.3(c) which are necessary to commence the carrying out of the Works;
- (d) the provision on site of site safety personnel by the Grantees pursuant to Clause 2.2.1(b);
- (e) receipt of evidence confirming that the Grantees have taken out the insurances required by Clause 2.3;
- (f) the date on which all Necessary Consents and Network Rail Consents have been obtained which are necessary to commence the construction of the Works; and
- (g) the date of Network Rail's approval to the Safety Management System pursuant to Clause 2.2.1.(f);

Contract Documents means the documents each of which form a contract between the Grantees and a third party in respect of the carrying out of the whole (or any part) of the design and construction of the Works;

Contractor means any person or company to whom a contract for the whole (or any part) of the Works is let and for whom the Grantees are the employer;

Costs means "Network Rail Costs" as defined in the Asset Protection Agreement;

Direction means any direction, requirement, instruction or rule legally binding on Network Rail, and includes any modifications, extension or replacement of any such direction, requirement, instruction or rule for the time being in force but shall not include the exercise of a discretion under any contract or other obligation binding on Network Rail or the enforcement of any such contract or obligation;

Escalation Procedure means the "Dispute Resolution Procedure" as defined in the Asset Protection Agreement;

Framework Agreement means the agreement so entitled and entered into between Network Rail and the Grantees of even dates with the dates of this Agreement;

Health and Safety Executive means the executive arm of the Health and Safety Commission which enforces health and safety law under the Health and Safety at Work etc. Act 1974, or any successor body;

Location means the location at which the Bridge is to be constructed, namely at [] (being at [] miles and [] chains between [] and [] [as generally shown [] on the Plan];

Maintenance Contractor means any person or company carrying out the inspection, maintenance, repair or renewal of the Bridge after final completion of the Works on behalf of the Grantees;

Necessary Consents means all approvals, permissions, consents, licences, registrations and authorisations (whether statutory or otherwise to include, without limitation, inoperability regulations) which are required from time to time for the purposes of carrying out the Works whether required in order to comply with any legal requirement or as a result of any rights of any third party,

Network Licence means the licence granted to Network Rail pursuant to Section 8 of Railways Act 1993 (as amended by the Transport Act 2000) and any succeeding or replacement licence;

Network Operator Issues means:

- (a) a Safety Critical Event;
- (b) an Operational Emergency;
- (c) a regulatory requirement or requirement of Network Rail's Network Licence;
- (d) a requirement of Scots and/or UK and/or European Community law; and/or
- (e) a Direction of a Competent Authority;

Network Rail Approval in Principle Submission means the submission necessary to obtain the approval in principle for the Works in accordance with such procedure and format as is acceptable to Network Rail.

Network Rail Company Standards means a standards document issued by Network Rail for its own use in relation to the Railway as a whole which applies to the performance of the Works under this Agreement;

Network Rail's Estimated Costs means a non-binding estimate of the Costs up to and including final completion of the Works;

Operational Emergency means any situation or circumstance which Network Rail reasonably considers requires immediate or urgent action in order to maintain or restore the effective operation of the Railway Infrastructure or any part of it;

Plan means the plan annexed and signed as relative to this Agreement (which plan is indicative only and not taxative);

Possession means planned safety arrangements, which control or prevent the normal movement of rail traffic on the Railway Infrastructure between defined locations and for a pre-determined period;

Programme means the programme for the carrying out and completion of the Works to be approved by Network Rail in accordance with this Agreement as may be amended by agreement between the parties;

Qualifying Period means any statutory successor of the said City of Edinburgh Council having responsibility for public transport for the area in which the Premises are situated and/or any statutory body established to provide and to assume responsibility for the provision of light rail

passenger or other transport services on the Edinburgh Tram System;

Railway means the Railway Infrastructure, Network Rail's activities in carrying out the operation, maintenance and replacement of the Railway Infrastructure and traffic on the Railway Infrastructure;

Railway Group Standards means technical standards to which railway assets or equipment must conform and operating procedures with which the operators of railway assets must comply;

Railway Infrastructure means Network Rail's infrastructure and operational track including the Station;

Regulator shall have the meaning ascribed to it in Section 1 of the Railways Act 1993 (as amended by the Transport Act 2000);

Road means that part of the Tram Line which will cross over the Railway Infrastructure by means of the Bridge as the same will form part of the Bridge;

Safety Critical Event means an imminent risk:

- (a) to the health and safety of any person(s);
- (b) of damage or destruction to any Railway Infrastructure; or
- (c) any incident which may reduce the safety integrity levels of any item of Railway Infrastructure;

Safe Management System means the management structure and controls through which the Grantees ensures it is capable of understanding Railway related risks and providing or procuring the provision of a safe system of working on or about the Railway;

Schedule means the schedule annexed and signed as relative to and forming part of this Agreement;

Special Requirements means the requirements set out or referred to in a document entitled "Special Requirements in relation to Network Rail" dated [] or the requirements from time to time substituted therefore and intimated in writing to the Grantee; [Have TIE/CEC seen these]

Standards means Railway Group Standards, Network Rail Company Standards, British and European standards and normal building practice;

Temporary Works means all works of a temporary nature of every kind required for the completion of the Works;

Tender Documents means the documents issued to tenderers by the Grantees in respect of the Works;

Term Commencement Date has the same meaning as ascribed to it in the Framework Agreement;

Track Access Agreement shall have the same meaning as given to access contract under Section 17(6) of the Railways Act 1993 (as amended by the Transport Act 2000);

Tram Line means the new tram line to be formed by the Grantees under and in terms of the Edinburgh Tram (Line [Two]) Act 2006;

Variation means any alteration or modification of the design, quality or quantity of the Works including:

- (a) the addition, omission or substitution of any work; or
- (b) the alteration of the kind or standard of any of the materials or goods to be used in the Works;

Value Added Tax means value added tax at the rate or rates applicable from time to time and includes any similar or replacement tax or taxes;

Works means the design and construction of the Bridge and Road including all tasks incidental thereto as more fully described in Part 1 of the Schedule.

1.2 In this Agreement:

- 1.2.1 the headings of the Clauses shall not affect their interpretation;
- 1.2.2 references to "Clauses" are references to clauses in this Agreement;
- 1.2.3 references to statutory provisions shall be construed as references to those provisions as amended or re-enacted, or as their application is modified by other provisions, from time to time;
- 1.2.4 references to Standards shall be construed as references to the edition or version of those documents, or their replacements, current at the start of the performance of the action to which they refer;
- 1.2.5 any consent, approval or permission to be issued or granted by Network Rail in terms of this Agreement shall require to be in writing by a person having appropriate authority from Network Rail to do so;
- 1.2.6 use of the present tense means the relevant time or as the case may be from time to time during the relevant period;
- 1.2.7 the singular implies the plural and vice versa and the masculine includes the feminine;
- 1.2.8 references to "Network Rail" and "the Grantees" shall, where permitted and applicable as appropriate, include their respective successors as proprietor of the Railway Infrastructure at the Location and proprietor of the Bridge and Road, respectively; and
- 1.2.9 to the extent that there may be any inconsistencies between the terms of the Asset Protection Agreement and this Agreement and/or the Bridge Lease, (i) the Asset Protection Agreement shall take precedence until the Term Commencement Date and (ii) the Bridge Lease (and, in consequence, this Agreement which will form an integral part of its terms) shall thereafter take precedence.

2. DUTIES AND OBLIGATIONS OF THE GRANTEES

2.1 Costs and Payment

- 2.1.1 The Grantees shall pay the Costs but not so that the same costs as are payable by the Grantees in terms of the Asset Protection Agreement shall be payable twice..
- 2.1.2 Payment of Costs to Network Rail shall be made in accordance with the terms of Clause 18 and Schedule 6 of the Asset Protection Agreement.
- 2.1.3 Should any payment not be made by the Final Date for Payment then the payment due shall bear interest thereon at the rate of two (2) percent above the base lending rate of the HSBC Bank plc such rate to be determined upon such Final Date for Payment and be payable from such Final Date for Payment to the date of actual payment.

- 2.1.4 Payments shall be exclusive of Value Added Tax and shall be subject to the addition of Value Added Tax at the rate if and where applicable on production of a Value Added Tax invoice.

2.2 The Works

2.2.1 General:

The Grantees shall be responsible for designing, carrying out and completing the Works and shall carry out the Works in accordance with the whole terms of and in compliance with the Asset Protection Agreement.

2.2.2 Construction of the Works:

The Grantees shall not commence construction of the Works prior to the Construction Works Commencement Date and shall be responsible for construction of the Works which shall be at their own risk and cost and shall be carried out in accordance with the whole terms of and in compliance with the Asset Protection Agreement.

2.2.3 The CDM Regulations:

For the purposes of the Works under the CDM Regulations the terms of Clause 7.3 in the Asset Protection Agreement shall apply.

2.3 Insurance

The Grantees shall comply with or procure compliance with the terms of Clause 16 of the Asset Protection Agreement.

2.4 Use of Network Rail Land

The Grantee, its agents and employees (including **tie**) shall only be permitted access to land in the ownership of Network Rail in accordance with and subject to the terms of the Asset Protection Agreement.

2.5 Bridge Identification Plates and Permanent Fencing

The Grantees shall (on or before substantial completion of the Works) at their own cost:

- 2.5.1 provide and fix to the Bridge, so as to be readily visible from both the Railway Infrastructure and the Road, numerical identification plates in accordance with details and specifications submitted to the Grantees by Network Rail; and
- 2.5.2 erect permanent fencing of a type stipulated by Network Rail in positions to be decided by Network Rail acting reasonably.

2.6 New Services

The Grantees shall advise Network Rail on substantial completion of the Works and from time to time afterwards of any proposed new or replacement pipes, cables and other media which are to be laid over and/or within the Bridge to serve the Tram Line and the same may only be laid in the

Road following notification to Network Rail of the Grantees' intention to do so and subject to such reasonable conditions Network Rail may require.;

2.7 Provision of "As Built" Drawings & Information

As soon as reasonable practicable after substantial completion of the Works the Grantees shall provide, for record purposes and free of cost to Network Rail:

- (a) a copy of the Health and Safety File;
- (b) sets of "As Built" drawings (so endorsed) of the Works in such form as Network Rail may reasonably require; and
- (c) such other information including, without limitation, calculations, specifications, documents and computer input and output data, as Network Rail may reasonably require.

2.8 Inspection and Maintenance of the Bridge and Road

2.8.1 On and from final completion of the Works:

- (a) the Grantees shall, at their own cost, arrange for the regular inspection of the structure of the Bridge in accordance with (with such adjustments as may be reasonable having regard to the fact that the Bridge is to carry part of the Tram Line and not a public road) the Highways Agency's "Design Manual for Roads and Bridges" as amended from time to time or any procedures substituted therefor, or the latest edition of Railway Group Standards, whichever is the higher standard. A copy of each inspection report and as appropriate an assessment certificate shall be submitted to Network Rail which may, if in its opinion the condition of the Bridge so warrants, at any time require the Grantees to carry out such additional examinations or further investigations as it considers necessary, Provided That where Network Rail's normal inspection procedures require further or more detailed inspection and Network Rail so notifies the Grantees in writing, the Grantees shall carry out such further or more detailed inspection;
- (b) the Grantees shall, at their own cost, maintain the Bridge in a good and proper state of repair (to include cleansing, scavenging, removal of obscene graffiti and using reasonable endeavours to remove all other graffiti) and, when necessary, repair and/or renew the Bridge all to the reasonable satisfaction of Network Rail provided that:
 - (i) the Grantees shall erect temporary fencing to the reasonable satisfaction of Network Rail to protect the Railway Infrastructure from unlawful entry and vandalism during the carrying out of such maintenance, repair and/or renewal;
 - (ii) the Grantees shall pay for the removal and/or reinstatement of any apparatus or other asset owned by Network Rail necessitated by the carrying out of such maintenance, repair or renewal work; and
 - (iii) in the event of the Grantees not so maintaining, repairing or renewing the Bridge, Network Rail may (after giving 3 months notice in writing to the Grantees except in case of emergency) carry out such works as Network Rail considers necessary at the proper cost of the Grantees;
- (c) in carrying out inspection, maintenance, repair or renewal of or alterations to the Bridge, the Grantees and any Maintenance Contractor shall comply with the

Special Requirements and such other conditions as Network Rail may impose for the protection of rail traffic and the safety of persons working on or near the Railway Infrastructure and shall ensure that the clear headroom and lateral clearances to rail are not reduced (unless agreed by Network Rail for temporary works in carrying out inspection, maintenance, repair or renewal of or alterations to the Bridge);

- (d) following maintenance, repair or renewal of or alterations to the Bridge, the Grantees shall arrange for the “as built” drawings provided by the Grantees to Network Rail in accordance with the provisions of Clause 2.7 to be modified;
- (e) in the event of a Safety Critical Event or an Operational Emergency (of which Network Rail shall be the sole judge) at the Location of the Bridge, Network Rail may take whatever action it considers necessary to protect the safety of both traffic on the Railway Infrastructure and persons on or near the Railway Infrastructure and shall as soon as possible advise the Grantees of the actions taken; and
- (f) the Grantees shall inspect, maintain repair, renew and alter the Road under such conditions as Network Rail may reasonably impose for the protection and safety of the Railway.

2.9 Lighting of the Road, Bridge etc.

The Grantees, in lighting the Road, the Bridge and their environs and in providing illuminated signs, shall comply with such reasonable requirements of Network Rail as may be dictated by the signalling arrangements and other safety requirements of Network Rail and shall use their reasonable endeavours to ensure that any lighting or signs erected by other parties entitled so to do complies with such requirements.

2.10 Restrictions on works on the Road

Except under such conditions as Network Rail may reasonably stipulate, the Grantees shall not, in maintaining the Road, execute or permit to be executed any works that unreasonably raise the level of the surface of the Road or otherwise increase the permanent loading on the superstructure of the Bridge or temporarily or permanently reduce the effective height of the parapets below that shown on the Approved Drawings or any structural works to the Bridge which could give rise to a Safety Critical Event or an Operational Emergency or materially affect the safety and/or efficient operation of the Railway.

2.11 Unauthorised Entry and Vandalism

In the event of acts of unauthorised entry or vandalism occurring on or from the Bridge or its approaches, the Grantees shall at their own cost and within such timescales as shall be agreed between the parties to be reasonably practicable (such agreement not to be unreasonably withheld) having regard to the incidence and nature of the acts of unauthorised entry or vandalism and the cost of such measures, take such preventative or defensive measures as Network Rail may reasonably require. Provided That if in the opinion of Network Rail such acts of unauthorised entry or vandalism endanger safety on the Railway Infrastructure or the safety of persons on or near the Railway Infrastructure, Network Rail may at the proper cost of the Grantees take such urgent measures as it considers necessary.

2.12 Future Railway Alterations

If, solely in consequence of the carrying out of the Works and/or the existence of the Bridge, Network Rail incurs additional costs and expenses in connection with the widening or alteration of the Railway Infrastructure on land in the ownership of Network Rail or in connection with the exercise of powers possessed by Network Rail at the latest date of signing of this Agreement, the terms of Clause 12.6 in the Asset Protection Agreement shall apply to and govern payment of

such costs and expenses.

2.13 Mining Subsidence

- 2.13.1 If Network Rail or the Grantees reasonably apprehend that any ground consolidation works or the working of any mines or minerals is likely to cause damage to the Works or any adjoining Network Rail Property or Network Rail works by reason of subsidence or if such working causes damage to the Works or any such Network Rail Property or works, Network Rail and the Grantees (or **tie** acting on the Grantees' behalf) shall notify and consult with each other with a view to agreeing the measures necessary to be taken, before taking steps to prevent, guard against or make good such damage.
- 2.13.2 Notwithstanding Clause 2.13.1, if Network Rail reasonably considers that immediate measures must be taken for the protection and safety of the Railway, it may take such measures without prior consultation with or notice to **tie** or the Grantees.
- 2.13.3 The Grantees shall or shall procure that **tie** shall reimburse Network Rail in respect of all losses reasonably incurred by Network Rail in carrying out any measures agreed between Network Rail and the Grantees or considered necessary by Network Rail in accordance with the preceding provisions of this Clause 2.13 which Network Rail would not otherwise have incurred provided that neither **tie** nor the Grantees shall be liable to Network Rail for such losses incurred in respect of measures taken under Clause 2.13.2 where and to the extent that the measures are determined to have not been necessary under the Escalation Procedure.

3. DUTIES AND RIGHTS OF NETWORK RAIL

- 3.1 Network Rail shall in relation to the Works comply with the terms of the Asset Protection Agreement including without limitation Clauses 5, 6 and 8 thereof.
- 3.2 Network Rail may, without payment to the Grantees, on or after completion of the Bridge affix thereto, use, maintain and renew, in such manner so as not to damage the structure of the Bridge nor operation of the tram system apparatus which may be necessary for the purpose of Network Rail's undertaking; Provided That Network Rail shall:
- 3.2.1 obtain the approval of the Grantees (not to be unreasonably withheld) by giving the Grantees twenty-eight (28) days' notice in writing of its intention to attach apparatus to the Bridge together with details of such apparatus and method of fixing (and failure by the Grantees to respond within this period shall be deemed to constitute acceptance) along with any requirements of the Grantees as to the date and time when the apparatus is to be affixed (which requirements shall be complied with by Network Rail Provided That such requirements shall have been notified to Network Rail within fourteen (14) days of receipt by the Grantees of the notice referred to above) save that in cases of emergency, as shall be decided by Network Rail in its absolute discretion, Network Rail shall notify the Grantees of the intention to attach apparatus as soon as reasonably practicable and comply with any requirements of the Grantees as above so far as are reasonably practicable;
- 3.2.2 to the reasonable satisfaction of the Grantees make good any damage to the Bridge caused by the affixing, maintenance or removal of the said apparatus, all such work to be commenced within a reasonable time from notification of damage by the Grantees and to be completed within a period not exceeding twenty-eight (28) days from commencement of such works; and
- 3.2.3 pay the Grantees' costs incurred pursuant to this Clause 3.2.
- 3.3 If, in the opinion of Network Rail, the Road should be partially or fully closed with immediate effect, as a result of, or in order to prevent the occurrence of, an Operational Emergency or a Safety

Critical Event, Network Rail shall notify the Grantees. The Grantees shall as soon as possible consider such notification on its merits in accordance with their statutory duties (and without in any way limiting the discretion of the Grantees) and immediately thereafter take such steps (if any) as they may consider necessary.

- 3.4 If, in the opinion of Network Rail for the safety of the Railway, an event of any nature on the Road or the Bridge requires the immediate partial or full closure of the Railway Infrastructure, or the temporary imposition of restrictions on traffic using the Railway Infrastructure, Network Rail shall be entitled to make all necessary arrangements at the cost of the Grantees but that subject always to the terms of Clause 19 in the Asset Protection Agreement.

4. LEASE

Network Rail and the Grantees shall enter into the Bridge Lease as soon as practicable after the as built plan(s) of the Bridge is/are available to annex to it and the Bridge Lease shall be effective from and after the Term Commencement Date.

5. INDEMNITY AND LIMIT OF LIABILITY

5.1 Indemnity

5.1.1 The Grantees shall indemnify Network Rail and keep Network Rail indemnified against any costs, claims, damages, demands, losses, expenses, liabilities or proceedings of whatever kind and howsoever arising from or in connection with (whether directly or indirectly) - the carrying out or the procuring of the carrying out of the Works (but that subject always to the terms of the Asset Protection Agreement including without limitation Clauses 19 and 20 thereof), breach of this Agreement by the Grantees, or the maintenance, repair or renewal and/or usage of the Bridge and/or the Road or the obligations assumed by Network Rail pursuant to this Agreement (referred to together in this Clause 5.1 as "Losses") provided that:

- (a) to the extent any such Losses arise from or in connection with (whether directly or indirectly) negligence or breach on the part of Network Rail then the Grantees shall not be under an obligation to indemnify Network Rail against such Losses;
- (b) in the event that any such Losses arise from the acts or omissions of any third party not being under the control of or in contract with the Grantees the Grantees shall only be liable to indemnify Network Rail for such Losses so far as they result from or are increased by negligence or breach on the part of the Grantees; and
- (c) Network Rail shall take all reasonable steps to prevent, mitigate and restrict the circumstances which have given or may give rise to such Losses.

5.2 Network Rail Limit of Liability

The terms of Clauses 19 of the Asset Management Agreement shall apply mutatis mutandis to the liability of Network Rail to the Grantees pursuant to this Agreement [what about £260K NR cap – is this appropriate?].

6. MISCELLANEOUS

6.1 Ownership/Vesting

Notwithstanding that all or parts of the Bridge and Road may be erected over land owned by Network Rail, ownership of, legal title to and the beneficial interest in the Bridge shall vest in and remain with the said City of Edinburgh Council (or a Qualifying Person), this specifically in

recognition and acceptance by the said City of Edinburgh Council of Network Rail's concern that the ownership and control of and responsibility for the Bridge must remain, for as long as the Bridge shall remain in situ, with the said City of Edinburgh Council or a Qualifying Person, having regard always to the potential impact on the safety, security, continuity and punctuality of the railway which may occur as a result of any failure properly to maintain and control operations on the Bridge as also the potential exposure of Network Rail to costs of remedying any failures in relation to the Bridge on default of the party who owns it.

6.2 Confidentiality

The terms of Clause 23 of the Asset Protection Agreement shall apply mutatis mutandis to this Agreement.

6.3 Third Party Rights

This Agreement is not intended to confer any rights on any third party.

6.4 Variation or Waiver

6.5.1 No modification, variation or amendment of any provision in this Agreement shall be effective unless it is in writing and signed by a duly authorised representative of each party.

6.5.2 No waiver of any breach or default under this Agreement or any of the terms hereof shall be effective unless such waiver is given in writing and has been signed by the party waiving its entitlement.

6.5 Successors and Assignees

6.6.1 This Agreement shall be binding upon and take effect for the benefit of the parties, including their respective legal successors, but strictly subject as hereinafter provided.

6.6.2 This Agreement may not be assigned in whole or in part the by Grantees, but without prejudice to Clause 6.6.4

6.6.3 The Grantees shall not charge this Agreement except with the consent in writing of Network Rail (this not to be unreasonably withheld but having regard always to the prerequisite that Network Rail will not permit any party to own or control the Bridge other than the said City of Edinburgh Council or subsequent Qualifying Party howsoever the same may arise).

6.6.4 If the Grantees cease to be the local authority responsible for public transport in Edinburgh, the Grantees and Network Rail shall enter into a novation agreement with the relevant Qualifying Party which succeeds the Grantees as such authority. Upon completion of such novation agreement, the Grantees shall be released from all future liability under this Agreement.

6.6.5 Network Rail shall be entitled to assign its interest under this Agreement, subject to the Grantees' consent which will not be unreasonably withheld.

6.6 Severability

If any term or provision of this Agreement is held to be invalid, illegal or unenforceable in whole or in part under any enactment or rule of law or otherwise such term or provision shall to that extent be deemed not to form part of this Agreement but the validity and enforceability of the remainder of this Agreement shall continue in full force and effect.

6.7 Entire Agreement

This Agreement constitutes the entire agreement between the parties relating to the subject matter of this Agreement and supersedes and extinguishes any prior drafts, undertakings, representations, purchase orders, warranties and arrangements of any nature whatsoever whether in writing or oral relating to such subject matter.

6.8 Resolution of Disputes

In the event of a disagreement relating to this Agreement, either Party may at any time invoke the Escalation Procedure (in accordance with its terms) without prejudice to its other rights and obligations

6.9 Notices

6.9.1 Any notice, save for a notice detailed in Clause 6.9.2, to be given under this Agreement shall be in writing and shall be deemed duly given if proven to have been delivered by hand, by recorded delivery or by fax to the recipient, address and fax number set out in [Part 1 of Part 2 of the Schedule] or such other recipient, address or fax number as each party may specify to the others in writing from time to time.

6.9.2 Any notice to be given under Clause 2.1 of this Agreement shall be in writing and shall be deemed duly given if proven to have been delivered by hand, by recorded delivery or by fax to the recipient, address and fax number set out in [Part 2 of Part 2 of the Schedule] or such other recipient, address and fax number as each party may specify to the other in writing from time to time.

6.9.3 Notices sent in accordance with Clauses 6.9.1 or 6.9.2 shall be deemed to have been received three working days after the date of posting or the working day after transmission but only if a transmission report is generated by the sender's fax machine recording a message from the recipient's fax machine confirming that the fax was sent to the number indicated [in Part 2 of the Schedule] and that all pages were successfully transmitted.

6.10 Law

This Agreement shall be governed by and construed between the parties in accordance with Scots law and the parties hereby submit to the exclusive jurisdiction of the Scottish Courts.

6.11 Registration

The Parties consent to the registration of this Agreement for preservation and execution.

IN WITNESS WHEREOF these presents typewritten on this and the [] preceding pages together with the Schedule, Plan and draft lease annexed are executed by the said Network Rail Infrastructure Limited and the said [] Council as follows:

SUBSCRIBED for and on behalf of the said NETWORK RAIL INFRASTRUCTURE LIMITED in the presence of the witness signing and whose particulars are as undernoted at [] on [] by:-

Authorised Signatory Witness.....

Signatory's Name Witness Name.....

Witness Address.....

.....

SUBSCRIBED for and on behalf of the said [] COUNCIL at [] on [] by the person hereunder subscribing, in the presence of the witness subscribing opposite and whose details are set out below:

.....
Signatory (Status)

.....
Witness (Signature)

.....
Signatory (Full Name)

.....
Witness (Full Name)

.....
Witness (Address)

**This is the Schedule referred to in the foregoing Agreement
between Network Rail Infrastructure Limited and City of Edinburgh Council**

Schedule

Part 1

Particulars of Works

Those works referable to the planning, design, construction, maintenance and use of the Bridge all as detailed in or provided for by the Asset Protection Agreement.

Part 2

Notice Details

Part 1

- (a) Network Rail's address for the service of notices is:

Network Rail Infrastructure Limited
Buchanan House
58 Port Dundas Road
Glasgow
G4 0LQ

Fax: 0141 555 4931

All written notices to be marked:

URGENT: ATTENTION OF THE ROUTE DIRECTOR

- (b) The address for service of notices for the Grantees is:

[

]

Fax: []

All written notices to be marked:

URGENT: ATTENTION OF []

Part 2

- (a) Network Rail's address for the service of notices under Clause 2.1 is:

Network Rail Infrastructure Limited
Buchanan House
58 Port Dundas Road
Glasgow
G4 0LQ

Fax: 0141 555 4931

All written notices to be marked:

URGENT: ATTENTION OF THE ROUTE DIRECTOR

(b) The address for service of notices under Clause 2.1 for the Grantees is:

[

]

Fax: []

All written notices to be marked:

URGENT: ATTENTION OF []

Plan of Location



**THIS IS SCHEDULE PART 28 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 28

CERTIFICATES

PART A - NETWORK CERTIFICATE

This document is applicable to the Network Performance Test as envisaged by section 23.16 of the Employer's Requirements and certifies in accordance with Clause 47.3 of this Agreement that the Edinburgh Tram Network has passed the test criteria in section 23.16 of the Employer's Requirements to the satisfaction of **tie's** Representative by meeting or exceeding:

- (i) the Punctuality Service Element target in section 2.16 of the Employer's Requirements over twenty-eight days measured in accordance with this Agreement;
- (ii) the sub-station and UPS demonstration test in accordance with section 23.16.4 of the Employer's Requirements; and
- (iii) the tram changeover test in accordance with section 23.16.5 of the Employer's Requirements.

The necessary test results are listed in Annex 1 to this Certificate including any agreed exclusions that have been applied.

tie's Representative

Signature

Name (in Block Capitals)

Original Certificate to be issued to: **tie**

Copies to be issued to: Infraco, the Tram Supplier, the Tram Maintainer and **tie's** Representative

PART B - RELIABILITY CERTIFICATE

This document is applicable to the Network Reliability Test as envisaged by section 23.17 of the Employer's Requirements for and certifies in accordance with Clause 47.4 of this Agreement that this System has passed the test criteria to the satisfaction of **tie's** Representative by meeting or exceeding the Target Value for that System in Table 45 of the Employer's Requirements over the required number of Periods. The necessary test results are listed in Annex 1 to this Certificate including any agreed exclusions that have been applied.

tie's Representative

Signature

Name (in Block Capitals)

Original Certificate to be issued to: **tie**

Copies to be issued to: Infraco, the Tram Supplier and the Tram Maintainer and **tie's** Representative

PART C - TRAM RELIABILITY CERTIFICATE

This document is applicable to Tram Number: and certifies that it has achieved Reliability as defined in accordance with the Tram Supply Agreement to the satisfaction of the Tram Inspector by operating for two consecutive Reporting Periods in passenger carrying service without being a Tram Maintainer Late Tram and that during the same two Reporting Periods it has travelled a distance in excess of 10,000 kilometres. The necessary test results are listed in Annex 1 to this Certificate including any agreed exclusions that have been applied.

Tram Inspector

Signature

Name (in Block Capitals)

Original Certificate to be issued to: **tie**

Copies to be issued to: Infraco, the Tram Supplier, the Tram Maintainer and Tram Inspector



**THIS IS SCHEDULE PART 29 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 29

TIE AND CEC POLICIES

A TIE POLICIES

tie Drug and Alcohol Policy – *PS_625_Drugs_and_Alcohol_Policy*

Tram Project Safety Policy Statement – *DEL.HSQE.105_Tram_Safety_Policy*

Tram Quality Policy Statement – *DEL.HSQE.103_Tram_Quality_Policy*

Tram Project Environmental & Sustainability Policy Statement –
DEL.HSQE.101_Tram_Environmental_Policy

Electromagnetic Compatibility (EMC) Management Policy – *Y170CR1*

Noise and Vibration Policy – *Noise_and_Vibration_March_2006*

B HEALTH AND SAFETY INFORMATION

Health and Safety Information

[Appendix A – Health and Safety Issues - DEL.HSQE.1123](#)

[Appendix B – Register of Insitu Hazard Identification Forms – HI/01-HI/06, HI/08-HI/37 & HI/39-HI/54](#)

[Appendix C – Health & Safety Information – Infracore - DEL.HSQE.1122](#)

Summary of Health and Safety File

Summary_of_Health_and_Safety

Project Safety and Quality Interface

DEL.HSQE.1010

C TRAM DESIGN MANUAL

Edinburgh Tram Design Manual



**THIS IS SCHEDULE PART 30 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE 30
INFRACO PROPOSALS

	Bilfinger Berger – Siemens Consortium								
	Edinburgh Tram Network								
	Infraco Proposals – Civil								
1	Introduction								
1.1	BBS proposals for Civil Works are the SDS Design, to be developed and finalised to Issued For Construction (IFC) status under the Design Management Plan in Schedule Part 14.								
1.2	The Design is, at present, incomplete or not issued to BBS for some Sections of the Works								
1.3	We refer to the Design Due Diligence Summary Report Rev 2B 18.02.2008, Appendix C								
1.4	The Design will, where possible, be developed and finalised in accordance with Section 3.4, Pricing Assumptions included in Part 4 of the Schedule to the Infraco Contract								
1.5	Part 4 of the Schedule deals with Notified Departures from the Pricing Assumptions								
Appendix A	Document List								
Appendix B	Due Diligence Summary Report Rev 2B 18.02.2008								
Appendix C	Construction Support by SDS								
2	Requirements for Development and Finalisation of SDS Design								
2.1	System Wide								
				Information from BBS to SDS	Description of Design completion activities				
2.1.1	Surveys								
2.1.1.1	Surveys need to be completed to ensure a safe and economic design.				see Sections				
2.1.1.2	Confirm adequacy of existing structures and that as built records and/or valid historical surveys are acceptable.				see Sections				
2.1.1.3	Monitoring requirements need to be defined.				see Sections				
2.2	Land Made Available								
2.2.1	Available land is to be identified in drawing and setting out data format.				Available land is to be identified in drawing and setting out data format.				
2.3	Risks								
2.3.2	Construction risks related to design are to be identified.				Residual Risk from Design/Designer Hazard Log to be completed for all Design packages				
2.4	Construction Support								
	Construction Support by SDS Site Staff				See Appendix C				

Infraco Proposals and Requirements for Development and Finalisation of SDS Design					
Section 1A					
				Information from BBS to SDS	Description of Design completion activities
1A.1	Trackform				
1A.1.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				
1A.1.2	Cross sections required to reflect BBS's selected Track System, including minimum track construction depths (top of rail to formation) with corresponding formation condition requirements.			SDS believe that loadings are required to enable them to complete this Design activity	Incorporate BBS selected Trackform on drawings and confirm minimum track construction depth and corresponding formation condition requirement as Pricing Assumption or at some other depth condition measure to be agreed/approved by SDS, BBS, tie and CEC
1A.2	Sytems and Power Cable Ducts				
1A.2.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information on cabling requirements to be supplied to SDS by BBS	Design duct group and spacing to accommodate cabling requirements and incorporate information on drawings
	Geometry				
1A.3	Horizontal Alignment				
1A.3.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design
1A.3.2	Confirmation required that alignment is compatible with CAF Tram DKE and LOD.				Incorporate CAF Tram DKE in Design
1A.4	Vertical Alignment				

				Information from BBS to SDS	Description of Design completion activities	
1A.4.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
1A.4.2	Revise alignment, where possible and where Programme permits for on-street section to minimise Roads work-scope.				Revise, generally raise, vertical alignment of Track	
1A.4.3	Revised alignment required to facilitate direct fixing of rails to structures and guideway.				Revise, lower, vertical alignment of Track	
1A.5	Tramstops					
1A.5.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
1A.6	Sub-station Buildings					
1A.6.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information on Sub-station equipment to be supplied to SDS by BBS	Complete Design	
1A.7	OLE Foundations					
1A.7.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information from BBS to be issued on OLE poles, including loadings.	Design OLE Foundations	
1A.8	Site Clearance					
1A.8.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
1A.9	Earthworks					
1A.9.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Earthworks Design	

				Information from BBS to SDS	Description of Design completion activities	
1A.9.2	Requirements for excavation and filling below Earthworks Outline to be designed and specified and assessment of anticipated formation conditions				Standard Details for treatment of low CBR or Stiffness or Soft Material; excavate and replace with class 6, Lime Modification, Geotextiles	
1A.9.3					Extent; length, width and depth of areas requiring earthworks below Earthworks Outline	
1A.9.4	Formation requirements to be confirmed.				CBR or Stiffness Requirements at Formation for Highways and Track	
1A.9.5	Requirements for excavation and disposal of contaminated material, and refilling of void, to be designed and specified.				Extent; length, width and depth of areas requiring earthworks below Earthworks Outline and materials to be used for refilling where required	
1A.9.6	Special Geotechnical measures, e.g. embankment slope steepening (by selection of fill type, re-inforced earth) cut slope steepening (by slope drains, buttresses, soil nails) soft ground treatment (by surcharging/consolidation, load transfer platforms) to be designed and specified.				embankment slope steepening (by selection of fill type, re-inforced earth) cut slope steepening (by slope drains, buttresses, soil nails) soft ground treatment (by surcharging/consolidation, load transfer platforms) to be designed and specified.	
1A.10	Roads					
1A.10.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	

				Information from BBS to SDS	Description of Design completion activities	
1A.10.2	Subject to survey, pavement design to be developed and finalised to minimise work scope				Pavement design is to be revised to a plane and re-surface (new regulating and surface course only) when survey information is available and where it confirms the feasibility of this design solution Note This activity is an alternative to the Vertical Alignment activity above)	
1A.10.3	Further pavement surveys and assessments are required.				GPR and/or Pavement Condition surveys as required by 1A.10.2 (above)	
1A.11	Drainage					
1A.11.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
1A.11.2	Requirements for maximising use of and connection to existing drainage network to be confirmed.				Review and complete design	
1A.12	Landscaping					
1A.12.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
1A.13	Accommodation Works					
1A.13.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
			Structures (Bridges and Walls)			
1A.14	W1 Lindsay Road					

				Information from BBS to SDS	Description of Design completion activities	
1A.14.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
1A.15	S16 Victoria Dock Entrance					
1A.15.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
1A.16	S17 Tower Place					
1A.16.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	

Infraco Proposals and Requirements for Development and Finalisation of SDS Design					
Section 1B					
				Information from BBS to SDS	Description of Design completion activities
1B.1	Trackform				
1B.1.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				
1B.1.2	Cross sections required to reflect BBS's selected Track System, including minimum track construction depths (top of rail to formation) with corresponding formation condition requirements.				Incorporate BBS selected Trackform on drawings and confirm minimum track construction depth and corresponding formation condition requirement as Pricing Assumption or at some other depth condition measure to be agreed/approved by SDS, BBS, tie and CEC
1B.2	Sytems and Power Cable Ducts				
1B.2.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information on cabling requirements to be supplied to SDS by BBS	Design duct group and spacing to accommodate cabling requirements and incorporate information on drawings
	Geometry				
1B.3	Horizontal Alignment				
1B.3.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design
1B.3.2	Confirmation required that alignment is compatible with CAF Tram DKE and LOD.				Incorporate CAF Tram DKE in Design
1B.4	Vertical Alignment				

				Information from BBS to SDS	Description of Design completion activities	
1B.4.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
1B.4.2	Revise alignment, where possible and where Programme permits to minimise Roads work-scope.				Revise, generally raise, vertical alignment of Track	
1B.5	Tramstops					
1B.5.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
1B.6	Sub-station Buildings					
1B.6.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information on Sub-station equipment to be supplied to SDS by BBS	Complete Design	
1B.7	OLE Foundations					
1B.7.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information from BBS to be issued on OLE poles, including loadings.	Design OLE Foundations	
1B.8	Site Clearance					
1B.8.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
1B.9	Earthworks					
1B.9.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Earthworks Design	

				Information from BBS to SDS	Description of Design completion activities	
1B.9.2	Requirements for excavation and filling below Earthworks Outline to be designed and specified and assessment of anticipated formation conditions				Standard Details for treatment of low CBR or Stiffness or Soft Material; excavate and replace with class 6, Lime Modification, Geotextiles	
1B.9.3					Extent; length, width and depth of areas requiring earthworks below Earthworks Outline	
1B.9.4	Formation requirements to be confirmed.				CBR or Stiffness Requirements at Formation for Highways and Track	
1B.9.5	Requirements for excavation and disposal of contaminated material, and refilling of void, to be designed and specified.				Extent; length, width and depth of areas requiring earthworks below Earthworks Outline and materials to be used for refilling where required	
1B.10	Roads					
1B.10.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design					
1B.10.2	Subject to survey, pavement design to be developed and finalised to minimise work scope				Pavement design is to be revised to a plane and re-surface (new regulating and surface course only) when survey information is available and where it confirms the feasibility of this design solution Note This activity is an alternative to the Vertical Alignment activity above)	
1B.10.3	Further pavement surveys and assessments are required.				GPR and/or Pavement Condition surveys as required by 1B.10.2 (above)	

				Information from BBS to SDS	Description of Design completion activities	
1B.11	Drainage					
1B.11.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
1B.11.2	Requirements for maximising use of and connection to existing drainage network to be confirmed.				Review and complete design	
1B.12	Landscaping					
1B.12.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design					
1B.13	Accommodation Works					
1B.13.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
	Structures (Bridges and Walls)					
1B.14	S18 Leith Walk Railway					
1B.14.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	

Infraco Proposals and Requirements for Development and Finalisation of SDS Design					
Section 1C					
				Information from BBS to SDS	Description of Design completion activities
1C.1	Trackform				
1C.1.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design
1C.1.2	Cross sections required to reflect BBS's selected Track System, including minimum track construction depths (top of rail to formation) with corresponding formation condition requirements.				Incorporate BBS selected Trackform on drawings and confirm minimum track construction depth and corresponding formation condition requirement as Pricing Assumption or at some other depth condition measure to be agreed/approved by SDS, BBS, tie and CEC
1C.2	Sytems and Power Cable Ducts				
1C.2.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information on cabling requirements to be supplied to SDS by BBS	Design duct group and spacing to accommodate cabling requirements and incorporate information on drawings
	Geometry				
1C.3	Horizontal Alignment				
1C.3.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design
1C.3.2	Confirmation required that alignment is compatible with CAF Tram DKE and LOD.				Incorporate CAF Tram DKE in Design
1C.4	Vertical Alignment				

Section 1C				
			Information from BBS to SDS	Description of Design completion activities
1C.4.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Complete Design
1C.4.2	Revise alignment, where possible and where Programme permits to minimise Roads work-scope.			Revise, generally raise, vertical alignment of Track
1C.5	Tramstops			
1C.5.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Complete Design
1C.6	Sub-station Buildings			
1C.6.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design	Information on Sub-station equipment to be supplied to SDS by BBS		Complete Design
1C.7	OLE Foundations			
1C.7.1	Design to be completed to IFC status and all design consents and approvals obtained.	Information from BBS to be issued on OLE poles, including loadings.		Design OLE Foundations
1C.8	Site Clearance			
1C.8.1	Design to be completed to IFC status and all design consents and approvals obtained.			Complete Design
1C.9	Earthworks			
1C.9.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Complete Earthworks Design

Section 1C					
				Information from BBS to SDS	Description of Design completion activities
1C.9.2	Requirements for excavation and filling below Earthworks Outline to be designed and specified and assessment of anticipated formation conditions				Standard Details for treatment of low CBR or Stiffness or Soft Material; excavate and replace with class 6, Lime Modification, Geotextiles
1C.9.3					Extent; length, width and depth of areas requiring earthworks below Earthworks Outline
1C.9.4	Formation requirements to be confirmed.				CBR or Stiffness Requirements at Formation for Highways and Track
1C.9.5	Requirements for excavation and disposal of contaminated material, and refilling of void, to be designed and specified.				Extent; length, width and depth of areas requiring earthworks below Earthworks Outline and materials to be used for refilling where required
1C.10	Roads				
1C.10.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				
1C.10.2	Subject to survey, pavement design to be developed and finalised to minimise work scope				Pavement design is to be revised to a plane and re-surface (new regulating and surface course only) when survey information is available and where it confirms the feasibility of this design solution Note This activity is an alternative to the Vertical Alignment activity above)

Section 1C				
			Information from BBS to SDS	Description of Design completion activities
1C.10.3	Further pavement surveys and assessments are required.			GPR and/or Pavement Condition surveys as required by 1C.10.2 (above)
1C.11	Drainage			
1C.11.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Complete Design
1C.11.2	Requirements for maximising use of and connection to existing drainage network to be confirmed.			Review and complete design
1C.12	Landscaping			
1C.12.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Complete Design
1C.13	Accommodation Works			
1C.13.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Complete Design

Infraco Proposals and Requirements for Development and Finalisation of SDS Design						
Section 1D						
				Information from BBS to SDS	Description of Design completion activities	
1D.1	Trackform					
1D.1.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design					
1D.1.2	Cross sections required to reflect BBS's selected Track System, including minimum track construction depths (top of rail to formation) with corresponding formation condition requirements.				Incorporate BBS selected Trackform on drawings and confirm minimum track construction depth and corresponding formation condition requirement as Pricing Assumption or at some other depth condition measure to be agreed/approved by SDS, BBS, tie and CEC	
1D.2	Sytems and Power Cable Ducts					
1D.2.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information on cabling requirements to be supplied to SDS by BBS	Design duct group and spacing to accommodate cabling requirements and incorporate information on drawings	
	Geometry					
1D.3	Horizontal Alignment					
1D.3.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
1D.3.2	Confirmation required that alignment is compatible with CAF Tram DKE and LOD.				Incorporate CAF Tram DKE in Design	
1D.4	Vertical Alignment					

				Information from BBS to SDS	Description of Design completion activities	
1D.4.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
1D.4.2	Revise alignment, where possible and where Programme permits to minimise Roads work-scope.				Revise, generally raise, vertical alignment of Track	
1D.5	Tramstops					
1D.5.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
1D.6	Sub-station Buildings					
1D.6.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information on Sub-station equipment to be supplied to SDS by BBS	Complete Design	
1D.7	OLE Foundations					
1D.7.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information from BBS to be issued on OLE poles, including loadings.	Design OLE Foundations	
1D.8	Site Clearance					
1D.8.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
1D.9	Earthworks					
1D.9.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Earthworks Design	

				Information from BBS to SDS	Description of Design completion activities	
1D.9.2	Requirements for excavation and filling below Earthworks Outline to be designed and specified and assessment of anticipated formation conditions				Standard Details for treatment of low CBR or Stiffness or Soft Material; excavate and replace with class 6, Lime Modification, Geotextiles	
1D.9.3					Extent; length, width and depth of areas requiring earthworks below Earthworks Outline	
1D.9.4	Formation requirements to be confirmed.				CBR or Stiffness Requirements at Formation for Highways and Track	
1D.9.5	Requirements for excavation and disposal of contaminated material, and refilling of void, to be designed and specified.				Extent; length, width and depth of areas requiring earthworks below Earthworks Outline and materials to be used for refilling where required	
1D.9.6	Special Geotechnical measures, e.g. embankment slope steepening (by selection of fill type, re-inforced earth) cut slope steepening (by slope drains, buttresses, soil nails) soft ground treatment (by surcharging/consolidation, load transfer platforms) to be designed and specified.				embankment slope steepening (by selection of fill type, re-inforced earth) cut slope steepening (by slope drains, buttresses, soil nails) soft ground treatment (by surcharging/consolidation, load transfer platforms) to be designed and specified.	
1D.10	Roads					
1D.10.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design					

				Information from BBS to SDS	Description of Design completion activities	
1D.10.2	Subject to survey, pavement design to be developed and finalised to minimise work scope				Pavement design is to be revised to a plane and re-surface (new regulating and surface course only) when survey information is available and where it confirms the feasibility of this design solution Note This activity is an alternative to the Vertical Alignment activity above)	
1D.10.3	Further pavement surveys and assessments are required.				GPR and/or Pavement Condition surveys as required by 1D.10.2 (above)	
1D.11	Drainage					
1D.11.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
1D.11.2	Requirements for maximising use of and connection to existing drainage network to be confirmed.				Review and complete design	
1D.12	Landscaping					
1D.12.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
1D.13	Accommodation Works					
1D.13.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	

Infraco Proposals and Requirements for Development and Finalisation of SDS Design					
Section 2A					
				Information from BBS to SDS	Description of Design completion activities
2A.1	Trackform				
2A.1.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				
2A.1.2	Cross sections required to reflect BBS's selected Track System, including minimum track construction depths (top of rail to formation) with corresponding formation condition requirements.				Incorporate BBS selected Trackform on drawings and confirm minimum track construction depth and corresponding formation condition requirement as Pricing Assumption or at some other depth condition measure to be agreed/approved by SDS, BBS, tie and CEC
2A.2	Systems and Power Cable Ducts				
2A.2.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information on cabling requirements to be supplied to SDS by BBS	Design duct group and spacing to accommodate cabling requirements and incorporate information on drawings
Geometry					
2A.3	Horizontal Alignment				
2A.3.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design
2A.3.2	Confirmation required that alignment is compatible with CAF Tram DKE and LOD.				Incorporate CAF Tram DKE in Design
2A.4	Vertical Alignment				

				Information from BBS to SDS	Description of Design completion activities	
2A.4.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
2A.4.2	Revise alignment, where possible and where Programme permits to minimise Roads work-scope.				Revise, generally raise, vertical alignment of Track	
2A.4.3	Revised alignment required to facilitate direct fixing of rails to structures				Revise, lower, vertical alignment of Track	
2A.5	Tramstops					
2A.5.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
2A.6	Sub-station Buildings					
2A.6.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information on Sub-station equipment to be supplied to SDS by BBS	Complete Design	
2A.7	OLE Foundations					
2A.7.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information from BBS to be issued on OLE poles, including loadings.	Design OLE Foundations	
2A.8	Site Clearance					
2A.8.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
2A.9	Earthworks					
2A.9.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Earthworks Design	

				Information from BBS to SDS	Description of Design completion activities	
2A.9.2	Requirements for excavation and filling below Earthworks Outline to be designed and specified and assessment of anticipated formation conditions				Standard Details for treatment of low CBR or Stiffness or Soft Material; excavate and replace with class 6, Lime Modification, Geotextiles	
2A.9.3					Extent; length, width and depth of areas requiring earthworks below Earthworks Outline	
2A.9.4	Formation requirements to be confirmed.				CBR or Stiffness Requirements at Formation for Highways and Track	
2A.9.5	Requirements for excavation and disposal of contaminated material, and refilling of void, to be designed and specified.				Extent; length, width and depth of areas requiring earthworks below Earthworks Outline and materials to be used for refilling where required	
2A.9.6	Special Geotechnical measures, e.g. embankment slope steepening (by selection of fill type, re-inforced earth) cut slope steepening (by slope drains, buttresses, soil nails) soft ground treatment (by surcharging/consolidation, load transfer platforms) to be designed and specified.				embankment slope steepening (by selection of fill type, re-inforced earth) cut slope steepening (by slope drains, buttresses, soil nails) soft ground treatment (by surcharging/consolidation, load transfer platforms) to be designed and specified.	
2A.10	Roads					
2A.10.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design					

				Information from BBS to SDS	Description of Design completion activities	
2A.10.2	Subject to survey, pavement design to be developed and finalised to minimise work scope				Pavement design is to be revised to a plane and re-surface (new regulating and surface course only) when survey information is available and where it confirms the feasibility of this design solution Note This activity is an alternative to the Vertical Alignment activity above)	
2A.10.3	Further pavement surveys and assessments are required.				GPR and/or Pavement Condition surveys as required	
2A.11	Drainage					
2A.11.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
2A.11.2	Requirements for maximising use of and connection to existing drainage network to be confirmed.				Review and complete design	
2A.12	Landscaping					
2A.12.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design					
2A.13	Accommodation Works					
2A.13.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
Structures (Bridges and Walls)						
2A.14	S19 Haymarket Viaduct					

				Information from BBS to SDS	Description of Design completion activities	
2A.14.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
2A.14.2	Requirements for a design condition survey of the existing wall.				Carry out or complete Condition Survey	
2A.14.3	Requirements for special foundations at Pier 4 and Abutment E to be confirmed.				Review Design	
2A.15	S20 Russell Road					
2A.15.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
2A.15.2	Possible re-design (subject to programme allowance) of sub-structure to improve buildability			refer to Appendix B	refer to Appendix B	

Infraco Proposals and Requirements for Development and Finalisation of SDS Design						
Section 5A						
				Information from BBS to SDS	Description of Design completion activities	
5A.1	Trackform					
5A.1.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design					
5A.1.2	Cross sections required to reflect BBS's selected Track System, including minimum track construction depths (top of rail to formation) with corresponding formation condition requirements.				Incorporate BBS selected Trackform on drawings and confirm minimum track construction depth and corresponding formation condition requirement as Pricing Assumption or at some other depth condition measure to be agreed/approved by SDS, BBS, tie and CEC	
5A.2	Sytems and Power Cable Ducts					
5A.2.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information on cabling requirements to be supplied to SDS by BBS	Design duct group and spacing to accommodate cabling requirements and incorporate information on drawings	
	Geometry					
5A.3	Horizontal Alignment					
5A.3.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5A.3.2	Confirmation required that alignment is compatible with CAF Tram DKE and LOD.				Incorporate CAF Tram DKE in Design	
5A.4	Vertical Alignment					

				Information from BBS to SDS	Description of Design completion activities	
5A.4.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5A.4.2	Revised alignment required to facilitate direct fixing of rails to structures				Revise, lower, vertical alignment of Track	
5A.5	Tramstops					
5A.5.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5A.6	Sub-station Buildings					
5A.6.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information on Sub-station equipment to be supplied to SDS by BBS	Complete Design	
5A.7	OLE Foundations					
5A.7.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information from BBS to be issued on OLE poles, including loadings.	Design OLE Foundations	
5A.8	Site Clearance					
5A.8.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5A.9	Earthworks					
5A.9.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Earthworks Design	

				Information from BBS to SDS	Description of Design completion activities	
5A.9.2	Requirements for excavation and filling below Earthworks Outline to be designed and specified and assessment of anticipated formation conditions				Standard Details for treatment of low CBR or Stiffness or Soft Material; excavate and replace with class 6, Lime Modification, Geotextiles	
5A.9.3					Extent; length, width and depth of areas requiring earthworks below Earthworks Outline	
5A.9.4	Formation requirements to be confirmed.				CBR or Stiffness Requirements at Formation for Highways and Track	
5A.9.5	Requirements for excavation and disposal of contaminated material, and refilling of void, to be designed and specified.				Extent; length, width and depth of areas requiring earthworks below Earthworks Outline and materials to be used for refilling where required	
5A.9.6	Special Geotechnical measures, e.g. embankment slope steepening (by selection of fill type, re-inforced earth) cut slope steepening (by slope drains, buttresses, soil nails) soft ground treatment (by surcharging/consolidation, load transfer platforms) to be designed and specified.				embankment slope steepening (by selection of fill type, re-inforced earth) cut slope steepening (by slope drains, buttresses, soil nails) soft ground treatment (by surcharging/consolidation, load transfer platforms) to be designed and specified.	
5A.10	Roads					
5A.10.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design					

				Information from BBS to SDS	Description of Design completion activities	
5A.10.2	Subject to survey, pavement design to be developed and finalised to minimise work scope				Pavement design is to be revised to a plane and re-surface (new regulating and surface course only) when survey information is available and where it confirms the feasibility of this design solution Note This activity is an alternative to the Vertical Alignment activity above)	
5A.10.3	Further pavement surveys and assessments are required.				GPR and/or Pavement Condition surveys as required by xxxx (above)	
5A.11	Drainage					
5A.11.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5A.11.2	Requirements for maximising use of and connection to existing drainage network to be confirmed.				Review and complete design	
5A.12	Landscaping					
5A.12.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design					
5A.13	Accommodation Works					
5A.13.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
Structures (Bridges and Walls)						
5A.14	W3 Russell Road (Wall) No 1					

				Information from BBS to SDS	Description of Design completion activities	
5A.14.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5A.15	W4 Russell Road (Wall) No 2					
5A.15.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5A.16	W18 Murrayfield Tramstop (Wall)					
5A.16.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Further GI required to inform Design	
5A.17	S21A Roseburn Street Viaduct					
5A.17.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5A.17.2	Possible re-design to reduce scope and cost.				Re-Design to 2 separate single span structures with re-inforced earth walled embankments replacing removed spans	
5A.17.3	Further GI required to confirm foundation design.				Further GI, in conjunction with GI for W18 (see above) to ascertain extent of soft layer	
5A.17.4	Re-design required to allow cost efficient fabrication of structural steel.			Appoint steelwork sub-contractor	Liaise with BBS and steelwork sub-contractor and re-design/re-detail accordingly	
5A.18	S21B Murrayfield Stadium (Wall)					

				Information from BBS to SDS	Description of Design completion activities	
5A.18.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5A.19	S21C Murrayfield Stadium Underpass					
5A.19.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5A.20	S21D Murrayfield Training Pitches					
5A.20.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5A.21	S21E Water of Leith					
5A.21.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5A.21.2	Subject to Programme allowance, redesign pier foundations to improve buildability.				Re-design with 2 No larger dia bored piles (mono-piles), one per column. Design a direct connection to the columns, to be made within the pile casing. Pile casings will be cut off at river bed level	
5A.21.3	Re-design required to allow cost efficient fabrication of structural steel.	Appoint steelwork sub-contractor			Liaise with BBS and steelwork sub-contractor and re-design/re-detail accordingly	
5A.22	W8 Baird Drive					
5A.22.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design					
5A.23	S22 Balgreen Road (A and B)					

				Information from BBS to SDS	Description of Design completion activities	
5A.23.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design					

Infraco Proposals and Requirements for Development and Finalisation of SDS Design					
Section 5B					
				Information from BBS to SDS	Description of Design completion activities
5B.1	Trackform				
5B.1.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design
5B.1.2	Cross sections required to reflect BBS's selected Track System, including minimum track construction depths (top of rail to formation) with corresponding formation condition requirements.				Incorporate BBS selected Trackform on drawings and confirm minimum track construction depth and corresponding formation condition requirement as Pricing Assumption or at some other depth condition measure to be agreed/approved by SDS, BBS, tie and CEC
5B.2	Systems and Power Cable Ducts				
5B.2.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information on cabling requirements to be supplied to SDS by BBS	Design duct group and spacing to accommodate cabling requirements and incorporate information on drawings
Geometry					
5B.3	Horizontal Alignment				
5B.3.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design
5B.3.2	Confirmation required that alignment is compatible with CAF Tram DKE and LOD.				Incorporate CAF Tram DKE in Design
5B.4	Vertical Alignment				

				Information from BBS to SDS	Description of Design completion activities	
5B.4.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5B.4.2	Revised alignment required to facilitate direct fixing of rails to structures and guideway.				Revise, lower, vertical alignment of Track	
5B.5	Tramstops					
5B.5.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5B.6	Sub-station Buildings					
5B.6.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information on Sub-station equipment to be supplied to SDS by BBS	Complete Design	
5B.7	OLE Foundations					
5B.7.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information from BBS to be issued on OLE poles, including loadings.	Design OLE Foundations	
5B.8	Site Clearance					
5B.8.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5B.9	Earthworks					
5B.9.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Earthworks Design	

				Information from BBS to SDS	Description of Design completion activities	
5B.9.2	Requirements for excavation and filling below Earthworks Outline to be designed and specified and assessment of anticipated formation conditions				Standard Details for treatment of low CBR or Stiffness or Soft Material; excavate and replace with class 6, Lime Modification, Geotextiles	
5B.9.3					Extent; length, width and depth of areas requiring earthworks below Earthworks Outline	
5B.9.4	Formation requirements to be confirmed.				CBR or Stiffness Requirements at Formation for Highways and Track	
5B.9.5	Requirements for excavation and disposal of contaminated material, and refilling of void, to be designed and specified.				Extent; length, width and depth of areas requiring earthworks below Earthworks Outline and materials to be used for refilling where required	
5B.9.6	Special Geotechnical measures, e.g. embankment slope steepening (by selection of fill type, re-inforced earth) cut slope steepening (by slope drains, buttresses, soil nails) soft ground treatment (by surcharging/consolidation, load transfer platforms) to be designed and specified.				embankment slope steepening (by selection of fill type, re-inforced earth) cut slope steepening (by slope drains, buttresses, soil nails) soft ground treatment (by surcharging/consolidation, load transfer platforms) to be designed and specified.	
5B.10	Roads					
5B.10.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	

				Information from BBS to SDS	Description of Design completion activities	
5B.10.2	Subject to survey, pavement design to be developed and finalised to minimise work scope				Pavement design is to be revised to a plane and re-surface (new regulating and surface course only) when survey information is available and where it confirms the feasibility of this design solution Note This activity is an alternative to the Vertical Alignment activity above)	
5B.10.3	Further pavement surveys and assessments are required.				GPR and/or Pavement Condition surveys as required by 5B.10.2 (above)	
5B.11	Drainage					
5B.11.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5B.11.2	Requirements for maximising use of and connection to existing drainage network to be confirmed.				Review and complete design	
5B.12	Landscaping					
5B.12.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5B.13	Accommodation Works					
5B.13.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
Structures (Bridges and Walls)						
5B.14	W9 Balgreen Road (Wall)					

				Information from BBS to SDS	Description of Design completion activities	
5B.14.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5B.15	S23 Carrick Knowe					
5B.15.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5B.15.2	Completed design to have foundations outwith Track Support Zone ?				Review and Revise Design	
5B.16	S26 South Gyle Access Road					
5B.16.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5B.17	W11 Bankhead Drive Tramstop (Wall)					
5B.17.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5B.18	S27 Edinburgh Park Station Viaduct					
5B.18.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5B.18.2	Possible re-design to reduce scope and cost				Redesign piers with flared tops and/or crossheads so that pre-cast deck beams can be placed without the need for Temporary Works (temporary beam supports)	
5B.18.3	Completed design to have foundations outwith Track Support Zone				Review and Revise Design	

Infraco Proposals and Requirements for Development and Finalisation of SDS Design					
Section 5C					
				Information from BBS to SDS	Description of Design completion activities
5C.1	Trackform				
5C.1.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design
5C.1.2	Cross sections required to reflect BBS's selected Track System, including minimum track construction depths (top of rail to formation) with corresponding formation condition requirements.				Incorporate BBS selected Trackform on drawings and confirm minimum track construction depth and corresponding formation condition requirement as Pricing Assumption or at some other depth condition measure to be agreed/approved by SDS, BBS, tie and CEC
5C.2	Systems and Power Cable Ducts				
5C.2.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information on cabling requirements to be supplied to SDS by BBS	Design duct group and spacing to accommodate cabling requirements and incorporate information on drawings
	Geometry				
5C.3	Horizontal Alignment				
5C.3.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design
5C.3.2	Confirmation required that alignment is compatible with CAF Tram DKE and LOD.				Incorporate CAF Tram DKE in Design
5C.4	Vertical Alignment				

				Information from BBS to SDS	Description of Design completion activities	
5C.4.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5C.4.2	Revised alignment required to facilitate direct fixing of rails to structures				Revise, lower, vertical alignment of Track	
5C.5	Tramstops					
5C.5.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5C.6	Sub-station Buildings					
5C.6.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information on Sub-station equipment to be supplied to SDS by BBS	Complete Design	
5C.7	OLE Foundations					
5C.7.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information from BBS to be issued on OLE poles, including loadings.	Design OLE Foundations	
5C.8	Site Clearance					
5C.8.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5C.9	Earthworks					
5C.9.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Earthworks Design	

				Information from BBS to SDS	Description of Design completion activities	
5C.9.2	Requirements for excavation and filling below Earthworks Outline to be designed and specified and assessment of anticipated formation conditions				Standard Details for treatment of low CBR or Stiffness or Soft Material; excavate and replace with class 6, Lime Modification, Geotextiles	
5C.9.3					Extent; length, width and depth of areas requiring earthworks below Earthworks Outline	
5C.9.4	Formation requirements to be confirmed.				CBR or Stiffness Requirements at Formation for Highways and Track	
5C.9.5	Requirements for excavation and disposal of contaminated material, and refilling of void, to be designed and specified.				Extent; length, width and depth of areas requiring earthworks below Earthworks Outline and materials to be used for refilling where required	
5C.9.6	Special Geotechnical measures, e.g. embankment slope steepening (by selection of fill type, re-inforced earth) cut slope steepening (by slope drains, buttresses, soil nails) soft ground treatment (by surcharging/consolidation, load transfer platforms) to be designed and specified.				embankment slope steepening (by selection of fill type, re-inforced earth) cut slope steepening (by slope drains, buttresses, soil nails) soft ground treatment (by surcharging/consolidation, load transfer platforms) to be designed and specified.	
5C.10	Roads					
5C.10.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design					

				Information from BBS to SDS	Description of Design completion activities	
5C.10.2	Subject to survey, pavement design to be developed and finalised to minimise work scope				Pavement design is to be revised to a plane and re-surface (new regulating and surface course only) when survey information is available and where it confirms the feasibility of this design solution Note This activity is an alternative to the Vertical Alignment activity above)	
5C.10.3	Further pavement surveys and assessments are required.				GPR and/or Pavement Condition	
5C.11	Drainage					
5C.11.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5C.11.2	Requirements for maximising use of and connection to existing drainage network to be confirmed.				Review and complete design	
5C.12	Landscaping					
5C.12.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5C.13	Accommodation Works					
5C.13.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
Structures (Bridges and Walls)						
5C.14	W19 Gyle Tramstop (Wall)					

				Information from BBS to SDS	Description of Design completion activities	
5C.14.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
5C.15	S28 A8 Underpass					
5C.15.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design					
5C.15.2	Subject to Programme allowance, re-design to incorporate a more economical piling solution along with further GI to confirm ground water regime.				subject to programme allowance, re-design secant piles as contiguous piles	
5C.15.3	Re-design for BT duct crossing (over structure)				re-design section of underpass to facilitate construction under BT duct	

Infraco Proposals and Requirements for Development and Finalisation of SDS Design									
Depot (Section 6)									
				Information from BBS to SDS	Description of Design completion activities				
6.1.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design				
6.2 Building									
6.2.1	Liaison on steelwork design for Depot Building may be required to allow BBS to comply with BAA requirements for notice period to lower crane jibs if BAA require use of the auxiliary runway. Any re-design is unlikely or minimal				Liaise with structural steel subcontractor on design of steelwork, where required, to allow BBS to comply with BAA requirements for notice period to lower crane jibs if BAA require use of the auxiliary runway.				
6.3 Trackform									
6.3.1	Cross sections required to reflect BBS's selected Track System, including minimum track construction depths (top of rail to formation) with corresponding formation condition requirements.								
Structures (Bridges and Walls)									
6.4 S32 Depot Access Bridge (or Depot Access Bridges)									
6.4.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Design to be completed from basic information, discussed at meeting on xxxx between BBS and SDS. The DABs are to be 2 separate structures. BBS will work with SDS to develop a cost effective Design				

Infraco Proposals and Requirements for Development and Finalisation of SDS Design						
Section 7A						
				Information from BBS to SDS	Description of Design completion activities	
7A.1	Trackform					
7A.1.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design					
7A.1.2	Cross sections required to reflect BBS's selected Track System, including minimum track construction depths (top of rail to formation) with corresponding formation condition requirements.				Incorporate BBS selected Trackform on drawings and confirm minimum track construction depth and corresponding formation condition requirement as Pricing Assumption or at some other depth condition measure to be agreed/approved by SDS, BBS, tie and CEC	
7A.2	Sytems and Power Cable Ducts					
7A.2.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information on cabling requirements to be supplied to SDS by BBS	Design duct group and spacing to accommodate cabling requirements and incorporate information on drawings	
	Geometry					
7A.3	Horizontal Alignment					
7A.3.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
7A.3.2	Confirmation required that alignment is compatible with CAF Tram DKE and LOD.				Incorporate CAF Tram DKE in Design	
7A.4	Vertical Alignment					

				Information from BBS to SDS	Description of Design completion activities	
7A.4.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
7A.4.2	Revised alignment required to facilitate direct fixing of rails to structures				Revise, lower, vertical alignment of Track	
7A.5	Tramstops					
7A.5.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
7A.6	Sub-station Buildings					
7A.6.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information on Sub-station equipment to be supplied to SDS by BBS	Complete Design	
7A.7	OLE Foundations					
7A.7.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design			Information from BBS to be issued on OLE poles, including loadings.	Design OLE Foundations	
7A.8	Site Clearance					
7A.8.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
7A.9	Earthworks					
7A.9.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Earthworks Design	

				Information from BBS to SDS	Description of Design completion activities	
7A.9.2	Requirements for excavation and filling below Earthworks Outline to be designed and specified and assessment of anticipated formation conditions				Standard Details for treatment of low CBR or Stiffness or Soft Material; excavate and replace with class 6, Lime Modification, Geotextiles	
7A.9.3					Extent; length, width and depth of areas requiring earthworks below Earthworks Outline	
7A.9.4	Formation requirements to be confirmed.				CBR or Stiffness Requirements at Formation for Highways and Track	
7A.9.5	Requirements for excavation and disposal of contaminated material, and refilling of void, to be designed and specified.				Extent; length, width and depth of areas requiring earthworks below Earthworks Outline and materials to be used for refilling where required	
7A.9.6	Special Geotechnical measures, e.g. embankment slope steepening (by selection of fill type, re-inforced earth) cut slope steepening (by slope drains, buttresses, soil nails) soft ground treatment (by surcharging/consolidation, load transfer platforms) to be designed and specified.				embankment slope steepening (by selection of fill type, re-inforced earth) cut slope steepening (by slope drains, buttresses, soil nails) soft ground treatment (by surcharging/consolidation, load transfer platforms) to be designed and specified.	
7A.9.7	Design special Geotechnical measures for Gogar Landfill Site. Solution to be dev				Design solution to be developed with BBS Engineers for surcharge embankment with appropriate consolidation period and excavation and replacement in the vicinity of Gogarburn Bridge East Abutment	

				Information from BBS to SDS	Description of Design completion activities	
7A.10	Roads					
7A.10.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design					
7A.11	Drainage					
7A.11.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
7A.11.2	Requirements for maximising use of and connection to existing drainage network to be confirmed.				Review and complete design	
7A.12	Landscaping					
7A.12.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
7A.13	Accommodation Works					
7A.13.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
	Structures (Bridges and Walls)					
7A.14	S29 Gogar Burn					
7A.14.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
7A.15	S30, 31 and 34 Gogarburn Culverts 1,2 and 3					
7A.15.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	
7A.16	W14 and 15 Gogarburn Walls 1 and 2					

				Information from BBS to SDS	Description of Design completion activities	
7A.16.1	Design to be completed to IFC status, all design consents and approvals obtained and BBS will construct IFC Design				Complete Design	

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31st March 2008

Updated Proposal Submission

Edinburgh Tram Network

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Combined Technical E&M Proposal

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1 Project Management Plan

1.1 Introduction

This document summarises the fundamentals of the BBS Consortium project management system, its approach, key tools and procedures. It explains the general approach for all the organizational units and its implementation through appropriate planning and setting appropriate targets.

When Consortium, BBS (Bilfinger+Berger, Siemens) or BBS Consortium is used in this document or its annexes, it stands only for the E&M part of the Edinburgh Tram Network.

1.2 Customer Requirements

As requested by the Employer's Requirements, the Consortium presents herewith the General Project Management Plan.

The following graphic illustrates how the Employer's requirements will be implemented as part of the project implementation philosophy. The project management system provides the proven approach to achieve the desired results to the complete satisfaction of the Employer.



Figure 1: Management System Cycle

1.3 Project Management Approach

The cornerstone for the Consortium Project Management Approach will be the implementation of the Edinburgh Tram Network Project. The Management System



is Risk-Based, Process-Driven and will integrate the various Management Systems of the Partners and Sub-systems. Thru implementation of an integrated management system, Infracore can integrate the various project management operations within each and every sub-system of the project to better assure implementation of the project requirements and also provide the objective evidence needed to demonstrate compliance.

The process, with a strong Systems Engineering and Systems Integration lead, proves crucial in support of maintaining the integrated operation method for overall mechanical and electrical system engineering and civil engineering. The Management System branches to include processes for design management, interface management, configuration & document control management, construction/installation management, RAMS and RAMS assurance management, requirements management, and information management. The entire process falls under the project Quality Management System (QMS) to ensure effective monitoring, improvement, and compliance.

The structure of the Consortium Project Management has been applied successfully in projects throughout the world. It has proven to be effective and successful in more than 20 projects worldwide. These Projects have been completed on time and within budget and are equally complex projects to the Edinburgh Tram Network Project

The Consortium Management System has proven its capabilities in some of the executed projects to successfully manage the integration and parallel execution of Civil Works and Electrical and Mechanical works to the benefit of the customer. Consequentially, the Consortium will incorporate its experienced project managers, engineers and supervisors into their management team, ensuring a smooth and professional implementation of the project.

Therefore, BBS propose to implement this well-proven Project Management structure also for this Edinburgh Tram Network Project

Table 1 Management Processes lists the management processes which are considered as the basis for the Consortium Management System and which will be described in detail with the Project Procedure Manual, which will be submitted within the first 90 days of the Project Implementation.

• **Management Process**

- Project Organization
- Project Controls
- Project Quality Management

- Environmental Management

- Project Documentation Management

- Project Design & Engineering Management

- Interface Management

- Reliability, Availability, Maintainability

- Project Safety Management

- Testing & Commissioning

- Risk Management

- Project Acceptance Management

- Contract Management

- General Office Management

Table 1 Management Processes

2 Design Management

2.1 Design Management

Please refer to Section 2: Overall Technical Concept; Chapter 1 - System Engineering

3 Risk Management

The objective of the Risk Management is to apply proven management techniques to risk identification and to remove issues of uncertainty from the project. The specific method to achieve this objective is to follow plans and procedures for the purpose of:

- Risk identification
- Risk classification
- Recording of identified risks in the Risk Register and Risk Forms
- A risk prioritisation process
- A risk mitigation process
- A process for reviewing the status of risks and mitigation
- A risk reporting process

The Risk Management applies to all project risks, irrespective of which party suffers the consequences of the risk occurrence.

3.1 Risk Deliverables

The BBS Consortium will establish, manage, develop, maintain, update and distribute the below listed documentation:

- BBS Consortium Risk Management Plan (IRMP)
- BBS Consortium Assumption Register (IAR)
- Risk Register (IRR)
- Risk Progress Report
- Construction Risk Control Report (CRCR)
- Commissioning Risk Control Report



4 Communication Strategy

4.1 Communications Plan

The BBS Consortium will develop a "Communications Plan" and this will be submitted in accordance with the Review Procedure.

The Communications Plan will illustrate how all the communication processes, activities and issues are to be managed, progressed and satisfactorily resolved. The Communications Plan will detail how the BBS Consortium will communicate with Sub-Contractors (including Tramco), the Operator, tie, the MUDFA Contractor, key stakeholders and third parties.

The BBS Consortium will implement all the requirements of the Communications Plan.

The BBS Consortium will liaise with the relevant parties to ensure that the BBS Consortium is copied into all relevant communications that are generated by others, in order to ensure that any relevant construction related issues, such as Temporary Works and practical constraints, are identified and addressed.

4.2 Meetings

The BBS Consortium will work with tie to develop the meetings schedules and requirements for progress reporting throughout the duration of the BBS Consortium Works. The following table provides a minimum of the meetings to be held:

Meetings	Frequency	Chaired by / Minutes taken
Safety Meeting	Weekly	BBS Consortium
Management Review Meetings	Two monthly	tie/BBS Consortium alternately
Project Progress Meetings	Four weekly (Fortnightly prior to site start)	tie
Design and Planning Meetings	Fortnightly	BBS Consortium



Stakeholder & Third Party Meetings	As required	tie
Site Meetings	Weekly	BBS Consortium
Cost Review Meetings	Four weekly	tie

The primary purpose of these meetings will be to enable the BBS Consortium to advise on:

- Any safety issues;
- The current state of the programmed BBS Consortium Works;
- Progress made in the various activities;
- Communication issues;
- Third party issues; and
- Commercial issues (Including Change Control)

The BBS Consortium will propose a comprehensive meetings schedule indicating those meetings which the BBS Consortium will chair and those meetings which the BBS Consortium will attend.

Prior to commencement on site, progress meetings will be held every two weeks. The purpose of these meetings will be to review progress made by all parties, and identify and agree actions required.

The BBS Consortium will provide an agenda, for all meetings to which they are designated as Chair. The BBS Consortium will also provide appropriate documentation in advance of each of the meetings.



5 Consents and Approvals

An Overall Approvals Management Plan for the System will be developed by BBS Consortium liaising with the Operator and the Operator which will cover at least the following:

- all statutory Necessary Consents to be obtained, identifying in each case the applicable Relevant Authority, the person or body responsible for obtaining the statutory Necessary Consent and the intended date by which such statutory Necessary Consent is to be obtained;
- all third party Necessary Consents to be obtained, identifying in each case the applicable third party, the person or body responsible for obtaining the third party Necessary Consent and the intended date by which the third party Necessary Consent is to be obtained;
- procedures to be used in obtaining statutory Necessary Consents and third party Necessary Consents; and
- procedures for maintaining the Overall Approvals Management Plan

The BBS Consortium will comply with all aspects of the Overall Approvals Management Plan as may be necessary to implement and maintain the Overall Approvals Management Plan.

The BBS Consortium will develop an Approvals Management Plan capable of incorporation within the Overall Approvals Management Plan and covering at least the following:

- all statutory Necessary Consents to be obtained by the BBS Consortium and the intended date by which such statutory Necessary Consents are to be obtained;
- all third party Necessary Consents to be obtained by the BBS Consortium and the intended date by which such third party Necessary Consents are to be obtained;
- procedures to be used by the BBS Consortium in obtaining statutory Necessary Consents and third party Necessary Consents required in terms of paragraphs (a) and (b) above; and
- procedures for maintaining the Overall Approvals Management Plan.

The BBS Consortium will comply with all aspects of the Approvals Management Plan as may be necessary to implement and maintain the Approvals Management Plan.

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The implementation of the SDS contractor into the above mentioned Approval and Consent procedures will be based on the SDS Agreement.



6 Quality Management

6.1 General

Quality management is the state of fulfilment of specified requirements for all products and services. It consists of coordination activities to direct and control an organization with regard to quality standard DIN EN ISO 9001:2000.

6.2 ISO 9001 Quality Management System Certification

Siemens has implemented and maintains a quality management system according to the DIN EN ISO 9000:2000 standards. Please find the Certificate in Annex 2.

All Partners of the Consortium operate under a certified DIN EN ISO 9001:2000 Quality Management System. Design & Implementation, Manufacturing, Construction – Installation, and Testing & Commissioning for the Project will all be done in accordance with the quality requirements of the Project Quality Management System - by certified suppliers.

6.3 Quality Policy

The Consortium Quality Policy states the commitment to become our customer's most valued supplier by providing products and services that meet our customer's requirements.

6.4 Quality Management Approach

The BBS Consortium will undertake the Works fully in compliance with Quality Management processes and procedures referenced in DIN EN ISO 9001:2000 and I DIN EN ISO 14001:2000.

The BBS Consortium will develop a Quality Plan to meet the requirements of DIN EN ISO 9001:2000, and which fully defines all quality aspects of the Works. The Quality Plan will be submitted in accordance with the Review Procedure. The Quality Plan will demonstrate an integrated quality management system relating to the design, construction, testing and commissioning of the system and will show how BBS Consortium and its sub-contractors will comply with the requirements of the Quality Plan.

The BBS Consortium will have all associated documentation readily available for internal review and review by the. Regular internal audits will be undertaken by the BBS Consortium to ensure full compliance with DIN EN ISO 9001:2000. The BBS

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Consortium will prepare and submit in accordance with the Review Procedure a "Schedule of Internal Audits" for agreement with ite. This will define the planned nature and timing of the internal audits.

Quality control including materials and works on site will also be undertaken.

7 Safety Management on Site

7.1 Policy Statement

The policy statement on safety and loss control is as follows:

The regard for the safety of all employees is an essential prerequisite for the achievement of our objective to provide a quality project and satisfy the needs of our client and the public.

To achieve this objective the management will:

- Actively participate in safety and loss control programs to ensure the involvement of all employees and to stimulate interest to maintain the lowest achievable frequency of injuries and damage that may result from incidents;
- Apply all realistic efforts to prevent injuries, fire, explosions, pollution and conditions that may jeopardize the health of employees or public or damage equipment;
- Ensure that all statutory regulations are complied with.

It is expected of each employee to:

- Have a thorough knowledge of all safety rules and procedures and to adhere to them at all times;
- Actively participate in the promotion of safety, for example, by submitting safety suggestions.

Put safety first at all times.

7.2 Safety Management Plan

The BBS Consortium will submit a Safety Management Plan that is over-arching with regard to safety and defines the management procedures that will be put in place to ensure Health & Safety for the design, construction, testing and commissioning, of the system. The Safety Management Plan will address issues relating to the safety of the Works, staff and third parties, as listed below:

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- The plan will detail the approach and all management procedures relating to health and safety for the Edinburgh Tram Network.
- The plan will show how the BBS Consortium will ensure that its sub-contractors apply all relevant health and safety policies and procedures.
- Details of all interfaces associated with safety and the procedures of how these will be managed. Interfaces will include Roads Authorities, Health and Safety Executive; HMRI; Network Rail; Police; Fire and Rescue Services; Ambulance Service, and all applicable Law.
- Proposed Safety Initiatives.
- How the BBS Consortium ensures that a safety culture will be cascaded and enforced throughout the team including its sub-contractors.
- The Emergency procedures which the BBS Consortium will implement.
- Details of how the BBS Consortium will implement Accident & Incident reporting and promotion of an open culture.
- The BBS Consortium Safety Inspection & Safety Tour regime.
- An outline of the BBS Consortium's procedures relating to safety for dealing with its Drugs & Alcohol Policy and procedures and details of the BBS Consortium's own similar policy and procedures.
- Details of any particular safety issues the BBS Consortium considers would be significant and initial mitigation measures.

8 Project Documentation Management

8.1 General

For Control and coordination purposes (e.g. status of submissions, change requests, correspondence (tracing, etc.) the role of Documentation Management to support the project has become more and more important during the past. The processes of unique identification, adequate reviewing and documented approval of all documentation as well as a safe management of all correspondence and all changes are key aspects of the documentation management approach.

8.2 Documentation Management Tool

During the execution of the Edinburgh Tram Network Project, an Electronic Document Management Tool (EDM - Tool) will be used for legally binding documents that may contain all kind of documents including correspondence between all parties.

Electronic Document Management Tool fulfils the requirements of the quality management system based on the international standard DIN EN ISO 9001. The processes of unique identification, adequate reviewing and documented approval of all documents as well as a safe management of all correspondence and all changes are supported by the Electronic Document Management Tool.

8.3 Requirements to the Electronic Documentation Management Tool

The Electronic Documentation Management Tool will meet the following requirements:

- Unique Identification of all Project Documents
- Easy Access to the Documents for all Project Partners Involved
- Traceability of Document Status

8.4 Submittals Schedule

Within 4 weeks of the Commencement Date the BBS Consortium will provide a schedule identifying all deliverables anticipated under the project, the anticipated date for submission and a summary of the intended scope.

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9 Interface Management

9.1 General

The objective of the Interface Management is to identify, describe, clarify, settle and control all interfaces between the project partners and their products or systems as well as with any other party involved in the project. This happens in order to ensure the functionality of the integrated system, to save costs and time caused by uncoordinated work or unnecessary rework.

The purpose of all interface management activity is that:

- The detailed design of each of the co-functioning items contains the necessary information to assure that items, when individually designed and produced or installed will work together, and
- If either item needs to be changed for any reason, its performance, functional or physical attributes, that are involved in the interface, act as constraints on the design change.

The main tasks of the interface management are thus the

- Identification
- Description
- Settlement
- Modification
- Cancellation

of all interfaces.

9.2 Interface Definition

Generally, interfaces are the physical, functional, performance or test boundaries between two (or more) different co-functioning organizations or products, within or outside of the project.

Interfaces within the responsibility of a subsystem (e.g. the construction of the propulsion system) are not managed by the project's interface management but are dealt with separately by the partner responsible for the subsystem.

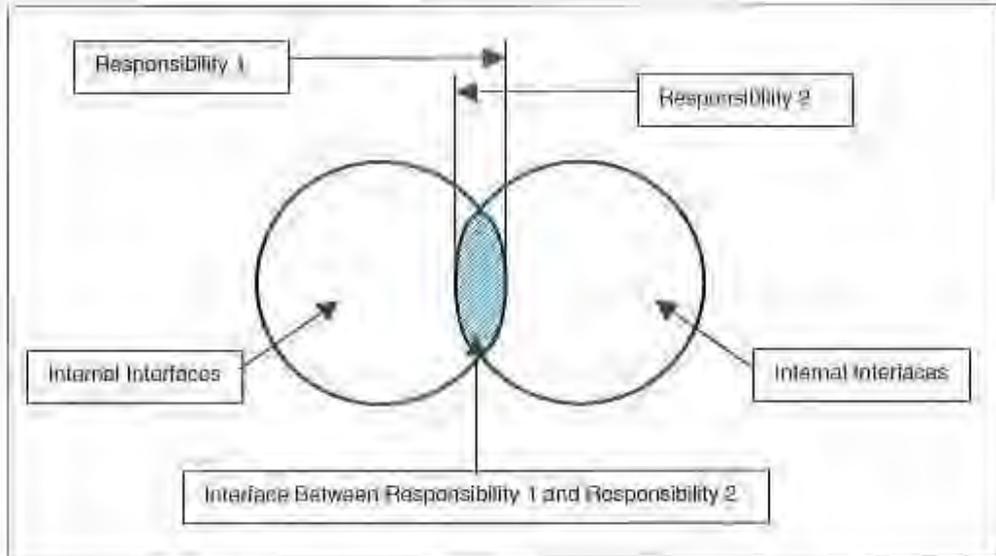


Figure 2: Interface between two Sub-Systems

Interfaces of sub-systems within the consortium are called internal interfaces, interfaces between a sub-system and sub-systems of the client or other entities are called external interfaces.

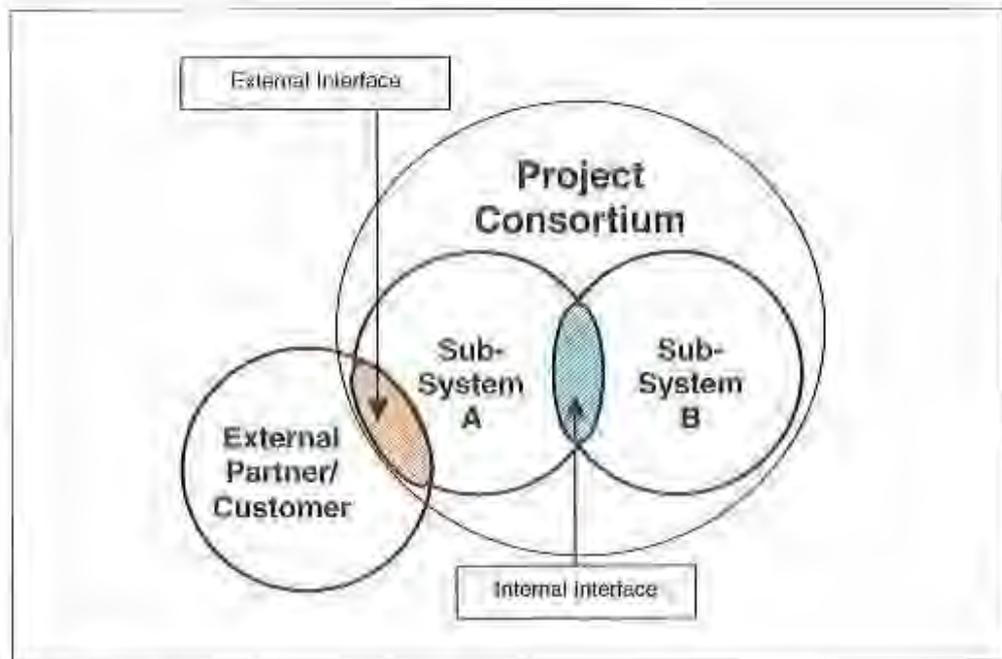


Figure 3: Internal and External Interfaces

10 Table of Annexes

Annex No	Title
1	Management Manual – Quality, Health & Safety
2	ISO Certificate
3	Interface Schematics

Table 2: Table of Annexes

31st March 2008

Updated Proposal Submission

Edinburgh Tram Network

Section 1: Overall PM Concept

Part 1 – Programme and Project Execution

Annex 1 – Management Manual



Management Manual

Siemens Transportation Systems

Quality

Environment, Health & Safety (EH&S)

SIEMENS

efficient rail solutions

USB00000088_0073



Content

Introduction	01
Company Overview	02
Business Segments	03
Product Portfolio	04
Key Figures	05
Environmental and Social Reporting	06
Appendix	07
Index	08

Siemens Transportation Systems is one of the largest suppliers of railway technology in the world. As a global player, we give railways the competitive edge they need to perform on a world stage by offering products, systems and services that are innovative, economical, reliable and safe. We provide our services over the entire value-added chain from customer to customer: in marketing and sales, development, procurement, project administration, production, assembly, commissioning and after-sales service. We believe that excellent quality and environmental friendly design are an obligation. Through consistent customer alignment, we are expanding our position further and securing our future – in each of the business segments within the railway industry. Thanks to our fields of competence: Automation & Power, Rolling Stock, Turnkey Systems and Integrated Services, we are perfectly positioned to achieve this goal. This is how we can offer efficient, pioneering solutions thus ensuring sustained improvement in our business results – to the complete satisfaction of our customers.



Preface

Thanks to their exceptionally high quality, the products, systems and solutions of the Transportation Systems Group enjoy an excellent reputation. The reliability of our environmentally friendly systems, their safety, long service life and commercial viability are known and acclaimed around the globe. We believe that this brings with it a far-reaching responsibility – to our customers, to our employees and to society as a whole.

The expectations placed on our services are high. We are therefore obliged to ensure and further improve the high quality standard of our products, environment, health & safety (EH&S) procedures through comprehensive management. We consider this to be a key requirement for our common success.

To this end, we have established a comprehensive plan of action encompassing the following:

Quality, environment, health & safety are personal

Everyone has a contribution to make. In this way we will fulfill the expectations of our customers, employees and society.

Quality, environment, health & safety are obligatory

Everyone must adhere to and continually improve the processes.

Quality, environment, health & safety are comprehensive

Everyone contributes to the success of our company through their creativity and commitment.

The management system described in this manual is binding for all managers and employees of Siemens Transportation Systems.



Hans M. Schabert

President of the
Transportation
Systems Group



Hans-Dieter Bott

Vice President of the
Transportation
Systems Group

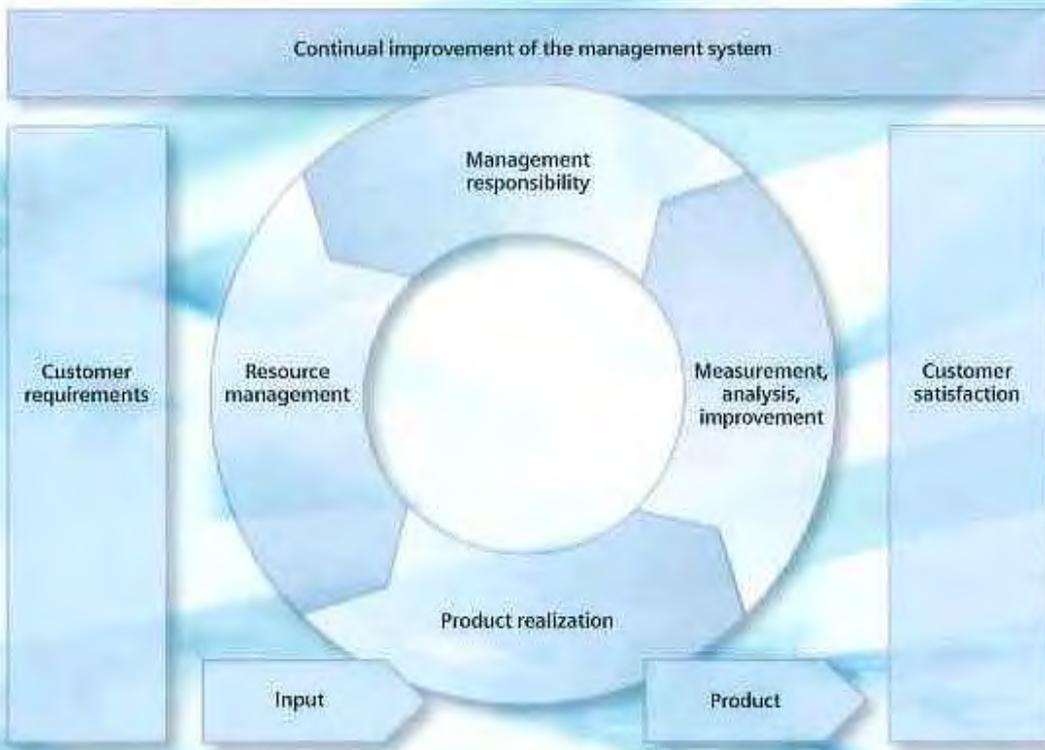


Friedrich Smaxwil

Vice President of the
Transportation
Systems Group

Erlangen, November 2003

USB00000088_0075



Management System

This manual describes the fundamentals of the Siemens Transportation Systems' management system. It explains the general requirements for all of the organizational units. Group Executive Management promotes the development and implementation of the management system through appropriate planning and setting the appropriate targets. It also includes a controlling process and initiates further development.

The management system is binding for every employee. Its documentation structure is described in the section "Documentation". If permitted exclusions from the requirements of ISO 9001 are required, these must be named, substantiated and documented by the organizational units. Associated companies included in the Transportation Systems organizational chart can have their own independent management systems. The same applies to organizational units whose particular business mandate requires an independent management system.

Regulations

The individual processes, including all operations and procedures, are stipulated in the organizational units as regulations. These exist in a structured form, preferably in the Intranet but also through other media. They contain important company know-how and are thus intended for internal use only.

Implementation and review

The aim of the management system is to fulfill customer requirements. Furthermore, it complies with the following Standards and Guidelines:

- Quality management system according to ISO 9001
- Environmental management system according to ISO 14001
- Occupational health and safety management according to the ICSCA Industry Guidance on Health and Safety at Work (ICSCA – Industry Cooperation on Standards and Conformity Assessment)

The management is responsible for monitoring and revising the implementation and efficiency of this system.

Processes

Management Processes

Management and Inter-Company Cooperation

Change Management

Strategic Planning

Core Process: Project Management



Support Processes

Business Administration

Human Resources

Quality Management

Strategic Purchasing



Strategic
Controlling

Business
Review

Installation/
Commis-
sioning

Accept-
ance
Test

Warranty

After-
Sales
Service

Organization/
Information

Environment
Health & Safety
Management

Our claim:

Reliable process quality

Our management system involves multiple processes. The aim of these processes is to ensure that our products, solutions and services completely fulfil the requirements of all those involved, particularly our customers.

These processes unfold on three, closely interrelated process levels that are closely intermeshed with one another:

- In the **management processes**, the general specifications for the core process are formulated and controlled.
- In the **core process**, all business activities – from product creation and acquisition to hand-over to the customer and after-sales service – are executed in precisely coordinated subprocesses.
- The **support processes** comprise all ancillary activities, such as resource management and documentation. Process analysis and optimization with targeted measurements, intensive analyses and effective measures are a key factor here. This process also includes such tasks as information security, knowledge management, risk management and much, much more.

Process coordinators support the various sub-areas at all three process levels. Every individual process is planned, supervised and documented by these coordinators according to customer- and product-specific criteria.

The operation and effectiveness of the core processes are secured by consequentially applying project management and supported by the use of quality gates. Further, additional elements of quality assurance are integrated in the process as well as environment, health & safety management. Thus the fulfillment of customer requirements and the legal compliance, standards and further regulations is guaranteed. Specifically, this support takes the form of integrated quality assurance, environment, health & safety activities.

Suitable methods have been initiated in the organizational units to control and monitor the core processes, for example, process indicators.

The aim is to make all of the processes stable and transparent and to include customers, partners and suppliers in the best manner possible.

... with integrated activities for environmental protection and safety at work.

Organization

The responsibility and specialist support for quality, environment, health & safety is stipulated in a three level regulation that is applicable for all of Siemens AG.

Responsibility

Specialist Support

Corporate Executive
Committee Siemens AG

Corporate offices:
 ■ Quality management
 ■ Environmental protection
 ■ Occupational Health & Safety

Within the framework of the Siemens AG corporate structure, the Transportation Systems Group is managed independently by Group Executive Management. The organizational chart depicts the relevant division of work. The responsible member of Group Executive Management must specify, and ensure compliance with, the group targets for quality, the environment, health & safety. This person ensures that the management system is further developed and implemented and also works to constantly improve its efficiency. This includes:

- Giving managers and staff a clear direction and motivating them to work consistently in a customer-oriented manner. The fulfillment of customer requirements and the statutory and official requirements are a priority.
- Stipulating the management policy with the objective of improving economic value added and increasing customer benefits.
- Performing regular management reviews to boost the efficiency of the management system and thus to also improve product quality.
- Securing the availability of suitable resources.

Group Executive
Management

Group coordinators:
 ■ Quality management
 ■ EH&S

The management teams of the divisions and those of the operational organizational units stipulate the quality, environment, health & safety goals and the relevant areas of responsibility and authorities.

The managers of the organizational units are responsible for the quality of their processes and products and for adherence to environmental, health & safety laws and regulations. They stipulate which measures can improve the quality of the product and the environment and ensure the health and safety of employees in the workplace. In addition, they determine who is responsible for which sub-processes.

Every manager is in charge of encouraging employees to work in a health-conscious manner to promote quality and respect for the environment. Furthermore, they must ensure that the knowledge and skills required to this end are imparted to the employees and that the necessary tools and resources are made available to them.

The managers of the organizational units are responsible for all activities that impact on quality management and EH&S.

Division presidents,
process coordinators,
operations managers

Quality managers,
environmental protection
specialists,
safety specialists,
company doctors





Organizational structure

The schematic organizational chart depicts the organizational structure of the Transportation Systems Group. It is described in detail in the latest versions of the organization and work plans. The group's coordinator for Quality Management and EH&S report directly to the Group Executive Management.

Level 1

The group's coordinators for Quality Management and EH&S set out the framework conditions. Their role in this context is to provide information, coordination, advice and supervision. The same applies for all other quality offices, management representatives, environmental protection specialists, safety specialists, safety assistants and company doctors.

All of the named offices support the process and product managers; however this in no way relieves the latter of their relevant responsibility.

Level 2

The quality managers of the divisions and group functions are appointed by the responsible member of Group Executive Management. Their tasks are stipulated in detail. The quality manager reports directly to the manager of the relevant organizational unit and is independent of the other organizational structures.

Quality management representatives for subdivisions and sub-project quality managers are appointed according to defined regulations.

The EH&S-specialists are appointed by the site manager and report directly to him/her. Their tasks are set down in the appointment.

Level 3

Business Policy

The corporate principles of Siemens AG shape the attitudes and actions of the entire company and are binding for everyone. They are described in detail in the company guidelines: "Principles of Siemens Quality Management", "Siemens AG's OH&S Management System", "Principles of Environmental Protection and Technical Safety" and "Regulations for Information Security", among others. It is from these guidelines that the Transportation Systems Group has derived the principles for its management system.

Principles

The principles of our business policy in our endeavors to achieve Business Excellence are as follows:

- Achieving the highest level of customer satisfaction and an ongoing trust in our products and services is, in our opinion, one of our core tasks.
- We strive for constructive, long-term and trust-based relationships with all our partners around the globe.
- We want to generate ongoing earnings to secure our future and our activities.
- We encourage the competence, creativity and performance of all our employees.
- We are very conscious of our sustainable development and our social, ecological and economical responsibility.

Targets

Our essential targets are:

- To develop, manufacture and sell high quality, reliable, environmentally friendly and safe products.
- To meet the agreed, but also the expected, requirements of our customers to their complete satisfaction.
- To constantly monitor and optimize the processes, on the basis of application specific experiences, in order to achieve the highest customer benefits with simultaneous commercial viability.
- To secure our innovative power through constantly high earnings.
- To ensure the efficient implementation of statutory provisions, guidelines and standards as well as to establish legal compliance to EH&S.
- To effectively incorporate our project partners and suppliers into our processes.
- To reduce costs by avoiding errors.
- For the management executives to act in an exemplary manner; to inform and support their employees and to train them in line with the requirements.
- To protect the life and health of our employees and of third parties.
- To be considerate in our use of natural resources.
- To promote team and group work.

Individual targets have been derived from these principles and have been made binding by a multi-level target agreement process. Measurable and tangible targets are stipulated and pursued particularly in the organizational units.

Strategy

Through the realization of the above-mentioned targets, the Transportation Systems Group is endeavoring to attain a world-class position. To this end, we have developed a corporate strategy that is based on a comprehensive management system.

Product Quality

Product creation

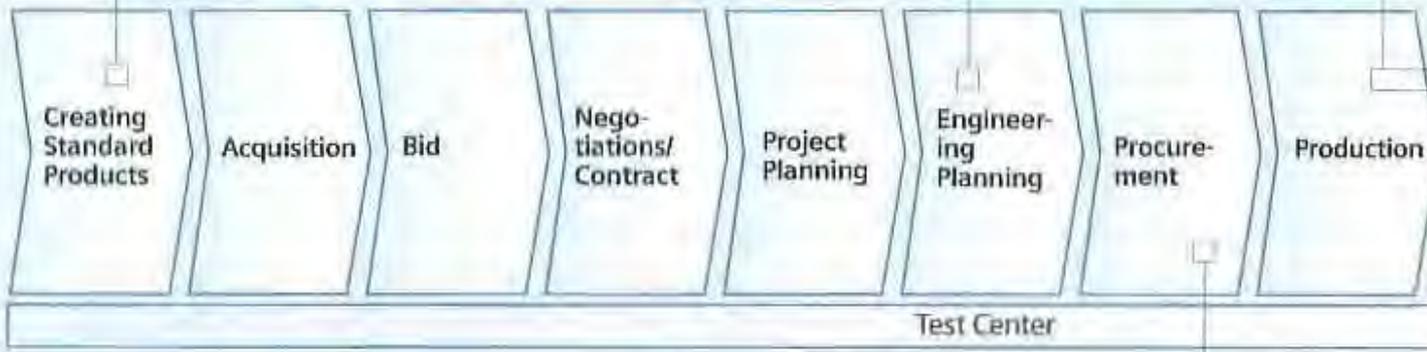
Product planning and development are customer-oriented and in line with the market. Studies and surveys were performed in advance to ensure this. In order to fulfill these requirements and to exclude errors from an early stage, preventive quality measures and other techniques are planned and implemented in a targeted fashion. These include: review techniques, failure mode and effects analyses (FMEA), safety and reliability studies, trials/tests (in the laboratory and on the test track), type tests, evaluation of environmental aspects etc.



We leave nothing to chance. Qualified, experienced employees ensure systematic error prevention. This procedure is also applied to the engineering/project planning phase.

Production and assembly

Production and assembly are planned intensively, documented in detail in work and test plans and specified for the various processes and operations. Back-up tests, such as screening and system tests, are integrated into reproducible process steps. Targeted quality assurance measures run through the entire production and assembly process. The functions of all safety- and reliability-relevant components are tested before they are installed. Agreed customer acceptances are factored in and conducted. EH&S are actively promoted during production and assembly.



Supplier management

We maintain long-term relationships with trusted suppliers, who we think of as partners. They are assessed, evaluated and promoted in a thorough selection and qualification procedure.



The suppliers are generally involved in the development process from an early stage, in order to produce innovative and high-quality products that incorporate the principles of environmental protection. Joint quality standards are coordinated and stipulated in quality assurance agreements (QAA) and technical documents. The release and acceptance processes are defined on a product-for-product basis.

Commissioning

Vehicles, infrastructure products and turnkey systems, including the integrated or related modules and components, are inspected and tested on the basis of a test plan.

The scope of testing for commissioning encompasses the contractual customer specifications including the requirements defined by official bodies and recognized standards.

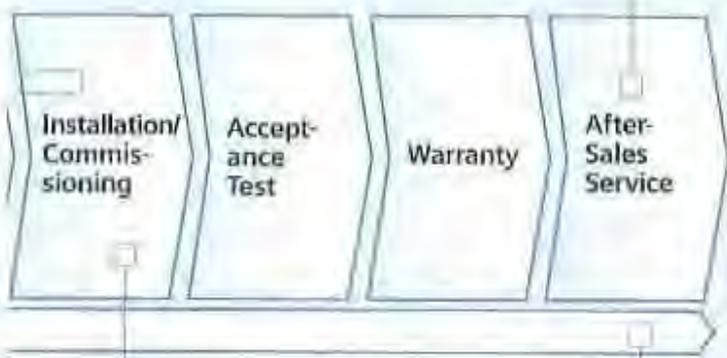
The proof of the performance and reliability of a turnkey system is recorded in the documents that are relevant for acceptance.



After Sales/Services

Our range of services covers scheduled maintenance, spare parts procurement, training and documentation. These services are also subject to a detailed planning process in order to ensure the individual customer requirements are fulfilled. To this end, quality tools are also deployed for preventive measures as well as when creating products. The results of scheduled maintenance activities are checked using state-of-the-art techniques to ensure the agreed level of availability and safety.

Documentation and training for our customers' drivers and maintenance personnel are significant issues. Highly qualified specialist personnel pass on our know-how and thus ensure a systematic transfer of knowledge to the customer.



The Wildenrath Test Center monitors product quality. Before being handed over to the customer, our products are tested comprehensively.

This internal, certified test center validates the national and international customer and official requirements – from development through to the hand-over to customers. The integrated test center holds all the required national and international licenses, including those from the Federal Railways Office.

An accredited safety assessment center has been established in Braunschweig for rail safety technology.



This is how we ensure product quality ...

Product Quality

Product requirements are determined, evaluated and contractually stipulated in close contact with the customer. All of the development, engineering and project processing activities are planned on this basis.

From the project specifications (that is, the planning documents or procurement specifications) functional and technical solutions are derived in defined processes and stipulated for realization in specifications (for instance, in the performance specifications). The results are reviewed, verified and validated.

When procuring products, released specifications and other technical documents are issued to qualified suppliers. Defined tests and other suitable measures are used to ensure that the products supplied comply with the procurement specifications.

We plan and implement manufacturing, assembly, commissioning and service under controlled conditions, including targeted monitoring and measuring procedures. State-of-the-art test centers, run by specialists, guarantee these measures. The use of all required supervision and measuring equipment is ensured – as is the use of appropriate calibration and tracking systems.

The procedure described above serves to systematically secure product quality. Preventive measures along with supervisory and testing activities are factored in over the entire value added process and are implemented and documented accordingly. In complex projects especially qualified sub-project managers for quality – as co-pilot of the project manager – combine the quality-related aspects of the project.

Environment, health & safety

Already in the planning phase, we assess and consider the possible impact our products and services will have on people and the environment. In this process, we take the entire life cycle of the products into consideration. We devote particular attention to the promotion of the health of our employees, the prevention of accidents on our construction sites and in our factories as well as to the process- and product-related resource efficiency.

... while adhering to all EH&S standards.

Controlling the Management System



Improvement

*top** is the company-wide improvement program.

*top** represents clear goals, concrete measures, unambiguous consequences. This instrument is an improvement system that requires a correspondingly high level of commitment from all managers. It is supported by a 6-step process, a process we will utilize to improve our quality and our standard of EH&S – thus benefiting the customer and strengthening our cost position in the process.

We rely on the commitment of our managers and employees. We therefore encourage and actively use their ideas, suggestions and initiatives. To this end, we have established an employee initiatives management system. This system is used to evaluate all employee suggestions and, if put into practice, a bonus is paid in accordance with internal regulations.

Finance



Best Practice

Our aim is to be world class – this is why we have benchmarking. In addition, we also practice Best Practice Sharing. Once the results are evaluated, relevant improvement measures are decided upon and implemented. We assess our success using a targeted realization controlling system.

Guide
Manage
teams





Balanced Scorecard

Company management will only achieve excellent results if they make the highest demands: on the development of business policy and strategies, on the choice, deployment and qualifications of employees, on the shaping of partnerships and processes and on the use of resources.

For the purposes of pursuing strategic goals, therefore, targeted key values and measurement points are defined at all levels and represented in the Balanced Scorecards. The change in these variables is regularly monitored by management and, if necessary, corrected through targeted actions.



Siemens Leadership Framework

The Siemens Leadership Framework demonstrates our mutual understanding of excellent management and is binding for all executives. It provides a clear basis for measuring and evaluating management performance, the results of which can be used to formulate concrete measures for promotion and personnel development.

Excellent executives achieve excellent results by means of their excellent capabilities: namely, to drive, focus, impact and guide.

During controlling, partial targets and measures are permanently aligned towards achieving the overall targets of the company.

The targets are concrete, measurable and agreed and updated periodically in the organizational units. Management executives pursue, evaluate, improve and report on the degree of fulfillment of these targets.

Target discussions

The fundamental issues of quality, environment, health & safety are, among other issues, stipulated in target agreements (integrated strategy and budget meeting) between the Corporate Executive Committee of Siemens AG and Transportation Systems Group Executive Management. The agreements are implemented in the organizational units.

Self-assessment

The strengths and weaknesses of the processes are worked out and improvement measures are thus derived. The promotion of "best practice" and benchmarking plays a key role in this process.

Management review / audits

The management system for quality, and EH&S are reviewed regularly by management within the organizational units.

Management evaluate their implementation, for example, on the basis of audits, assessments, benchmarks, inspections, self-assessment and reviews. The necessary improvement measures are then derived from the results and realized; and their efficiency monitored.

Customer satisfaction

We gather customer-related information both actively and passively. This is evaluated and used to determine ways of boosting customer satisfaction.

Thanks to the interaction of all these management instruments and to targeted controlling, we have established a continuous improvement process, which encompasses all levels of our company and is wholly aimed at achieving BUSINESS EXCELLENCE.

Documentation

Management Processes

Document management

Document management ensures that documents and data are checked, released and/or enforced according to a specific procedure. The same applies to their distribution, archiving, modification or deletion as well as their listing in directories, according to their relevant status.

Principles
Corporate
Guidelines

Level 1
Siemens AG

Siemens AG

The principles of Siemens AG shape our corporate culture.

The company guidelines "Principles of Siemens Quality Management", "Siemens AG's OH&S Management System" and "Principles of Environmental Protection and Technical Safety" set out fundamental statements on targets, organization and the responsibilities of our company.

They serve to further develop and continuously improve the management systems.

Core Processes

TS Management
Manual

Level 2
Group
Siemens
Transportation
Systems

Siemens Transportation Systems Group (TS)

This manual contains general statements on the management system of the Siemens Transportation Systems Group. It is supplemented by process regulations that apply group-wide and detail generally applicable stipulations and the processes of the management system.

Support Processes

Process Regulations

Level 3
Divisions
Group Functions
Sales Regions

Divisions, group functions, sales regions

The management system is documented in a concrete fashion in these units. These regulations describe the individual procedures and processes – if required, down to the employee level.

Siemens Transportation Systems – The Divisions



TS RA – Rail Automation

- Signaling and control systems
- Interlockings
- Automatic train control systems
- Signaling components
- Telecommunications systems
- Operations control system for maglev trains



TS EL – Electrification

- Contact lines for mass transit and main line services
- Traction power supplies for mass transit and main line services



TS MT – Mass Transit

- Metro and underground trains
- Suburban rapid transit
- Tramcars
- Light rail transit



TR Trains

- High speed and InterCity trains
- Commuter and regional trains
- Passenger coaches



TS LM – Locomotives

- Electric locomotives
- Diesel electric locomotives
- Special purpose vehicles
- Rebirthment
- Drive and power supply for maglev trains



TS IS – Integrated Services

- Maintenance
- Spare parts
- Documentation and training
- Consultancy
- Diagnostic services



TS TK – Turnkey Systems

- Turnkey systems for mass transit services
- Turnkey systems for main line services

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Transportation Systems
Group Coordinator IRLS
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Germany

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www.Siemens.com/Transportation

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Dign 21700
Order No.: A191003000000014717600

This information is the document contains general description of
the terms of railway facilities, which do not change their to present
individual cases. The required features must therefore be specified
in each individual case in the form of changing the contract.

SIEMENS

31st March 2008

Updated Proposal Submission

Edinburgh Tram Network

Section 1: Overall PM Concept

Part 1 – Programme and Project Execution

Annex 2 – ISO Certificate



DET NORSKE VERITAS CERTIFICATE

DNV ZERTIFIZIERUNG UND UMWELTGUTACHTER GMBH

certifies that the company

Siemens AG
Transportation Systems (TS)

has established
an integrated quality, safety, health and environmental management system
in the units listed on page 2 and 3

in conformity with the standards

ISO 9001 : 2000
ISO 14001 : 2004
OHSAS 18001 : 1999

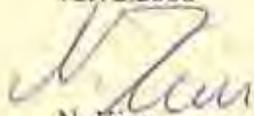
This Certificate is valid for:

**Project Planning, Acquisition, Engineering, Procurement, Production,
Assembly, Commissioning and Service of Products, Systems and Services of
the fields of Rail Automation, Electrification, Locomotives, Trains, Mass
Transit, Bogies, Turnkey Systems and Integrated Services**

This Certificate is valid until:
31.12.2009

Certificate-Registration-No.:
CERT-30777-2006-AE-ESN-TGA

Issued in Essen on
12.12.2006


N. Kim
General Manager

Certified by DNV since
19.05.2006


T. Beck
Technical Support

Page 1 of 3 to certificate CERT-30777-2006-AE-ESN-TGA



DET NORSKE VERITAS

CERTIFICATE

This certificate is valid for the following units:

Standards: ISO 9001:2000, ISO 14001:2004, OHSAS 18001:1999

TS Executive Board

Head Office EH&S Management System - TS QM and TS SE

D - 38126 Braunschweig, Ackerstraße 22

D - 91052 Erlangen, Werner-von-Siemens-Straße 61 / 67

TS Group Functions

Siemens AG Transportation Systems, GT - Group Technology

D - 91052 Erlangen, Werner-von-Siemens-Straße 67

Siemens AG Transportation Systems, OI - Organization, Information Processing

D - 91052 Erlangen, Sieboldstraße 16

Siemens AG Transportation Systems, CS - Central Services

D - 12435 Berlin, Elsenstraße 87-96

D - 38126 Braunschweig, Ackerstraße 22

D - 91052 Erlangen, Werner-von-Siemens-Straße 50

Business Units TS RA - Rail Automation

D - 12435 Berlin, Elsenstraße 87-96

D - 38126 Braunschweig, Ackerstraße 22

Business Units TS EL - Electrification

D - 91052 Erlangen, Mozartstraße 33 b

Business Units TS MT - Mass Transit

D - 91052 Erlangen, Werner-von-Siemens-Straße 61

Siemens Transportation Systems GmbH & Co, KG
A - 1110 Wien, Leberstraße 34

D - 90461 Nürnberg, Katzwanger Straße 150

Business Units TS LM - Locomotives

D - 91052 Erlangen, Werner-von-Siemens-Straße 67

D - 80997 München, Krauss-Maffei-Straße 2

Business Units TS TR - Trains

D - 91052 Erlangen, Werner-von-Siemens-Straße 69

D - 47829 Krefeld-Uerdlingen, Duisburger Straße 145

*Siemens Transportation Systems GmbH & Co KG
Passenger Coaches*

A - 8021 Graz, Eggenberger Straße 31

*Siemens Transportation Systems GmbH & Co KG
Passenger Coaches*

A - 1110 Wien, Leberstraße 34

Siemens Kolejová vozidla s.r.o. (SKV)
CZ - 155 21 Praha 5, Ringhofferova 115/1

Business Units TS TK - Turnkey Systems

D - 12435 Berlin, Elsenstraße 87-96

Business Units TS IS - Integrated Services

D - 91052 Erlangen, Sieboldstraße 16

D - 38126 Braunschweig, Ackerstraße 22

D - 12435 Berlin, Elsenstraße 87-96

D - 40231 Düsseldorf, Königsberger Straße 100



DET NORSKE VERITAS

CERTIFICATE

This certificate is valid for the following units:

Standards: ISO 14001:2004, OHSAS 18001:1999

TS Group Functions

Siemens AG Transportation Systems, CS – Central Services

D – 41844 Wegberg-Wildenrath, Friedrich-List-Allee

A – 8020 Graz, Eggenberger Straße 3

D – 47289 Krefeld-Uerdingen, Duisburger Straße 145

A – 1110 Wien, Leberstraße 34

Business Units TS RA - Rail Automation

Siemens Transportation Systems S.A.S.

F – 92542 Châtillon, Le Diagonal - Avenue de la République

messMa GmbH

D – 39167 Irxleben, Am Stadtfeld 8

Siemens Transportation Systems S.A.S.

F – 59015 Lille, Immeuble Le Plaza, 91 Rue Nationale

Siemens Signalling Company Ltd.

CN – 710016 Xi'an, No. 30 Feng Cheng Erlu

Subdivision TS BG - Bogies

Siemens Transportation Systems GmbH & CO. KG

A – 8020 Graz, Eggenberger Straße 31

Business Units TS IS - Integrated Services

D – 41844 Wegberg-Wildenrath, Friedrich-List-Allee

Siemens Transportation Systems, Inc.

Rolling Stock

USA – 95828 CA – Sacramento, 7464 French Road

Siemens Transportation Systems - a division of Siemens plc.
Automation & Power

UK – SW1H 9BP London, 2 Queen Anne's Gate Buildings,
Dartmouth Street

31st March 2008

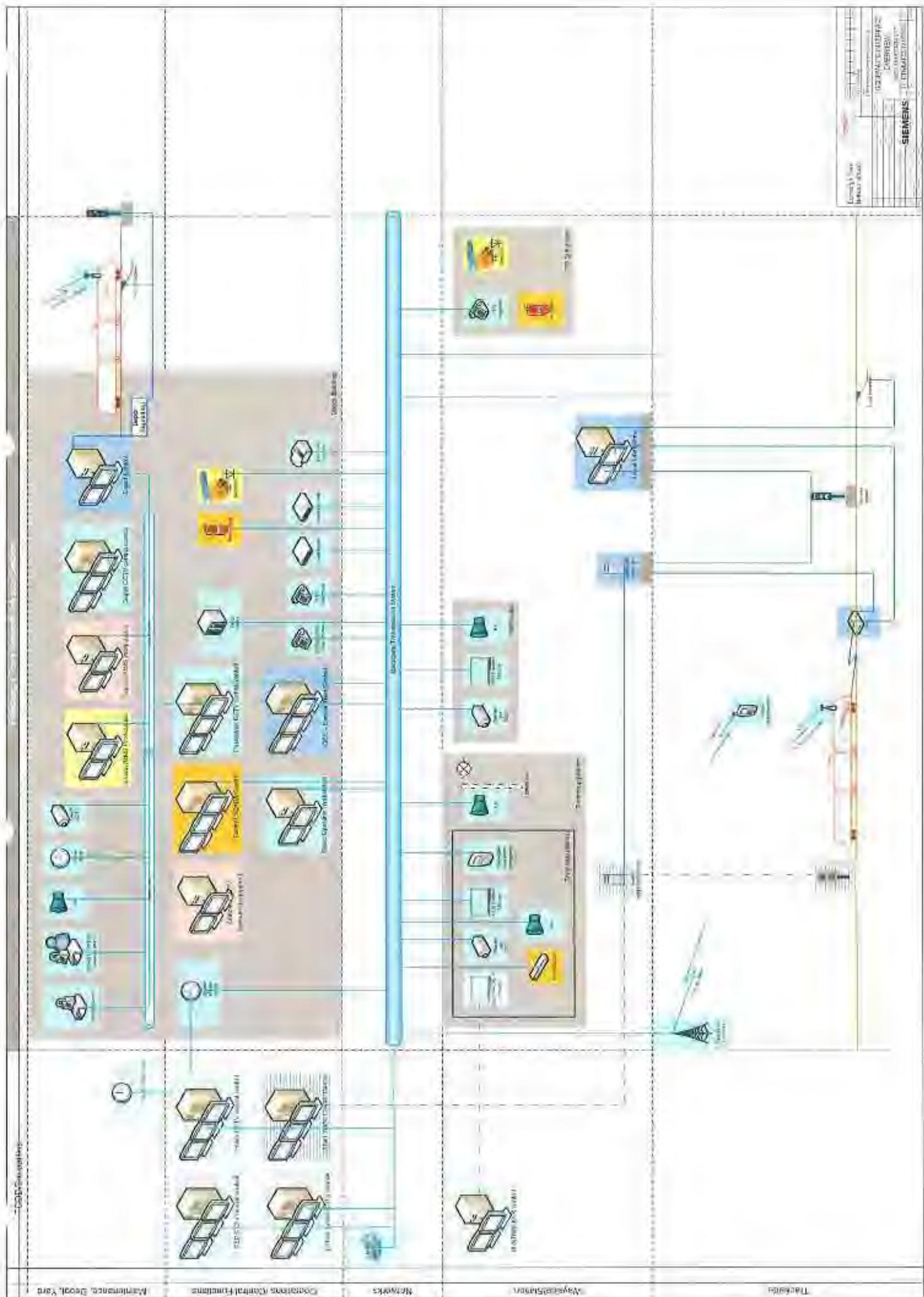
Updated Proposal Submission

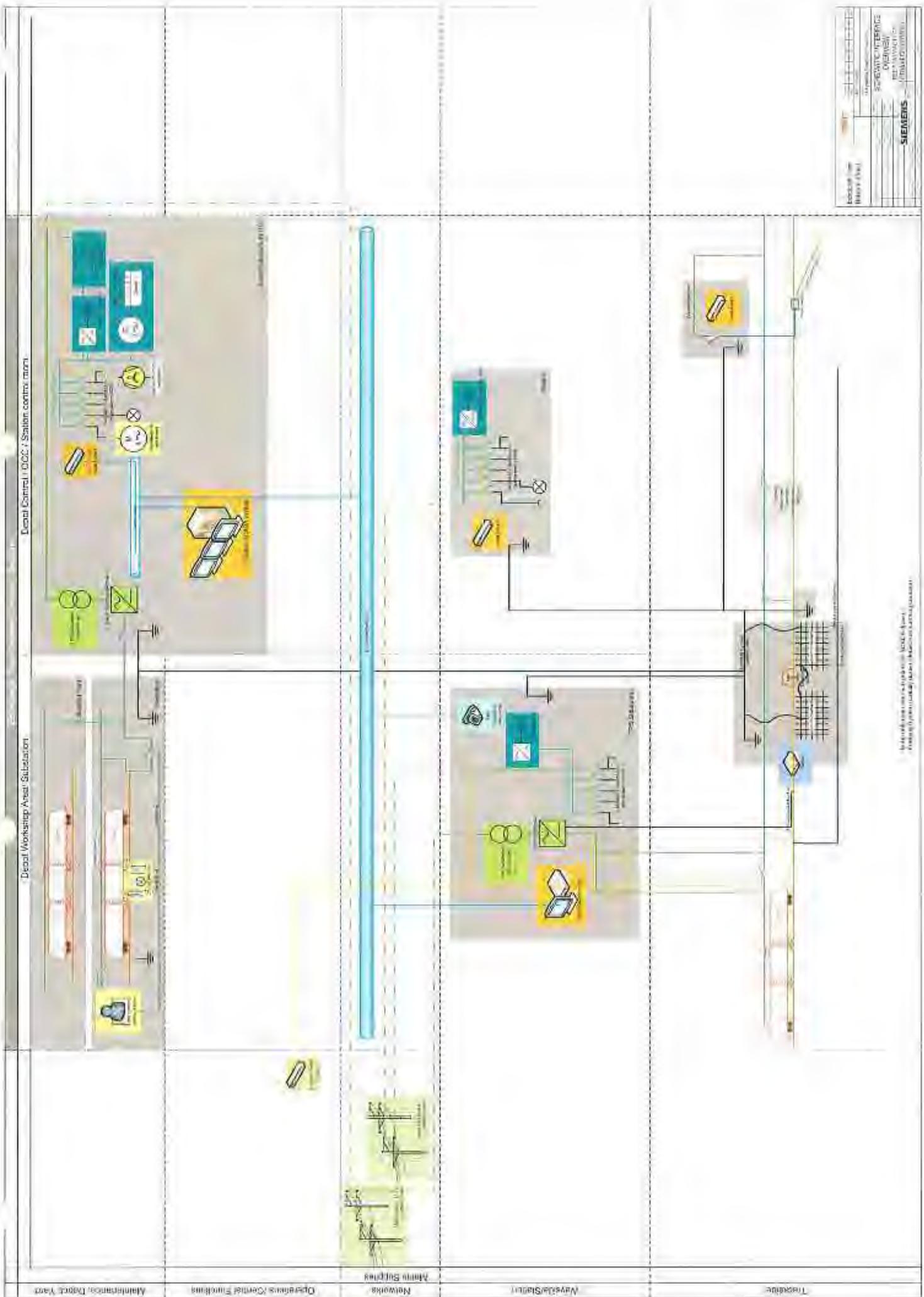
Edinburgh Tram Network

Section 1: Overall PM Concept

Part 1 – Programme and Project Execution

Annex 3 – Interface Schematics





Depot Control / DCC / Station control room

Depot Workshop Actual Situation

Maintenance/ Depot Yard

Operative Control Functions

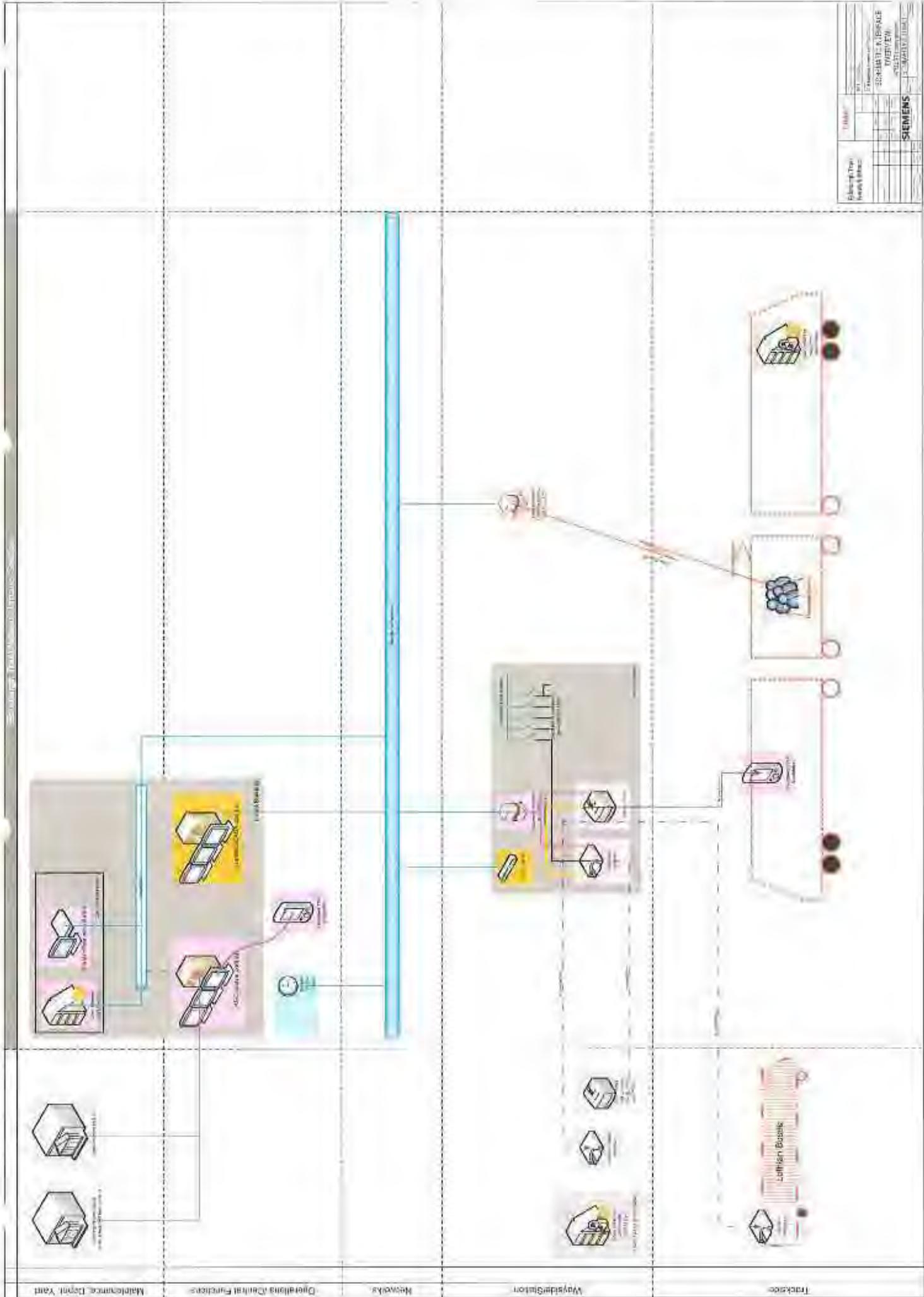
Networks

Myst/Sigint

Traction

Alle Angaben sind ohne Gewähr. Die Zeichnung ist Eigentum der Siemens AG. Nachdruck ist ohne schriftliche Genehmigung der Siemens AG. Die Siemens AG ist für die Richtigkeit der Angaben nicht haftbar. Die Siemens AG ist für die Richtigkeit der Angaben nicht haftbar.

Access Line (Myst/Sigint)	□
Separate Interference	□
Overhead	□
Railway	□
Signal	□
SIEMENS	



Project Name	SIEMENS
Client	SIEMENS
Document Title	SIEMENS
Version	SIEMENS
Author	SIEMENS
Reviewer	SIEMENS
Approval	SIEMENS
Date	SIEMENS

SIEMENS

31st March 2008

Updated Proposal Submission

Edinburgh Tram Network

Section 2: Overall Technical Concept

Part 1 – System Engineering



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1 Overall Subject

This document describes the general approach of the System Engineering and the scope of activities for the Edinburgh Tram Network during the Design and the Implementation Phases.

The Infraco will approach the design and submit the necessary deliverables forming the Infraco Deliverables, using the similar processes as defined within the "SDS Provider's Agreement with tie (which BBS understands will be novated to BBS under the Infraco Contract and which is included in Volume 7 of the ITN).

One advantage of having a tram system being implemented as a Turnkey Tram System is to have all project phases and activities in one hand - comprising the system configuration and detailed design, the construction of the system, the system commissioning and the integration tests up to the trial run and the training of Operation and Maintenance (O&M) staff of the future Operator.

In this context, the novation of the SDS contract to the Bilfinger&Berger-Siemens Consortium, referred to hereinafter as BBS, and the interface between the two becomes an essential issue for the fulfillment of the BBS contract.



Figure 1 Engineering Model for ETN

It is understood, that the System Design Services has been contracted separately by tie to the SDS Provider, and will be novated to BBS after contract award of the ETN Infraco contract to BBS. It is further understood that the scope of the works for

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which the SDS Provider is responsible includes but is not limited to their provision of the Infrastructure Detail Design.

The technical project co-ordination and the system configuration to be provided by BBS and the System Engineering does not only comprise the Electrical and Mechanical (E&M) sub-systems but also covers the interfaces with the SDS Detail Infrastructure designs.

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approval respectively and that these tests cover all appropriate ETN requirements and functionality as defined in the Employer Requirements.

In the progress of design review of these Test and Acceptance procedures, BBS will also justify the extent of these in relation to the Employer's Requirements and the requirements set out by the relevant authorities.

3 Liaison to Tramco contract

Rolling stock for the ETN will be contracted separately under the Tramco contract. Tramco's vehicles will have to be integrated into the ETN system, by BBS.

As the System Design, where the main features of Tramco's rolling stock will have to be defined, shall be managed and carried out by BBS, this definition and integration has to be handled between BBS, SDS and Tramco.

BBS will contribute to this process with the system design reviews mentioned above. Beyond this, BBS expects vehicles to be manufactured, commissioned, tested and approved according to the design agreed defined by tie.

Layout and dimensioning of the BBS deliverables depend to a great extent from the characteristics and the parameters of the rolling stock employed for ETN. The current layout included in this bid is based on the parameters and technical issues of Tramco's vehicles as they are currently defined in the Infraco tender documentation. It is understood, that tie will nominate the vehicle supplier after the submission of the BBS bid. Therefore, parameters of the BBS deliverables have to be reviewed after definition of the tram supplier and the release of confirmed technical data of the vehicles.

Details of technical data required for the overall engineering of the system were communicated with tie within the "Tramco / Infraco Matrix" in relation to RT 089. Comments to this matrix were given by BBS as far as required and applicable.

Following the Due Diligence Process BBS will employ a Tram Inspector to be agreed by tie, who shall follow the Tramco design process and be responsible for the trams approval based on the tie specification and the parameters agreed on in the "Tramco / Infraco Matrix"

4 System Concepts

System Engineering activities comprises a set of basic System Concepts which are key documents for the whole engineering process. These concepts shall be elaborated by BBS. BBS suggests to use technical solutions and outline concepts included in this bid as basis thereto (see annexes).

These System Concepts comprise, but are not limited to, the following:

- Operations Concept and Plans,
- RAM Concept (Reliability, Availability, Maintainability),
- System Safety Concept and Plans, Safety Case,
- Concepts for Earthing & Bonding and for EMC (Electromagnetic Compatibility),
- Maintenance Concept and Plans,
- Concept for Interface Management,
- Concept for Commissioning, Testing and Trial Run,
- Training Concept.

5 Approval of SDS Design by BBS

After inclusion of the required details in BBS system and/or subsystem design, this will be forwarded separately or incorporated in the SDS design, as far as applicable, for approval to tie and other approving bodies.

6 Installation

6.1 Installation

Delivery and installation plans and proposals will be developed by BBS to identify and assign direct responsibility for all elements of the BBS delivery and installation process. These plans will ensure that all elements of the ETN are correctly manufactured, delivered, installed, inspected, and tested to the level necessary to ensure that equipment, subsystems, and the overall system perform in accordance with the design criteria.

Installation method statements will be developed for all installation work. These method statements typically identify the activities to be performed to ensure equipment is correctly installed and include inspection and testing requirements to verify conformance. Modularised, self-contained equipment assemblies with standardised panel layout, power and signal interfaces, and mounting configurations, will be used to the maximum extent practical to minimise 'custom' site installations. This approach permits the use of many standard drawings and procedures, thereby, significantly reducing the amount of time required for the production and approval of the installation method statements.

Installation method statements will also clearly identify protection requirements, resource and material requirements, and equipment preservation instructions.

7 Commissioning and Testing

The strategy for testing and commissioning is to transfer all subsystems into operational conditions

- o step by step based on the logistic sequence,
- o in parallel if logistically possible (e.g. installation of telecommunication equipment, commissioning of power supply)
- o section by section to have the possibility to test integrated parts of the system as early as possible.

Commissioning phase will start with site testing of different units and/or subsystems within one line section. After successful testing the integration of further subsystems will follow until completion of the whole line section. The specified technical function will be demonstrated for one line section until subsequently performed for the entire system to complete system ready for Trial Run.

Some of these tests may be performed during Trial Run, when the whole System is more reliable

During the different phases the verification takes place by each lot. The verification of the whole system is to be co-ordinated by the System Integration Manager. Parallel to the commissioning process the set up of the Operations and Maintenance Organisation, and the on-site training of the staff has to be finalised. The complexity of the commissioning process with relation to staff training and operation and maintenance of the system will require a clear and strict organisation including the co-operation of all parties involved. Training of operations and maintenance staff partly may be executed during the phases of System Demonstration and/or Trial Run.

Commissioning and testing will comprise the following stages:

- o Factory tests
- o Installation Tests (Site tests items a and b)
- o System integration tests (Site tests items c and d; SIT, SCT)
- o Trial Run initial stage, completed with T1 tests
- o Trial Run performance ramp up, completed with T2 tests
- o Shadow running, completed with T3 tests
- o Provisional System Acceptance, Handover and start of revenue service
- o First year of revenue service, completed with T4 and T5 tests
- o Final System Acceptance

7.1 Testing & Commissioning Process

Validation of the technical contractual requirements / specifications will generally be implemented by testing, whereby other means of validation (e. g. simulations, calculation notes) may also be applied where appropriate to provide confidence about the correctness of the design.

The Testing and Commissioning Process shall be performed by a working group consisting of customer and operator representatives and subsystem suppliers, whereby the following tasks / objectives shall be considered:

Customer Representatives

- Review and comment of Test Program Plan, Test Procedures and other relevant test documents;
- Monitoring of testing methods and procedures;
- Witnessing of tests.

Project Management and Subsystem Representatives

- Elaboration of basic documentation for Testing and Commissioning for the respective subsystem tests and integration tests;
- Planning and performance of progress control of commissioning on basis of the project installation schedule;
- Coordination of on site the testing of subsystem suppliers and other contractors interfacing equipment and installations;
- Performance of maintenance during commissioning phase;
- Supervision of Safety and Security;
- Realisation of Quality Control and Documentation for subsystem and system level;
- Follow up of correction of variances/deviations on subsystem and system level;
- Performance and coordination of System Integration and Demonstration Tests (with support by the subsystem suppliers);
- Submission of relevant testing documentation to the Customers review team.

Operations and Maintenance

- Take over the System as specified in the contract for Revenue Service;
- Performance of operation and maintenance of the system during and after Trial Run Operation;
- Participation in testing, commissioning and start up activities;
- Witnessing of tests and participation on facility inspections;
- Support and assistance the integration and overall system testing with trained and experienced staff.

7.2 Test Planning

The Test Plan is expected to be developed for all test phases on system level, i.e. from the site tests SIT/SCT to T5, by BBS, tie and the relevant authorities. This test plan shall clearly identify all items to be tested to satisfy tie's requirements to provide acceptance to the system and all items required from HMRI or other relevant authorities to grant approval for operation, energization and the like. Test planning shall be completed by the end of the final design.

In addition the Commissioning and Testing Plans shall include but not be limited to the following information:

- Systems/components to be commissioned with its dedicated functional requirements (e.g. definition of parameters).
- Roles and responsibilities, incl. commissioning team organization and schedule for the required support by the operators personnel
- Commissioning process to be followed, incl. commissioning pre-requisites and schedule
- Commissioning report requirements, incl. Progress Reporting and logs.

Subsequent documentation will detail:

- test procedures,
- the approval procedures,
- safety management and related measures,
- the process for managing non – conformances,

7.3 Testing of construction phases 1a and 1b

Factory tests in terms of type and investigation tests will be performed in phase 1a. Routine tests will be performed as stipulated by the applicable standards. Where equipment for phase 1b differs from any reason to phase 1a, type and investigation tests may be repeated if necessary.

Installation tests and System Integration tests as well as trial running will be performed for every phase (1a and 1b) separately and independently. For joining phases 1a and 1b, the testing for the anticipated 56-h-period has to be agreed separately and independently from the following descriptions.

7.4 Factory Tests

Factory tests will be performed by each lot and sub supplier on their own responsibility, but under coordination of BBS's System Engineering. Factory tests may comprise type tests, routine tests or bench tests or a combination of these, as deemed necessary from the supplier and stipulated by the applicable standards.

7.5 Installation Tests

Installation tests, including Subsystem Integration (Site tests items a and b) will be performed mainly by each lot and sub supplier on their own responsibility, yet under coordination of the system engineering. To promote the progress of works, BBS's System Engineering will coordinate system installations and tests such, that subsystems can be completed on certain sections simultaneously. Therewith, these sections can be handed over to System Integration tests section wise as indicated in the BBS Contract (Sections A to F). Furthermore, the coordination will normally aim to give priority to the completion to section close to the depot to have them operative for the first test runs with the vehicles at an early stage. In case that Interfacing components of sub systems are missing in the above process, this has to be covered by operational procedures / instructions. Those instructions and procedures will be adjusted according to the status of the system.

7.6 System Integration Tests

E&M System Integration Test activities will be handled by the BBS's System engineering with support by the lots and sub suppliers

The System Integration Test shall verify the correct interaction and interfacing of the appropriate subsystem with other interfacing systems and its correct functioning in its environment according to the contractor's offer and to the specification requirements.

The E&M System Integration Tests will start at the SIT level, normally with that interfacing subsystem regarded as the most decisive for the overall functioning of the appropriate subsystem (e.g. SCADA with communication) followed by the other interfacing subsystems until achieving full functionality of the appropriate system.

Completing all System Integration Tests will lead to the SCT level (Site tests item d).

As said before, this System Integration testing can also be split up into dedicated sections of the systems which may then, after passing the SCT level, may be used e.g. for test runs with vehicles with Tramco.

7.7 Trial Run

The Trial Run is the ultimate project phase prior to Shadow running. In the particular case, the Trial run will be considered in two stages, the initial stage to achieve full functionality and completed with the T1 test (runtime confirmation). The second stage will include full driver familiarization and ramp up of the system performance until reaching the system performance as stipulated in the chosen operational variant (one of the variants set out in the Information release 2007-03 28). The second stage of the Trial run will be concluded with the T2 test (System Performance).

The staff of the Operator, the "O&M Organisation" will execute the Trial Run as part of the "On-the-Job Training".

During this phase the main activity is also with System Engineering supported by the suppliers including Tramco that are co-ordinated by the Site Management.

The following technical and organizational preconditions shall be fulfilled prior to the start of the Trial Run:

The system has to be commissioned completely. Punch list items are allowed, but all safety relevant requirements and functions need to be fulfilled and the relevant certificates have been issued, respectively the Operations Manager took over the system, (exceptions such as completion of AFC or prioritization of traffic lights may be agreed with the Customer)

- o The organization of the Operation and Maintenance Company is established.
- o Training of Operation staff necessary for the Trial Run operation has been completed the examination is documented accordingly.
- o Training on Maintenance staff necessary is completed as far as required for achieve the overall requirements for Trial Run operation.
- o Rules & Regulations and procedures required for Trial Run Operation are available
- o Coordination of Operation and Maintenance Management with Site Management defined
- o The Evaluation Committee (and if required the appropriate sub committees) is founded.

7.8 Shadow Running

The Shadow Running is a final stage, where nearly no tests are performed any more, but where various operational patterns and emergencies can be trained. T3 test will be part of the final stage of shadow running. Within T3 tests, Tramco has to prove that their rolling stock is able to provide a riding comfort level as set out in Tables 8-1 and 8-2 of the Employer's Requirements on track as specified in the BBS contract.

7.9 Revenue Service and Network Performance/Reliability Test

After Provisional Acceptance granted after T3 tests respectively after successful termination of Shadow running, the system will enter into revenue operation. During the first 12 month of revenue service the Network Reliability Test (T5) and the Network Performance Test (T4) will be performed.

The Network Reliability Test (T5) will be performed in a period of 90 consecutive days, whereby the reliability targets for the subsystem as set out in Section 1b /10.3 of the Employer's Requirements will be demonstrated.

The Network Performance Test (T4) will be performed in parallel in a period of 28 consecutive days, whereby special demonstrations - Substation and UPS Demonstration, Tram Change Over as defined in part 1d/ 9.4 ff. of the Employer's Requirements will be performed.

For both tests effects of vandalism, damage or other impacts caused by third parties (e.g. collision of motor vehicles), shall be eliminated from the performance demonstration and neither effect nor deem as interruption of the ongoing demonstration period.

8 Acceptance and Approval

Acceptance and approval are distinguished here as follows:

- Acceptance: certification that the system is conform to the requirements of the customer, discharge of BBS from their contractual obligations
- Approval: certification that the system is conform to legal requirements, standards and the like and that the system is allowed to enter into passenger service

Approval and acceptance shall be given according to clear pass-fail criteria as set out in the test plans worked out by the BBS (see 2).

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31st March 2008

Updated Proposal Submission

Edinburgh Tram Network

Section 2: Overall Technical Concept

Part 1 – System Engineering

Annex 1 – RAMS Concept

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1.5 Definitions and Abbreviations

Availability: The ability of a product / system to be in a state to perform a required function under given conditions at a given instant of time or over a given time interval assuming that the required external resources are provided.

Hazard: A physical situation with a potential for human injury (EN 50126)

Maintainability: The probability that a given maintenance action, for an item under given conditions of use can be carried out within a stated time interval when the maintenance is performed under stated conditions and using stated procedures and resources.

RAMS: An acronym meaning Reliability, Availability, Maintainability and Safety.

RAM-Program: A documented set of time scheduled activities, resources and events serving to implement the organizational structure, responsibilities, procedures, activities, capabilities and resources that together ensure that an item will satisfy given RAM-Requirements relevant to a given project or contract.

Reliability is defined as the capacity of a system / component to fulfill it's assigned function under defined conditions for a certain time (IEC 271). That means, reliability is the probability that an item can perform a required function under given conditions for a given time interval expressed in hours (MTBF: Mean Time Between Failure) or kilometers (MKBF: Mean Kilometers Between Failure).

Risk: The probable rate of occurrence of a hazard (expressed in a time interval) causing harm and the degree of severity (expressed in hazard severity levels) of the harm.

Safety: Freedom from unacceptable risk of harm (EN 50126).

Safety-Program: A documented set of time scheduled activities, resources and events serving to implement the organizational structure, responsibilities, procedures, activities, capabilities and resources that together ensure that an item will satisfy given Safety-Requirements relevant to a given project or contract.

The following abbreviations are used:

EN	European Norm
GF	Business domain (Geschäftsfeld)
RAM	Reliability, Availability, and Maintainability
RAMS	Reliability, Availability, Maintainability, and Safety
SAP	System Assurance Plan

1.6 RAMS Aspects of Railway System

This RAMS Concept covers the RAMS aspects of railway systems. The term RAMS represents the core aspects of System Assurance and means:

- Reliability,
- Availability,
- Maintainability, and
- Safety.

System Safety includes the technical safety, the safe system operation, especially the safety of persons, and the safe functioning of the equipment installed.

The attainment of acceptable in-service RAM parameters can only be achieved by meeting ongoing reliability, and availability requirements, by controlling the maintenance activities, and the operational environment.

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1.7 Integration of System Suppliers

Specific internal rules and regulations to improve co-ordination, and quality of work of internal system suppliers for mass transit systems will be established. Internal suppliers are obliged to provide their input according to requirements established by the contract, by applicable standards, and the internal regulations fixed in the "GF" process. This "GF" process is developed to provide, beside others a RAMS process according to EN 50126.

Sub-contractors will be integrated in the RAMS process by using sub-system specifications considering the Contract, EN 50126, and project procedures, e.g. for organization, quality management, or documentation.

2 RAMS Process

2.1 General RAMS Activities

2.1.1 RAMS Program (System Assurance Program)

The RAMS program scheduled by BBS comprises activities relating to RAMS aspects of transit systems. RAMS, also known as System Assurance will be ensured by duly performing the RAMS activities outlined below.

The RAMS activities described below represent the RAMS Program including the preparation of a System Assurance Plan (SAP). This System Assurance Plan for the BBS scope of supply details the general RAMS activities work to be carried out by BBS. The plan defines the scope of the RAMS tasks that will be undertaken to achieve a safe and reliable system operation. Details about the documentation of the RAMS activities are provided in section 2.1.4.

The following RAMS aspects will be considered in the SAP:

- RAMS Management Structure
- Scheduled RAMS Activities
- RAMS Documentation
- Reporting
- Reviews
- Quality Management
- Limitation of Scope

2.1.2 RAMS Management Structure

BBS will establish a comprehensive, and effective RAMS management. This includes the controlling of the RAMS activities on overall system, system, and on sub-system level. A hierarchical management structure as shown below will be established. This structure has proven to deliver good results in mass transit turnkey projects.

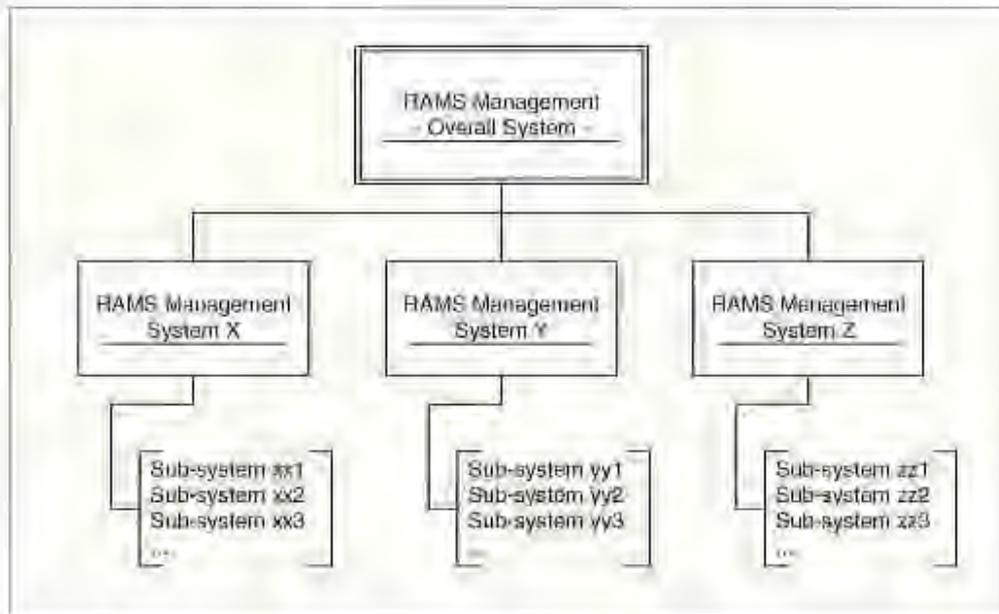


Figure 1.: Example for hierarchical RAMS management structure

2.1.3 Scheduled RAMS Activities

A global flowchart of the RAMS activities scheduled in relation to general project phases is given below.

The activities outlined in figure 2 will be detailed in the RAMS documentation according to the specific project phases, and the RAMS requirements established. The activities are scheduled in accordance with EN 50126, and will be tailored to the specific project requirements.

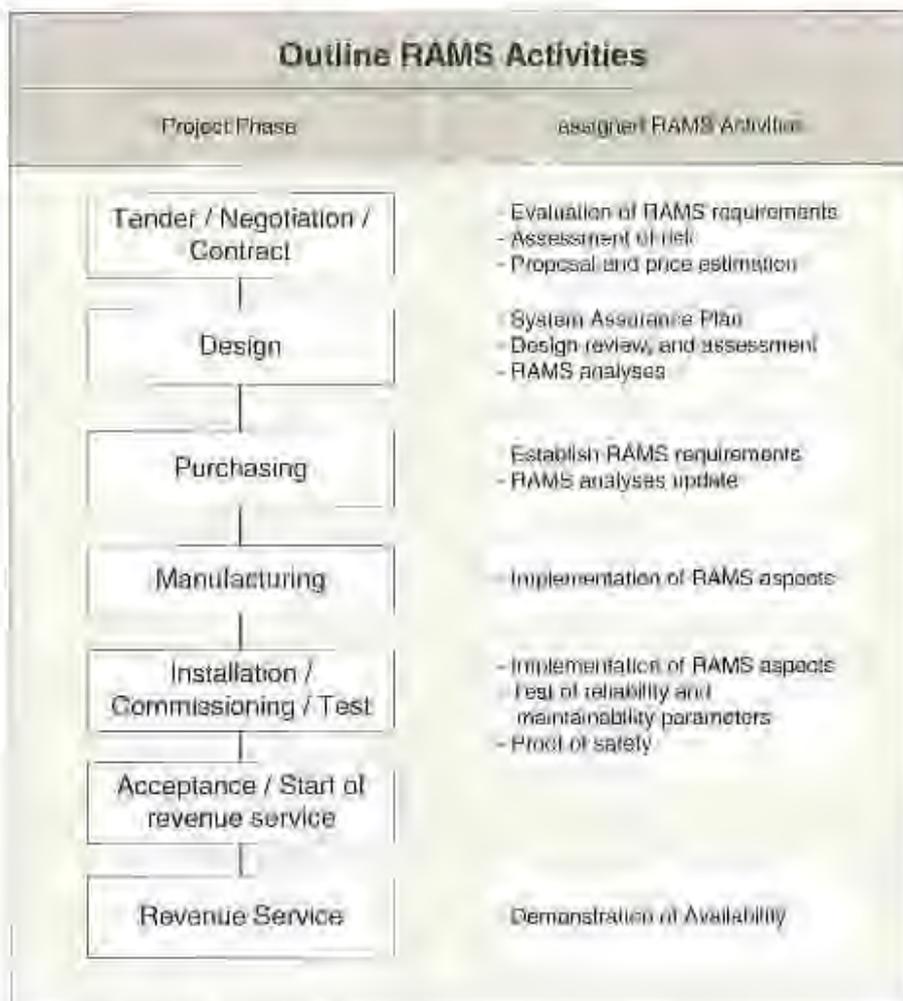


Figure 2. RAMS activity flowchart

2.1.4 RAMS Documentation

The RAMS Program contains several activities for the RAMS aspects of the project. BBS will document the RAMS activities. Figure 3 shows the documentation structure proposed for system assurance activities on the overall system level.

The System Assurance Plan covers the RAMS related procedures and activities from design phase up to the start of revenue operation of the system. The objective of the System Assurance Plan is to ensure that the approach adopted by BBS for the reliability, availability, maintainability and safety activities will satisfy the requirements established for modern mass transit systems. The System Assurance Plan can contain System RAM Plan, and a System Safety Plan. In this case these documents will provide the details of the RAMS activities.

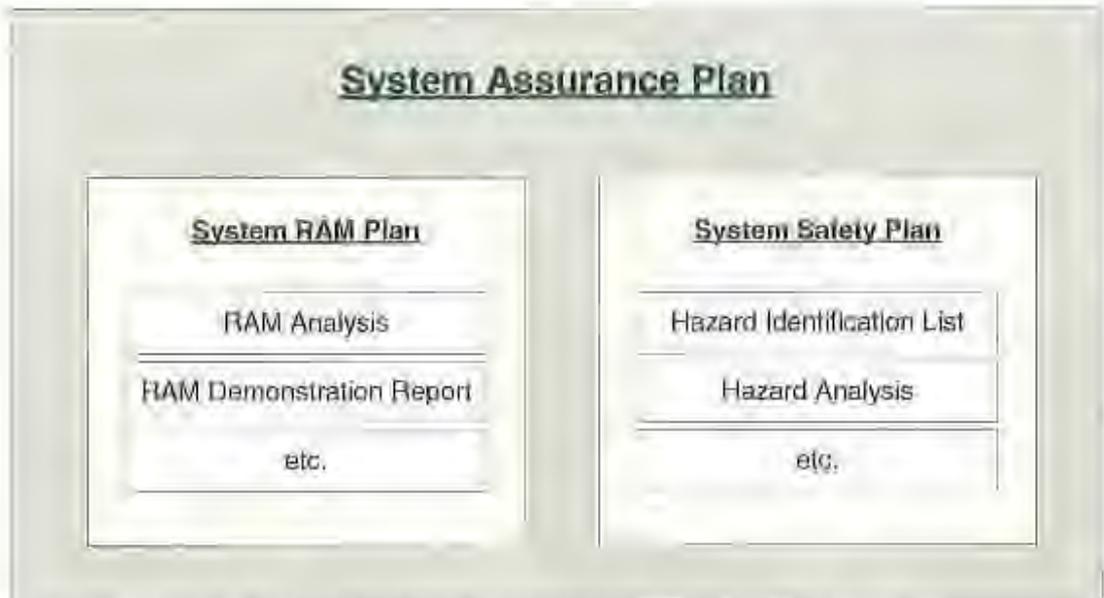


Figure 3.: Example for RAMS documentation on overall system level

A hierarchical documentation structure will be established for the systems RAMS activities. Figure 4 below shows a rough example for the structure of the RAMS documentation. This structure will be extended according to the specific requirements established.

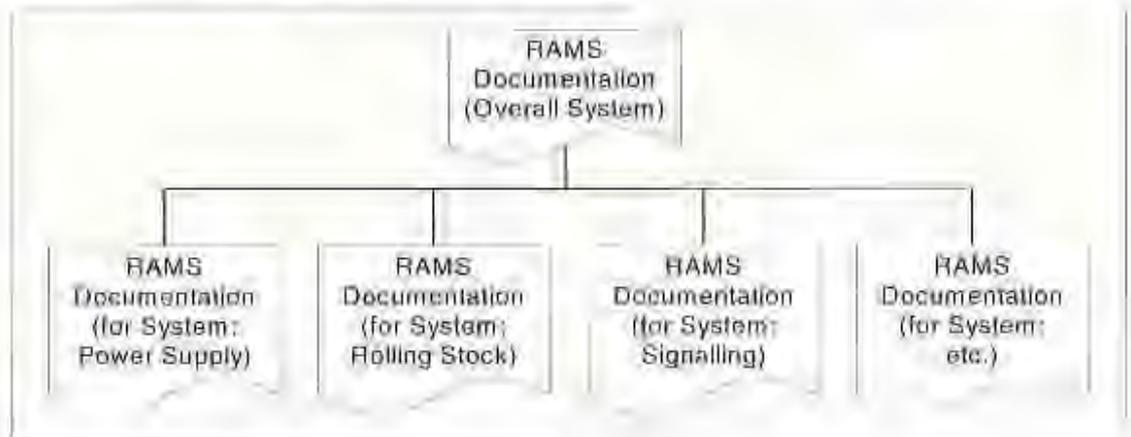


Figure 4.: Example for hierarchical structure of RAMS documentation

2.1.5 Reporting

Reports will be prepared and submitted to the Authority providing information about RAM and Safety analyses, and demonstration tests performed by system suppliers. RAMS activities can be reported for the overall system level as well as for the system level depending on the RAMS requirements established, and the system complexity. Details will be provided in the RAM and Safety plans.

Status reports will be prepared periodically containing information about work progress

BBS will present the status, and results of RAMS activities at least at the end of design period, and commissioning period, if required.

2.1.6 Reviews

Internal reviews of system assurance work will be performed at the end of major design phases.

2.1.7 Quality Management

High product quality is a precondition for successful achievement of the RAMS requirements.

BBS will establish a project Quality Management during the project phases to supervise and control the BBS works as well as the works of the sub system suppliers. The Quality Plan will provide further details.

2.1.8 Limitation of Scope

The following events will not be covered by safety or RAM studies:

Consideration of any malevolent or voluntary action, vandalism or force majeure, Site Safety, and Occupational Health and Safety.

2.2 System Safety Activities

BBS intend to perform the following safety activities:

- Hazard identification and analysis
- Detailed safety analysis for items identified as safety critical
- Demonstration of safety related functions
- Documentation of safety activities

Generally the safety activities will be performed to provide:

- Evidence of adequate Quality Management,
- Evidence of adequate Safety Management,
- Details of the implementation and results of technical safety analysis and activities,
- Recommendations and restrictions for use of system and / or installation operational and maintenance requirements constraints.

2.2.1 System Safety Objective

The system safety activities will ensure that the policy of BBS is:

- To meet the contract requirements on safety,
- To design, procure and commission the system capable of being operated and maintained at the required safety level which has been identified as result of hazard analysis for this project.



Application of this policy means:

- Safety risks (i.e. likelihood and consequences of hazards) will be reduced, e.g. for signalling by designed fail-safety of the employed technology or other protective product features down to a rate considered as being tolerable in accordance with EN 50129

Priority is to provide proven safety so that:

- The requirements on proven safety are met
- The safety process focuses on adaptations and modifications from generic systems.
- The consistency of the overall safety concept of the project is not undermined by new developments of safety critical items.

BBS will ensure that the safety policy statement from their partners and sub-contractors have equivalent complementary statements that support and comply with this policy

2.2.2 System Safety Organisation

The safety organization is an integrated part of the system assurance organization outlined in section 2.1.2. BBS will designate a System Safety Manager for the overall system.

System suppliers are responsible for implementation of the Safety policy within their scope of work. They will designate their Safety manager(s)/officer(s) for the application of it.

These managers, and officers will form the Safety Team and they will meet on a regular basis. The System Safety Plan will provide a description of the Safety organization.

2.2.3 System Safety Plan

BBS will prepare a System Safety Plan as part of the SAP or as a separate document (see section 2.1.4).

As a basic guideline of the Safety Program, the System Safety Plan will provide the program elements.

The objective of the Safety Plan is to provide the Authority and BBS with a complete statement of the planned System Safety Program. This program is an element of the transportation project to ensure compliance with the relevant safety requirements established by the authorities and will include the milestones for obtaining approvals from the authorities. BBS will identify, analyze and control all relevant hazards under normal, restricted and emergency conditions following the plan so that the hazards can be eliminated or controlled at levels, considered as being tolerable in accordance with EN 50126.

The System Safety Plan will require that:

- BBS, their partners and main subcontractors will provide their own plans, which will be compatible with their own in-house design safety management practices and consistent with the System Safety Plan.
- BBS, their partners and main subcontractors will provide a detailed management structure document describing and emphasizing the



responsibilities relating to safety management together with the definition of the organization, the roles and responsibilities of the individuals involved.

- BBS, their partners and main subcontractors will have a demonstrably competent and well-trained workforce.

The Safety standard to be complied with is European standard EN 50126. The content of the safety analyses will fulfill the applicable requirements and will be conform to the relevant safety standards.

The Safety Plan is part of the RAMS program, see also section 2.1.4., and covers the following items:

- General system safety requirements, recommendations and criteria
- Overview about the system configuration
- Safety organization and management
- Scheduling of safety activities
- Safety Program activities
- Documentation of safety activities

2.2.4 System Safety Program

The objective of the Safety Program is to demonstrate that the system design and/or its application are likely to achieve the specified safety requirements. The Safety Program will provide the authorities as well as BBS with a complete statement of our proposed methodology for ensuring compliance of the system design with the required safety regulations. The Safety Program will be subject to approval by the Authority.

The Safety Program will include the required documentation of safety related analyses, tests and reports and will be performed on the overall system and sub-system level. Each document that is part of the Safety Program will be submitted to the Authority for approval.

A Time Schedule will be provided to the Authority, which will include the milestones for submission of the safety related documents, and for safety verification and validation procedures.

2.3 System RAM Activities

The RAM activities will be performed as part of the system assurance activities. BBS intend to perform the following RAM activities:

- RAM analysis and prediction
- Detailed analysis for items identified as reliability critical
- Demonstration of reliability, availability, and maintainability if required
- Documentation of RAM activities

3 RAMS Requirements

The Edinburgh Tram Network shall be made as reliable as practicable by making the subsystems as reliable as practicable, subject to the constraints of cost. Where necessary, the system should be made resilient to single point equipment and cable failure by employing suitable levels of equipment/cable redundancy and duplication.

On equipment or cable failure, systems shall be designed in a safe manner with modes of degradation leaving possibilities to work around. Limited back-up facilities shall be provided to maintain services under specified partial failure conditions.

Defined within chapter 3.5 are the requirements for availability of individual subsystems (each of which is given a definition), and the reliability of individual components of the subsystems (see chapter 3.2).

3.1 Definition of Reliability

The capacity of a system / component to fulfill its assigned function under defined conditions for a certain time (IEC 271).

For the percentage values in clause 3.2 and 3.3 the following calculation should apply:

$$R_{\text{Subs}} = 100\% \cdot [Nh_{\text{oa}} - (Nh_{\text{oa}} / \text{MTBF}) \cdot \text{MTTR}] / Nh_{\text{oa}}$$

$$= 100\% [1 - \text{MTTR} / \text{MTBF}]$$

R_{Subs} – Subsystem-Reliability [%]

Nh_{oa} – Operation-hours per year (7300hours = 20hours/day * 365 days)

MTBF – ‘Mean Time between Failures’

MTTR – ‘Mean Time To Repair (without administration and logistic time)

For all components and subsystems, assume a Mean Time to Repair (MTTR) of 4 hours for the definition of the Reliability-targets. For the demonstration of the Reliability-targets the real MTTR will be taken into account for the estimation of R_{Subs} under consideration of the stipulation made in 3.9 herein.

3.2 Reliability targets for Subsystems

3.2.1 Overhead Line Equipment and Power supply

Component or Subsystem Minimum Reliability

OLE System, where its availability is defined as the probability that in any linear km of the OLE system, trams are not able to operate at the normal operational speed due to defects in the OLE. (this is based on 20hr/day operation and 20 route-km plus depot, about 50 track-km) maintenance by skilled personnel according maintenance manual, operation within specified limits, transient-effect failures and third-party impact will not be taken into account.

99.995% for each km

Component or Subsystem Minimum Reliability

(a) that an indicator is read correctly at the RTU, transmitted to the SCADA Master Station in the Control Centre, and displayed correctly on any SCADA display that is in use within four seconds; and

(b) that a control is effectively transmitted to an outstation within three (two) seconds assuming that the ODN is fully functional and that the hardware component of the Control Centre servers and workstations is fully functional

99.75%

Central Control Equipment

Component or Subsystem Minimum Reliability

Servers (if necessary, by use of hardware and software redundancy)	99.99%
Workstations	99.9%
Printers	99.5%
CCTV Matrix Controller	99.9%
LAN Switches, Routers and Hubs	99.99%

Further reliability targets are stipulated in 3.3 herein.

3.3 Network Reliability tests for Subsystems

The Network Reliability Test (T5) will be performed in a period of 90 consecutive days, whereby the reliability targets for the subsystem as set out in this chapter will be demonstrated.

For this test effects of vandalism, damage or other impacts caused by third parties (e.g. collision of motor vehicles), shall be eliminated from the performance demonstration and neither effect nor deem as interruption of the ongoing demonstration period.

Each specified sub-system has its own specified target detailed in this chapter. The tests will start on the same date (on or after Service

Commencement Date) and as each subsystem is individually demonstrated to meet its contractual target that subsystem reliability test is then considered completed.

Network

Reliability Test is only passed when all the sub-systems meet their targets.

The undertaking of the test will essentially be a maintenance function carried out by the Contractor. However, it requires contractor management of the preparation for the Tests with technical support and monitoring by Contractor, (along with representatives from the during the Test).

The contractor will undertake and pass Network Reliability Test within twelve months after the Service Commencement Date of the whole Edinburgh Tram Network to pass Network Reliability Test.

If any part of the works or part of the ETN fails to pass Network Reliability Test then rectification, repair, modification or reinstatement of that system will be undertaken. The defect correction period on that part of the system or any sub-system which fails the test will be extended a further twelve months beyond the time of rectification, repair or modification. The contractor will propose and undertake the necessary remedial action to achieve acceptance.



He will be given thirty working days advance notice of the Network Reliability Test plan and fourteen working days written notice of the test commencement date.

TEST	TARGET VALUE
Tram Reliability	see Tramco Supply Agreement.
Hand Held Ticket Vending Machine	dedicated to supplier for Automatic Fare Collection System
Ticket Control System	dedicated to supplier for Automatic Fare Collection System
Passenger Information Display System	as set out in chapter 3.2.2 herein
Passenger Help/Emergency Help Point System	as set out in chapter 3.2.2 herein
On Street Track & Formation	Achieves 99.995% reliability over six consecutive Periods.
Off Street Track & Formation	Achieves 99.995% reliability over six consecutive Periods.
Point Machine	Achieves 99.995% reliability over two consecutive Periods.
Traction Switchgear	Achieves 99.995% reliability over two consecutive Periods.
OLE Equipment Achieves	reliability as set out in chapter 3.2.1 herein over two consecutive Periods.
Bonding & Earthing	No stray current, or 'touch voltage' recording that is within 15% of tolerable target for four consecutive Periods
Operational Radio	Achieves reliability as set out in chapter 3.2.2 over two consecutive Periods.
Operational Data Network	Achieves reliability as set out in chapter 3.2.2 over two consecutive Periods.
LTC Interface Achieves	99.75% reliability over four consecutive Periods.
Wheel/Rail Interface	No proven instances of Noise and Vibration exceedences have occurred in a six-month period
CCTV System	Achieves 99.75% reliability over two consecutive Periods.
Tram Position Detection System	Achieves 99.75% reliability over two consecutive Periods.
Traction SCADA System	Achieves 99.75% reliability over two consecutive Periods.
Transtop Lighting	Achieves 98.5% reliability over two consecutive Periods.

General Exclusions and Assumptions

Should the Contractor be able to prove to the reasonable satisfaction of He that any of the reliability tests would have been exceeded by means of one or more of the following exclusions then, in consultation with He, the test results will be amended to discount the effects of such proven Network Reliability Test exclusions.



Vise versus applies:

$$\text{Availability} = 1 - \text{Non-Availability}$$

The offer of the contractor regarding the Availability/ Non-availability based on the following stipulations:

In general the Availability is depending from the status of the overall system. In the beginning of operation ("burn-in" phase) the availability may be influenced by spurious "early" failures. During this period the availability will grow up to the targeted availability of 99% (long term averaged value) due to replacement of such failed equipment under defects liability. According to common experience this period ends approximately after one year when the system is in the phase of 'normal use' characterized by a stable availability (averaged over the *'given instant of time or given time interval'*).

'The ability ... to perform a required function' is defined over part 10, 2.6 'Maintenance Strategy'; 'Reactive and Fault Corrective Maintenance' (Table 2-1) of the tender documents.

The ability to perform a required function is no more given when a 'failure halting the operation of the tram network in whole or part thereof' longer than 2h and/or a 'failure impact the punctuality of the tram network' longer than 8h.

'...a given instant of time or over a given time interval' is depending from the status of the overall system as mentioned above. In the beginning ("burn-in" phase) a fluctuation of the availability is possible. Due to that the *'given instant of time or given time interval'* should not be shorter than half a year in this period. In the follow-up period (phase of "normal use") the *'given instant of time or given time interval'* could be 3 months.

The specific definition of the (overall) Availability is defined as follow:

$$\text{(overall) Availability} = 1 - \text{Sum}(t_{BD}) / t_{Cal}$$

- $\text{Sum}(t_{BD})$ - Sum of time-periods for failure halting the operation of the tram network in whole or part thereof longer than 2h per failure-event over a given time interval (3month) (e.g. a failure-event were a failure halting the operation of the tram network in whole or part thereof for 2,5hours the time-period which has to be taken into account for the availability calculation would be $t_{BD} = 0,5h$)
- t_{Cal} - Calendar-time of the given time interval

3.6 RAM Apportionment of the overall Availability

The following table gives an overview of the apportionment of 'Non-Availability/ Availability' based on common experiences for modern mass transport systems. This table serves as orientation only. The portion of the subsystems could diverge due to its stochastic character, but this deviations will compensate each other so that the averaged availability of 99,00%" will be reached during the phase of 'normal use'.



general ETN Subsystems	ETN non-availability allocation	ETN Availability (100%-related)	ETN non-availability (100%-related)
Rolling Stock	50,00%	99,500%	0,500%
Signalling	22,50%	99,775%	0,225%
Power Supply	24,00%	99,760%	0,240%
Telecommunication	2,00%	99,980%	0,020%
Trackwork	1,50%	99,985%	0,015%
	100,00%	99,000%	

* long-term averaged value

3.7 Definition and targets for Maintainability

The probability that a given maintenance action (or an item under given conditions of use) can be carried out within a stated time interval when the maintenance is performed under stated conditions and using stated procedures and resources.

The system and its components will be designed with maintainability in mind. To this end, the following will be observed:

- Particular equipment will be in a redundant configuration, so that a component may be replaced while stand-by equipment takes over its duty
- Equipment will be replaceable if possible as field replaceable units, so that defective components can be replaced without the need to power down the overall piece of equipment
- Equipment, particularly at trackside and stopping points, will be positioned so that where possible it is accessible for maintenance or replacement without the necessity to halt tramway traffic or to close down the stopping point and without the need to use access equipment such as steps.

For all components and subsystems assume a Mean Time to Repair (MTTR) of 4 hours.

Any downtime required for planned maintenance can be discounted from the determination of availability, provided that such maintenance can be reasonably undertaken at a time when the maintenance has no impact on the operation of the system. This will often be during overnight system shut-downs.

3.8 Targets for Maintenance

Response times for reactive and fault correcting maintenance will be based on the potential impact of the incident or failure.

Fault category	Correction Time Limit	Description
1	1 hour to attend and make safe. 2 hours to Breakdown Intervention	Critical Issue such as Health & Safety risk, or failure halting the operation of the tram network in whole or part thereof, failure of major system
2	4 hours	Failure impacting the punctuality of the tram network, or having potential



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1 Training Support

The Bilfinger Berger–Siemens Consortium (BBS) offers in addition to the Suppliers Training on ETN subsystems special Training Support for operations and maintenance staff of the future Operator in an extent of twelve (12) man-months.

This Training Support may cover

- assistance in preparation of the Training Plan, and
- support in operational training on System operations under Regular and Degraded Operations Modes, handling of Emergencies and regarding Recovery Strategies.

Details of this additional support with respect to training scope and scheduling should be discussed and jointly agreed with the and the future Operator.

The Suppliers Training will be performed by each Supplier for the Operator's operations and maintenance staff to be trained at their specific subsystems including

- operating of equipment, and
- execution of preventive and corrective maintenance of the equipment.

It is understood that the Suppliers Training will also cover the training of drivers in operating the tram vehicles. This Drivers Training will be subject to separate contract with the tram supplier (Tramco).

Key aspects of the Suppliers Training will be:

- Handling of equipment and/or trains;
- Fault finding;
- Repair and maintaining of equipment;
- Response to irregularities;
- Safety rules for the respective field of work;
- Handling of protective devices and emergency equipment.

Suppliers Training will mainly be performed as an "on-the-job" training with the required theoretical background. Therefore the most benefit might be derived from a progressive involvement of the trainees in the installation, testing and commissioning of the relevant subsystem, where applicable.

The relevant training documents will be produced by the Suppliers step by step as needed for the different tasks. The Supplier's necessary documentation like the operating and the maintenance manuals of the specific subsystems will be part of the training documents.

SIEMENS

31st March 2008

Updated Proposal Submission

Edinburgh Tram Network

Section 2: Overall Technical Concept

Part 1 – System Engineering

Annex 3 – Earthing and Bonding



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1 Scope

The construction of railway installations generally requires a concept for earthing and bonding including provisions for lightning protection as a basic document for the involved parties in the project. This is important particularly for modern systems with high traction currents and the extensive use of electrical energy for many purposes.

The objectives for earthing and bonding are:

- The safety of persons:
The safety of persons is characterised by the value of the touch voltage.
- The protection of installations:
Damage of installations may arise from overheating of conductors, by arcing and by electrical corrosion.
- The intended operation of the system:
For the intended operation of the system the aspect of electromagnetic compatibility (EMC) has to be considered too.

The safety of persons is considered to have the highest priority!

The present Concept deals with all aspects of earthing and bonding of the Edinburgh Tram Network project.

The earthing system described in this concept is a combined system for all purposes:

- Traction Power Supply and Traction Return Circuit
- Service Power Supply of all voltage levels
- Lightning Protection
- EMC appropriate earthing design

Earthing and Bonding form the basis of EMC!

Figure 1-1 shows the relation among EMC, earthing, bonding, and lightning protection.

Earthing and Lightning protection are two essential aspects of EMC dealt with in this document, for all other EMC related aspects see the document "EMC plan", (will be subject of the detail planning phase)

To ensure consistent earthing design for the whole project, there is only one Concept for Earthing, Bonding and Lightning Protection of the Edinburgh Tram Network. It describes the structure of the earthing and bonding network, the rules, methods, calculations and materials to be adopted by all subsystems (lots) concerned to fulfil these objectives.

The measures described base on the relevant international and European standards and recommendations.

The return circuit of a DC-railway is not allowed to be connected to earthing systems like pole foundations and building earthing systems. This is to force the main part of the traction return current to flow back to the traction supply substation via the running rails. Nevertheless, the resistance between the running rails and the soil generates a stray current which can cause stray current corrosion in adjacent metallic systems.

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2 Project Overview

The essential project parameter like line & track configuration, traction & service power supply, headway and so on are named in the invitation of bid.

A summary of key data will be created after start of project.

The use of the term "railway" in this concept considers also the application of the relevant requirements and standards on "railways".

3 Abbreviations and Definitions

3.1 Table of Abbreviations

General Abbreviation	Explanation
AC or a.c.	Alternating Current
CISPR	Comity International Special of perturbations radioelectriques (This is a comity of the IEC.)
DC or d.c.	Direct Current
DIN	Deutsche Industrie-Norm (German Industrial Standards)
E&B	Earthing and Bonding
E&M	Electrical and Mechanical Equipment
EMC	Electromagnetic compatibility
EN	European Standard
H/E	Magnetic / Electrical Field
HV	High Voltage (> 45 kV DC; > 45 kV AC)
IEC	International Electrotechnic Commission of ISO
ITU	International Telecommunication Union (This union is the former CCITT.)
LPS	Lightning Protection System
LV	Low Voltage (≤ 1 kV AC; $\leq 1,5$ kV DC)
MEBB	Main Equipotential Bus Bar, sometimes named MET (Main Earthing Terminal)
MV	Medium Voltage (< 1 kV and ≤ 45 kV AC; $< 1,5$ kV and ≤ 45 kV DC)
OCL	Overhead Contact line
PE(N)	Protection Conductor (or combination with Neutral Conductor)
TSS	Traction Supply Substation
VDE	Verband Deutscher Electrotechniker (Germans electrotechnic standardisation organisation)
WHO	World Healthy Organisation

This table will be amended according to the progress of the project if necessary!



3.2 Definitions

For a common understanding of the technical requirements some definitions are essential. Further definitions can be found in the mentioned standards.

List of definitions:

3.2.1.	earth [IEC 60050(826)-04-01]	8
3.2.2.	structure earth [EN 50122-2]	9
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3.2.19.	stray current [EN 50122-1]	11
3.2.20.	Lightning protection system (LPS) [IEC 62305-1]	11
3.2.21.	External lightning protection system [IEC 62305-1]	11
3.2.22.	Internal lightning protection system [IEC 62305-1]	11
3.2.23.	Lightning protection zone (LPZ) [IEC 62305-1]	11
3.2.24.	Surge protective device (SPD) [IEC 62305-1]	11
3.2.25.	Stray current zone [EN 50122-2]	12
3.2.26.	Electromagnetic compatibility (EMC) [IEC 60050-161-01-07]	12

3.2.1. earth [IEC 60050(826)-04-01]

The conductive mass of the earth, whose electric potential at any point is conventionally taken as equal to zero.

3.2.2. structure earth [EN 50122-2]

The electrical interconnection of the reinforcing rods of structures, and in the case of other modes of construction, the conductive interconnection of the metallic parts. Examples are reinforced railway structures such as bridges, viaducts and reinforced trackbed.

3.2.3. earth electrode [IEC 60050(826)-04-02]

A conductive part or a group of conductive parts in intimate contact with and providing an electrical connection with earth.

3.2.4. foundation earth electrode [IEC 62305-3]

Reinforcing steel of foundation or additional conductor embedded in the concrete foundation of a structure and used as an earthing electrode

3.2.5. equipotential bonding [IEC 60050(826)-04-09]

Electrical connection putting various exposed conductive parts and extraneous conductive parts at a substantially equal potential.

3.2.6. global earthing system [HD 637 S1]

An earthing system established by the connection of local earthing systems, which ensures that no dangerous touch voltages arise from the near vicinity of these local earthing systems. Global earthing systems reduce the potential increase of the local earthing system by distributing the fault currents. Such a systems performs as a quasi equipotential area.

3.2.7. main earthing terminal [IEC 60050(826)-04-08]

A terminal or bar provided for the connection of protective conductors, including equipotential bonding conductors for functional earthing if any, to the means of earthing.

3.2.8. exposed conductive part [IEC 60050(826)-03-02]

A conductive part of electrical equipment, which can be touched and which is not normally live, but which may become live under fault conditions.

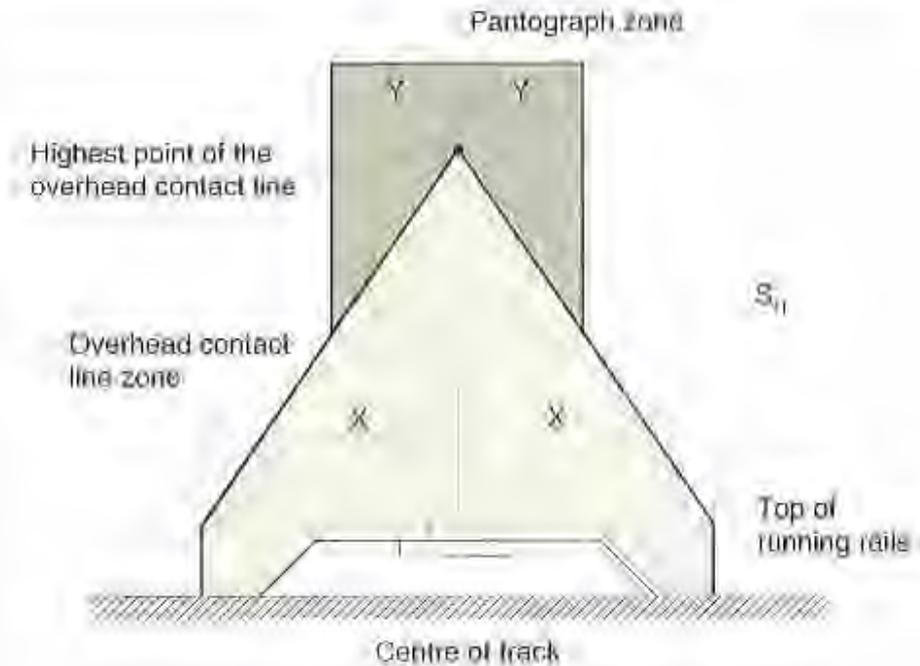
NOTE: A conductive part of electrical equipment which can only become live under fault conditions through an exposed conductive part is not considered to be an exposed conductive part.

3.2.9. extraneous conductive part [IEC 60050(826)-03-03]

A conductive part not forming part of the electrical installation and liable to introduce a potential, generally the earth potential

3.2.10. overhead contact line zone and pantograph zone [EN 50122-1]

Zone whose limits are not exceeded in general, by a broken overhead contact line or a pantograph which is energized, in the event of dewirement or by broken fragments.



3.2.11. return circuit [EN 50122-1]

All conductors which form the intended path for the traction return current and the current under fault conditions.

Note: The conductors may be for example:

- running rails,
- return conductor rails,
- return conductors,
- return cables.

3.2.12. track return system [EN 50122-1]

A system in which the running rails form a part of the return circuit.

3.2.13. rail potential [EN 50122-1]

The voltage occurring under operating conditions when the running rails are utilised for carrying the traction return current or under fault conditions between running rails and earth.

3.2.14. (effective) touch voltage [EN 50122-1]

Voltage under fault conditions between parts when touched simultaneously.

NOTE: The value of the effective touch voltage may be appreciably influenced by the impedance of the person in contact with these parts.

Additional remark: This term is used in this document for operating conditions in the same manner. Depending on conditions on site, touch voltage may be a part of or the total value of the voltage of a touchable part versus earth.

3.2.15. voltage limiting device [EN 50122-1]

A protective device against permanent existence of an inadmissible high touch/accessible voltage.

7 Basic design rules for earthing and bonding of structures

7.1 Basic Principle for Civil Works

Civil works shall bear in mind during design and construction of all civil structures the following main principle:

The reinforced civil structures generally form the basis for earthing and bonding of an electrified railway system.

Therefore, the earthing conductors embedded in concrete are an essential part of the earthing system of the railway and need careful design and installation.

7.2 Structure earth

All buildings made from reinforced concrete shall have a structure earth including foundation earth electrode. For this purpose, the foundation slab and the walls of the building will get a mesh of earth wires of about 10 by 10 m mesh size.

This mesh may be part of the reinforcement, or made from additional mild steel rods and wire-tied to the reinforcement at least each 40 cm.

The foundation earth electrode shall be located from 5 to 8 cm from the lower concrete surface (see chapter 7.3). For the welding of structure earth see chapter 7.5.

7.3 Embedded Earthing conductors

Earthing conductors for all purposes, including lightning protection, have to be designed according to named standards to withstand mechanical and thermal stress. This also applies to earthing conductors embedded in concrete, which may be part of the reinforcement or additional mild steel rods.

If not otherwise stated, the following cross-sections shall be applied to embedded earthing conductors according to the standards referred above and basing on experience from conventional electrified railway systems.

Material	Minimum cross-section
Steel	200 mm ²
Copper	50 mm ²

Table 7-1: Minimum cross-sections for concrete-embedded earth conductors

Remark to table:

The minimum cross-section of vertical earthing rods of piles must be 314 mm² or an equivalent round steel with minimum diameter of 20 mm.



Stainless steel of vertical earthing rod must be applied in soil. It must fulfil the following requirements:

Chromium	≥ 16 %
Nickel	≥ 5 %
Molybdenum	≥ 2 %
Carbon	≤ 0.03 %

The cross-section of earthing wires is subject of detail design.

All embedded earthing conductors must be covered by at least 5 cm of concrete for corrosion protection.

Conductors, which are part of an earth electrode or are located within the OCL or pantograph zone, shall not be covered by more than 8 cm of concrete. That is necessary to ensure sufficient contact to the soil or to a broken overhead contact line respectively. The exact locations of these embedded conductors will be subject of detail design.

The down conductors inside of walls have to be connected to the reinforcement at intervals of 400 mm by means of wire wrapping.

7.4 Lightning protection down conductors

According to IEC 62305-3 down conductors must be erected from the roof to the foundation earth in the outer walls of buildings. Large buildings like Main Workshop buildings additionally require down conductors inside the building. Steel columns and reinforced columns should be utilised for this, otherwise additional conductors will be required. That will be subject of detailed design. An earthing terminal should enable the connection of down conductors to the air termination system on the roof surface.

7.5 Welding

Figure 7-1 shows examples for welded connections. The minimum length of two opposite welded seams is 50 mm. To ensure a fully electrical conductive length of 50 mm, a welding length of at least 55 mm is recommended. In case of single side welding a minimum length of the seam of 100 mm is required.

Welded connections of earthing wires of the foundation earth electrode, the structure earth and connecting wires made from round steel

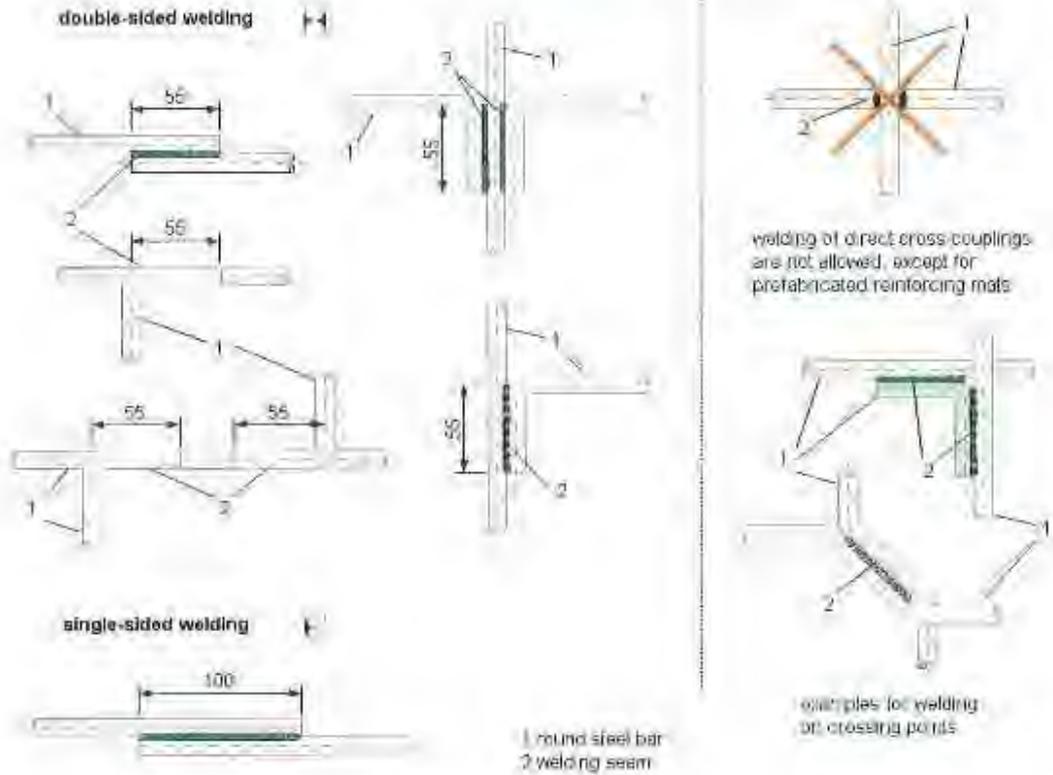


Figure 7-1: Welded earthing connections

7.6 Terminals

Terminals for the connection of embedded parts to other parts of the earthing systems will be required.

Inside of buildings and other closed structures contact tongues made from hot galvanized flat steel or embedded terminals for bolted connections shall be used.

For connections outside of buildings and for open structures embedded terminals for bolted connections made from stainless steel shall be used only. These terminals are furnished with a thread inside for one bolt M16.

Figure 7-2 shows an example of an embedded terminal.

Earthing terminals must be non-corrosive welded to the earthing bars according to the welding requirements above.

The earthing terminals shall be accessible in a height from 30 to 50 cm above concrete floor or final ground level.

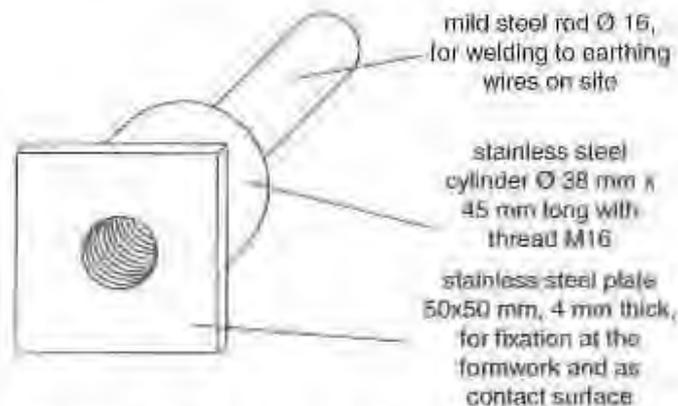


Figure 7-2: Example of embedded terminals

The supplier of terminals must provide a certificate for terminal applying according to threats parameter by short circuits, direct lightning strikes and corrosion by climate.

7.7 Services/ Utilities

Conductive Services and Utilities entering or leaving the railway environment from/to the outside are not allowed to transmit currents or dangerous voltages.

Therefore all such pipes need an insulating joint where they enter a building, which is accessible for tests and maintenance.

According to the requirements of equipotential bonding all metallic utilities and devices must be earthed. Potential equalisation is achieved by

- Direct bonding of all extended metallic installations at their foot points like e.g. escalators, elevators, banisters, air condition pipes
- Direct bonding of all outgoing and incoming metallic installations at the inside of building boundary like e.g. cable armour and pipes of water, gas etc.

For this purpose earthing terminals must be provided for these connections.

The locations of earthing terminals will be defined in the related drawings during detailed design.

Service utilities in parallel to or crossing the tracks, which have applied active corrosion protection, the requirements for separation or additional insulation have to be elaborated in coordination with the owner of the utility.

8 Typical measures for different types of civil structures and its parts

8.1 General note

All the following descriptions and drawings show and explain typical solutions for earthing and bonding measures of structures.

In chapter 10 "Overall Single Line Diagram" is shown an overview of the structure of the earthing system for the whole railway, the main earthing and bonding measures and the responsibilities of the subsystems.

The solutions to be applied for Edinburgh Tram Network are subject of detailed design and may vary in details.

8.2 Trackside structures and installations

8.2.1 Overhead contact line zone and pantograph zone

Figure 8-1 shows the overhead contact line zone and pantograph zone.

Any exposed conductive part within the overhead contact line zone and pantograph zone shall be connected to the structure earth. Conductive structures smaller than 2 m and not supporting or containing electrical equipment, do not need any protective measures. The tendons of pre-stressed reinforcement are excluded from this measure because of usually existing trackbed layers above which are connected the structure earth. These protective provisions avoid non-permissible touch voltages in case of insulator flashovers, short-circuits and other faults which do not occur directly to the running rails.

Care shall be taken at construction overlaps of the contact line. The overhead contact line zone shall be extended, where the contact and messenger wire are tensed at anchor supports. This has to be considered mainly for wayside running fences and noise walls.

Following measures shall be defined according to related standard and experience in relation to Centre of Track (CoT) and Top of Rail (ToR) to $X = 4\text{ m}$; $Y = 2\text{ m}$; $Z = 2\text{ m}$.

S_{11} will be defined in relation to highest point of overhead contact line. When this point cannot be determined, S_{11} shall be defined to 8 m.

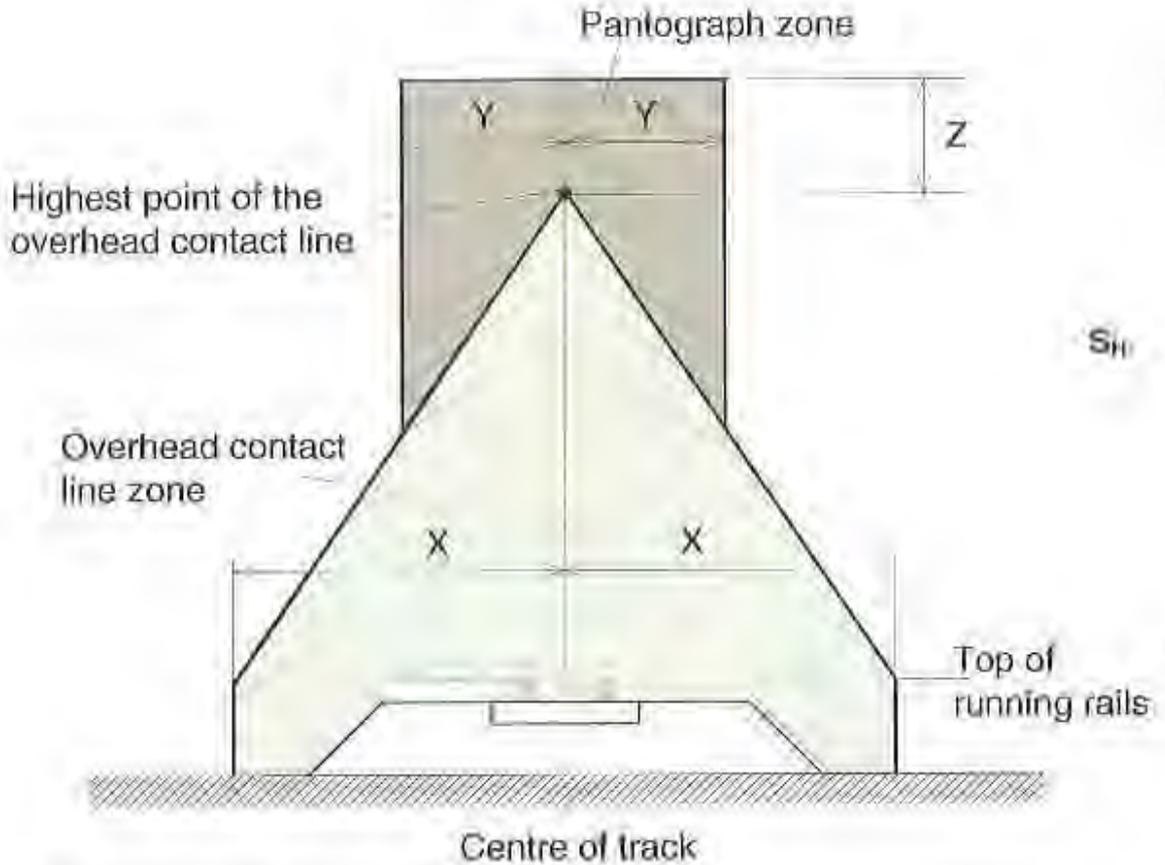


Figure 8-1: OCL zone and pantograph zone

8.2.2 Running rails

The running rails are the return conductors of the DC railway system. Opposite to an AC railway system the running rails of Edinburgh Tram Network are not earthed and shall be not connected with the structure earth, to any earthing conductor or to any part in contact to soil.

8.2.3 Unballasted track

A typical construction of unballasted trackbed for LRT-System is shown in following Figure 8-2.

Poles close to overvoltage protection devices shall be electrically connected to stray current collector for reducing of their earth resistance,

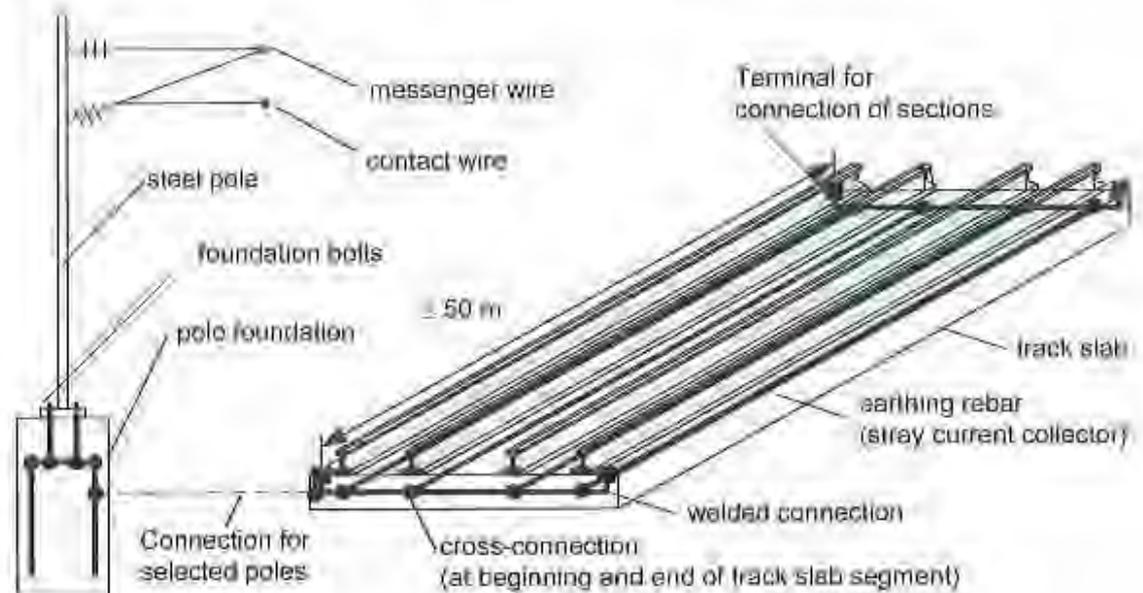


Figure 8-2 Unballasted trackbed with earthing terminal

The single segments of the running rails shall be welded together longitudinally in order to limit the longitudinal resistance of the track installation. If the transverse earthing rebars are installed inside track slab, one earthing terminal at slab side will be sufficient.

The conductance per unit length between the running rail and earth or structure earth shall be low. EN 50122-2 [2] recommends values for the conductance per unit length between running rails and earth or structure earth of a single track for design purposes. The specified values are:

- 0.5 S/km for open formation in open air (this corresponds to $2 \Omega \text{ km}$)
- 2.5 S/km for closed formation in open air.

The clean initial track shall be tested for finding of possible installation faults e.g. random connection of fixation screw of running rail to reinforcement. Following values are recommended.

- Conductivity G of initial test of track for open formation shall be about $G \leq 0.05 \text{ S/km}$ instead of $< 0.5 \text{ S/km in open air}$ according to EN 50122-2.
- Conductivity G of initial test of track in closed formation shall be about $G \leq 1 \text{ S/km}$ instead of $< 2.5 \text{ S/km in closed formation}$ according to EN 50122-2.

A stray current collector for double track with a minimum cross-section of 800 mm² is recommended according to experience.

8.2.4 Ballasted Track

Sections of ballasted track with reinforced substructure are treated like unballasted track. In line sections with ballasted track without conductive substructure no longitudinal earthing bars are embedded below the rails. Attention is required to conductive utilities crossing or in parallel to the track.

The conductance of ballasted track is 0.5 S/km for open formation in open air according to EN 50122-2 [2].

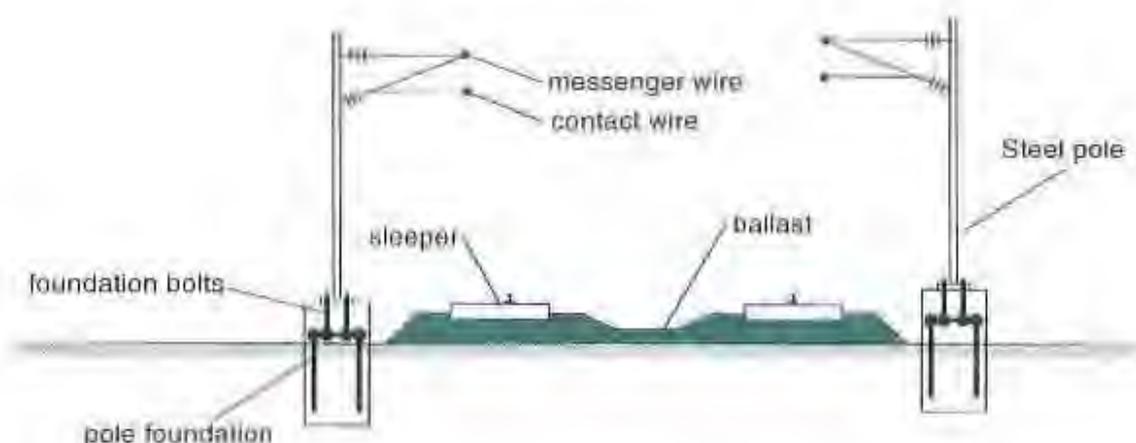


Figure 8-3: Example of ballasted track bed without reinforced substructure

8.2.5 Fences, Noise walls, Railings

Metallic railings, hand rails, noise walls, crash barriers may need to be earthed because of lightning protection. If located inside the overhead line zone they have to be handled according to requirements of EN 50122-1 by responsible party or subsystem (see also chapter 8.2.1).

8.2.6 Platforms/ Stops

The reinforcement of platforms has to be connected to structure earth and forms the local earthing system of the platform. Along the platform edge at least one rod must be continuously welded and bonded to the local earth to ensure switch-off of traction power supply in case of a broken overhead line. All protective wires of electrical installations and all metallic parts on the platform, like poles and handrails, must be connected to the local earthing system.

The voltage between the running rails and the local earthing system must be limited by a voltage limiting device like e.g. a voltage fuse.

The protection of passengers against direct contact to live parts or bridging between electrical equipment (e.g. escalator, ticket vending machine) and train must be settled by clearances according to Figure 8-4.

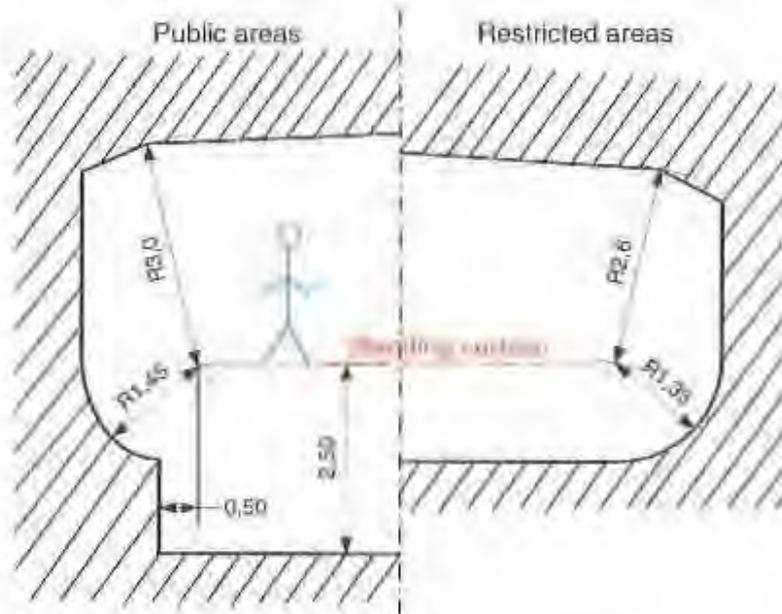


Figure 8-4 Clearances to accessible live parts

All other measures for trackside structures and installations described in the other paragraphs of this chapter 8.2 are valid for platforms too.

8.2.7 Passenger Stations

Station buildings shall be provided with a structure earth as described in chapter 7.2.

The earthing system of DC railways has to be independent from distant earth potential to avoid stray current corrosion problems.

Earthing terminals are necessary for LV power supply rooms, technical rooms and facilities like elevator & escalator.

8.2.8 Viaduct

The reinforcement of the viaduct forms the structure earth of viaduct sections. Therefore the reinforcements of single segments have to be electrically interconnected and the dedicated earthing rebars shall be welded together via cross connections. Figure 8-5 shows the schematic earthing connections of viaducts. The foundations of the piers form the earth electrodes for viaducts. The reinforcement of the foundation shall be electrically connected to the reinforcement of the piers and the viaduct segments:

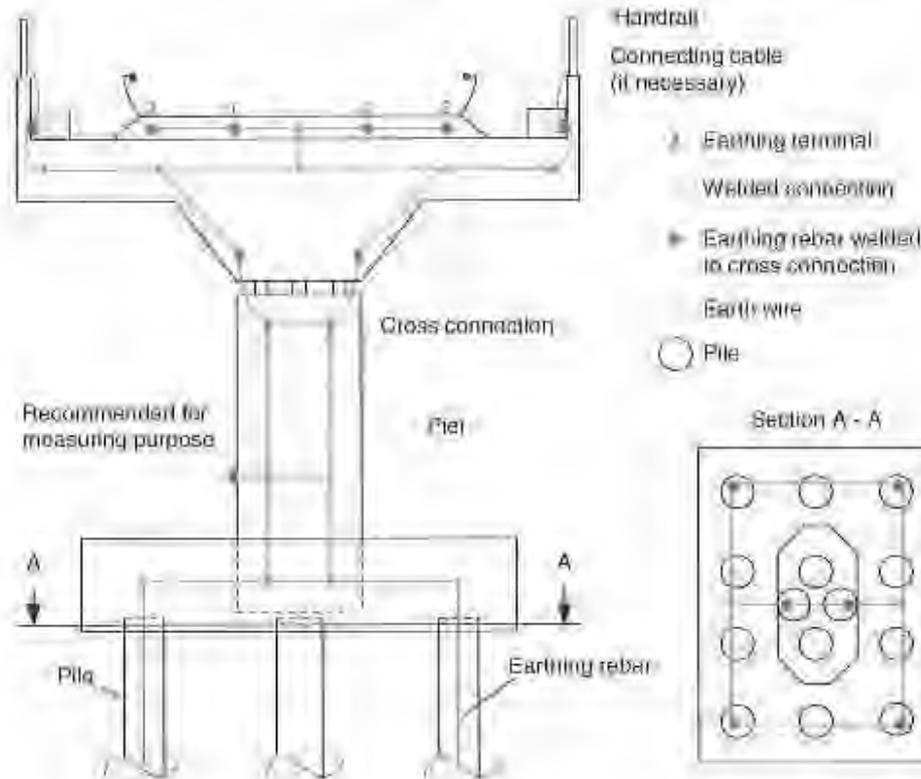


Figure 8-5: Schematic earthing connections for reinforced concrete viaduct

The required number and cross-section of the rebars used for earthing and the earthing wires have to be designed with respect to the maximum earth fault currents of the AC and DC installations on the viaduct and with respect to lightning protection and with respect to the requirements for stray current protection. All three items are subject of detailed design.

Earthing terminals for earthing measurements and bonds are recommended at approximately two metre above ground level of the piers of viaducts and within the cable ducts at the top of the viaduct.

An air termination network must also be erected according to the requirements of LPS [7].



8.2.9 Overbridges

Figure 8-6 shows typical earthing measures for existing overbridges, which are located fully or partly in the OCL and pantograph zone. In general, the same measures apply to new-built overbridges, while there is the chance to implement some of the measures embedded to the concrete.

The voltage between the protective measures of the overbridge and the running rails must be limited by a voltage limiting device.

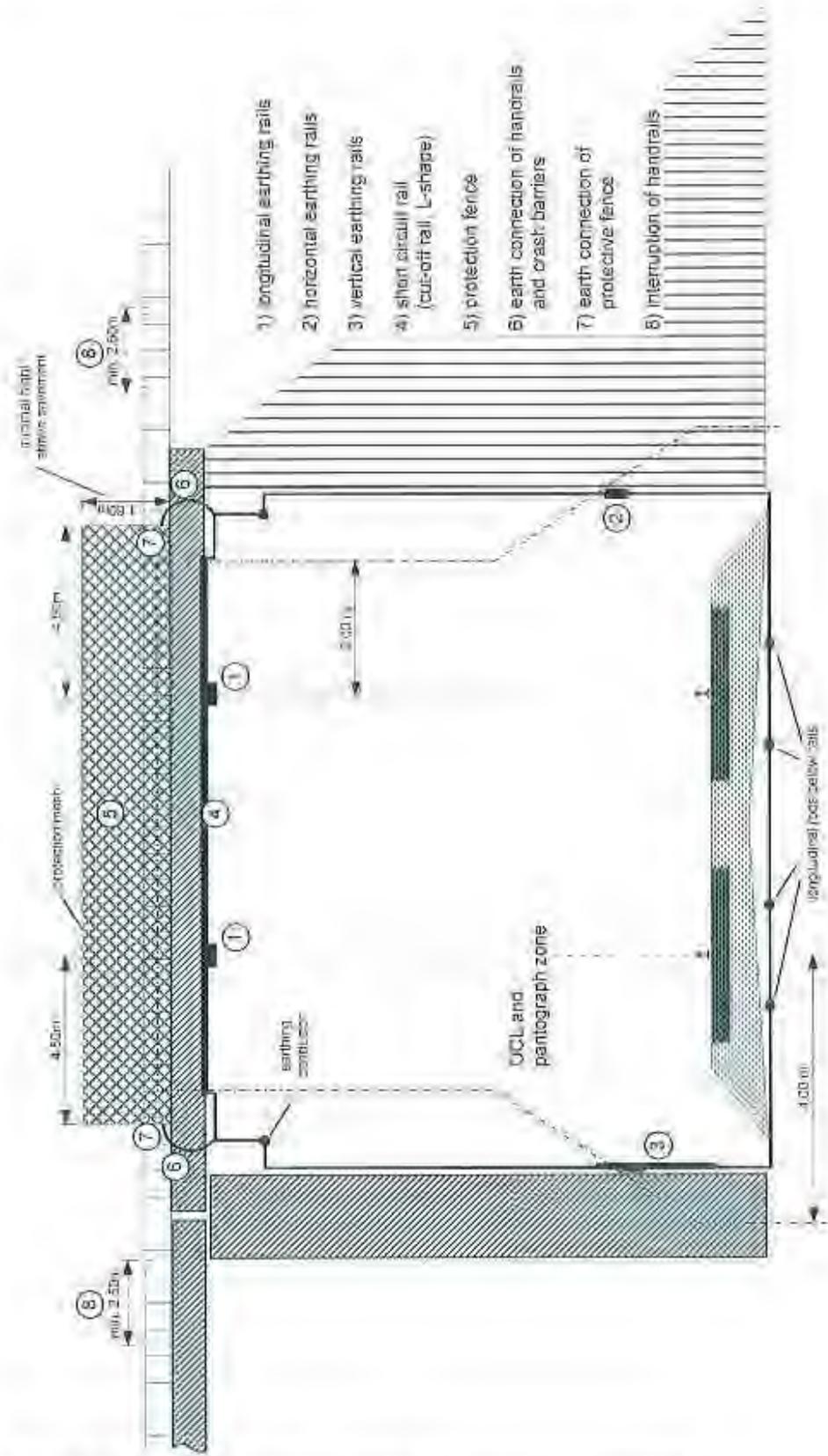


Figure B-6 Earthing of existing Structures (Typical arrangement)

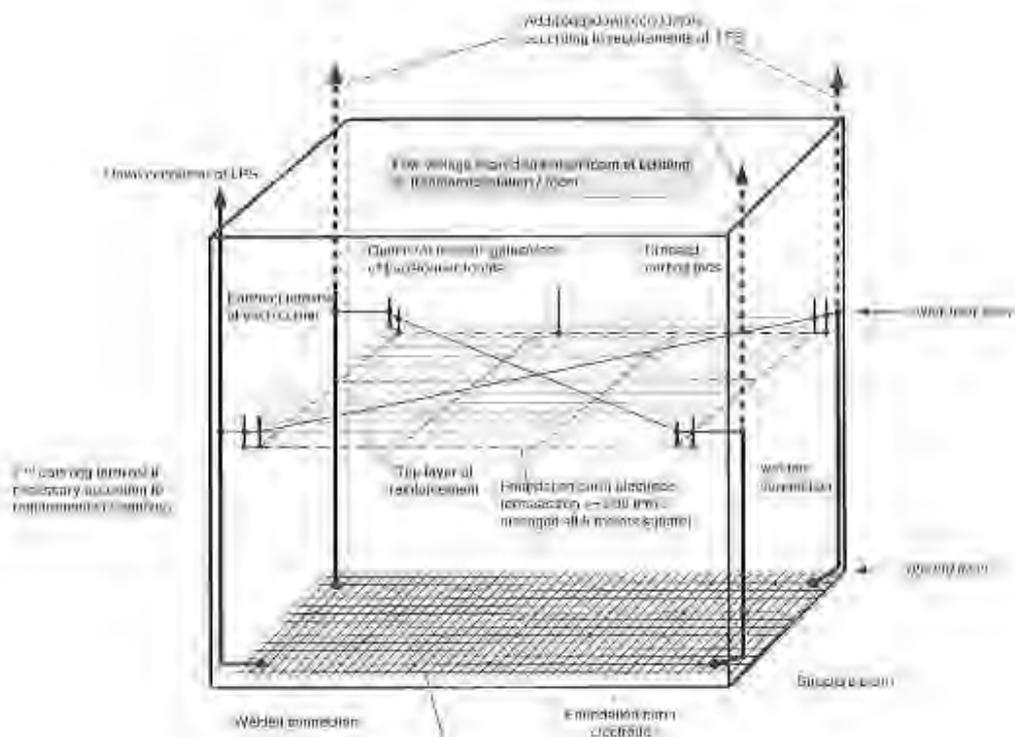
8.2.10 Low voltage power supply rooms

The traction and service power supply rooms and power substation buildings shall have a foundation earth electrode as specified in section 7.2.

In rooms containing power transformers or switchgear the floor reinforcement shall be used for internal potential grading.

This shall be connected to the foundation earth electrode by welding.

Earthing terminals as described in chapter 7.6 shall be provided near to each corner of the rooms. Additional earthing terminals shall be provided at the outside of the building near to each corner of the building and according to the specification of the power supply subsystem (lot).



If this room is located at the ground level, earthing structure of the other floor level is required.

Figure 8-7: Earthing & bonding of low voltage power supply rooms

8.2.13 Depot and workshop area

Depot buildings shall be equipped with a structure earth according chapter 7.2. In the depot and workshop area the return circuit shall be insulated against structure earth similar to the main line.

Potential differences between the structure earth of the workshop area and the return circuit cause restrictions to operation and service activities. Therefore the return circuit and the structure earth shall be connected. The connection between the return circuit and the structure earth shall be made centrally at one point.

In order to avoid non-permissible touch voltages caused by the train operation on the main line and to reduce stray currents the running rails and the structure earth of the depot and workshop area have to be separated from the main line track system and structure and the depot and workshop areas are supplied from separate traction rectifiers.

All individual earthing installations and conductive parts of the depot and workshop area shall be equipotential bonded. The totality of all earthing installations connected to the equipotential bonding conductor forms the structure earth of the depot and workshop area.

Additionally for all major workshop equipment terminals for direct earthing at the structure earth shall be provided like under floor wheel lathe, wheel press, maintenance platform, crane rails etc.

9 Stray Current Monitoring

Generally, the direct measurement of the current flowing through earth, in DC railways known as stray currents, is not possible. Current differential measurements between contact and running rails are complicated to be done, especially if the parallel feeding of substations is used.

The continuous measurement of rail potential, e.g. implemented in substations, is a practical possibility for the assessment of stray current behavior without increasing stray currents.

Taking reference measurements for a functioning system, the actual stray current situation and the rail potentials relating to that are recorded. Afterwards, along the entire line voltage monitoring during operation can be easily performed for comparative purposes.

This method does neither affect the current distribution nor the rail potential in the return system. It can be implemented without high costs, because in many cases the required measuring equipment can be installed in the substations. Furthermore the SCADA system must be prepared for the data transfer to the operation control centre (OCC).

The **SITRAS SMS** stray-current monitoring system is used to monitor the track potential of DC railway networks.

This system permits evaluation of the stray-current conditions of the track and the early detection of insulation deficiencies, thus enabling measures to be taken to prevent damage due to stray-current corrosion.

- Continuous monitoring of track potentials during operation
- Automatic location of insulation deficiencies
- Representation, archiving and analysis of track potentials in a central evaluation unit
- Transmission of measured values via the communication network, existing networks can be used
- No interference with stray-current conditions because SITRAS SMS is based on potential measurement.

31st March 2008

Updated Proposal Submission

Edinburgh Tram Network

Section 2: Overall Technical Concept

Part 1 – System Engineering

Annex 4 – Electro Magnetic Compatibility Plan

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Section 2: Overall Technical Concept

Part 2 – Outline Operation Concept

Abbreviations

AC	Alternate Current
AIR	Edinburgh Airport (station)
AFC	Automatic Fare Collection
BAA	British Airport Authority
BAS	Balfour Street (station)
BBS	Bilfinger Berger – Siemens (Consortium)
BDE	Bankhead Drive (substation)
BOOT	Build-Own-Operate-Transfer
CAP	Caroline Park (station)
CGR	Central Control Room
CCTV	Closed Circuit Television
CAE	Cathedral (substation)
CEC	City of Edinburgh Council
CGE	Craigleith (substation)
COM	Communications
COS	Bernard Street (station)
CRT	Crewe Toll (station)
DC	Direct Current
DEH	Depot Halt (staff only)
DKE	Developed Kinematic Envelope
DOP	Degraded Operation Plan
DTS	Digital Transmission System
EARL	Edinburgh Airport Rail Link
E&M	Electrical and Mechanical
EDP	Edinburgh Park Central (station)
EMC	Electro-Magnetic Compatibility
EPS	Edinburgh Park Station
ERQ	Employer's Requirements
ETN	Edinburgh Tram Network
FOW	Foot of the Walk (station)
GDE	Gogar Depot (substation)



GDJ	Gogar Depot Junction
GME	Granton Mains East (substation)
GOG	Gogarburn (station)
GRS	Granton (station)
GRW	Saltire Square (station)
GYL	Gyle Centre (station)
HAY	Haymarket (station)
HMRI	Her Majesty's Railway Inspectorate
HTE	Haymarket Terrace (substation)
IFE	Ingliston Park & Ride (substation)
IPR	Ingliston Park & Ride (station)
IT	Information Technology System
ITN	Invitation to Negotiate
JDE	Jenner's Depository (substation)
JRC	Joint Revenue Committee
LoD	Limits of Deviation
LRT	Light Rail Transit
LRV	Light Rail Vehicle
LSE	Leith Sands (substation)
LTS	Local Transport Strategy
LV	Low Voltage
LWE	Leith Walk (substation)
MDR	McDonald Road (station)
MMI	Man Machine Interface
MOI	Memorandum of Information
MUDFA	Multi-Utilities Diversion Framework Agreement
MUR	Murrayfield Stadium (station)
NER	Newhaven (station)
NSA	St. Andrew Square (station)
O&M	Operation and Maintenance
OCC	Operation Control Centre
OCD	Port of Leith (station)
OCL	Overhead Contact Line



OCT	Ocean Terminal (station)
OLE	Overhead Line Equipment
OM	Regular Operation Mode
OpCon	Operation Concept
ORS	Operational Radio System
PA	Public Address System
PABX	Private Automatic Branch Exchange
PHP	Passenger Help Point
PEHP	Passenger Emergency Help Point
PID	Passenger Information Display
PIP	Picardy Place (station)
PIS	Passenger Information System
PII	Point Position Indicator
PPP	Public-Private-Partnership
PSW	Princes Street (station)
PVR	Peak Vehicle Requirement
RDA	Roads Demarcation Agreement
ROGS	Railway and Other Guided Transport Systems
ROJ	Roseburn Junction
ROTS	Railway and Other Transport Systems
ROW	Right-of-Way
RRE	Russell Road (substation)
RST	Rolling Stock
RVAR	Rail Vehicle Accessibility Regulation
SCADA	Supervisory Control and Data Acquisition
SCC	Supervisory Control and Communications
SDS	System Design Services
SIG	Signalling
SGA	Bankhead (station)
SHP	Shandwick Place (station)
SRN	Saughton (station)
TCU	Train Control Unit
TEL	Transport Edinburgh Ltd.



lie	Transport Initiates Edinburgh or lie Limited. lie is the client for the Edinburgh Tram Network (TN).
TMA	Tram Maintenance Agreement
TOR	Top of Rail
tph	trams per hour (per direction)
TPDS	Tram Position and Detection System
TPS	Traction Power Supply
TPSS	Traction Power Substation
Tramco	Rolling Stock Supplier
Transdev	Transdev Edinburgh Tram Limited (TETL) the Edinburgh Tram Network (ETN) Operator
TRS	Trunk Radio System
TRW	Track Work
TSA	Tram Supply Agreement
TRO	Traffic Regulation Order
TTRO	Temporary Traffic Regulation Order
UPS	Uninterruptible Power Supply
UTC	Urban Traffic Control
WGA	Pilton (station)
YOP	York Place (crossover)

Key Data

Item	Characteristic
Track lengths: Phase 1a Phase 1b total	approx. 18.8 km approx. 5.5 km approx. 24.3 km
Track configuration Tramway configuration: integrated on-street segregated on-street off-street	double track approx. 25% approx. 5% approx. 70%
Line lengths (from / to station centre): Line 1: Phase 1a: Newhaven – Haymarket Phase 1a+1b: Newhaven – Granton Line 2: Phase 1a+1b: Airport – Ocean Terminal	 7.2 km 13.5 km 17.6 km
Number of Tramstops (network): Phase 1a Phase 1b Number of Tramstops (line): Line 1: Phase 1a: Newhaven - Haymarket Phase 1a+1b: Newhaven – Granton Square Line 2: Phase 1a+1b: Airport – Ocean Terminal	31 22 9 12 21 21
Track gauge (Standard Gauge) Rail type	1,435 mm UIC 60
Direction of traffic	Left-hand
Direction Convention: Airport – Ocean Terminal Ocean Terminal - Airport Granton – Haymarket Haymarket - Granton	Inbound Outbound Inbound Outbound
Maximum gradient, desirable (exceptional)	5% (8%)
Minimum radius on line, desirable (exceptional)	50 m (25 m)

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Maximum operating speed: Non street running street running depot	80 km/h 50 km/h 15 km/h
Station platforms: platform style length minimum width height	centre and side 43m + 2m stopping tolerance centre: 4m, side: 3m low level
Services Hours	06:15 h (first tram) - 00:45 h (last tram)
Average dwell time at tramstops	25 sec
Headways in peak hours (Standard Scenario): 8&8 trams per hour (tph)	7,5 min (each line) 3,75 min (on common section)
Design headway (+50%): 12&12 trams per hour (tph)	5 min (each line) 2,5 min (on common section)
Layover at terminals: minimum layover time at Airport (at 8 tph)	4 min or 10% of run time 7,5 min
Operational Journey Time Allowance: Newhaven – Haymarket Ocean Terminal – Airport Newhaven - Granton	1,5 min 1,5 min 45 sec
Maximum Journey Times (required): Airport – Ocean Terminal Granton – Newhaven Total Run Times: OCT – AIR / AIR - OCT NER – GRS / GRS – NER NER – HAY / HAY - NER	42 min 15 sec 39 min 30 sec 48:50 / 49:40 45:04 / 43:56 29:13 / 29:07
Minimum round trip times: OCT – AIR – OCT NER – GRS – NER NER – HAY - NER	1:50:55 1:37:22 1:06:20
Signalling System	'line-of-sight' operation, tram priority at signal controlled junctions

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Fleet Size: Standard Scenario 8&8 trams per hour (tph)	Phase 1a: 27 Phase 1a+1b: 31
Train Mileage (per tram and year) (Standard Scenario 8&8)	Phase 1a: 96,167 km Phase 1a+1b: 105,600 km
Train dimensions: length width height (above TOR, lowered pantograph) floor height (above TOR)	43.5 m 2.65 m 3.55 m 300 – 400 mm
Train capacity (places): seats standees (at 4 pers/m ²) total	80 190 270
Service brake rate Hazard brake rate	1.2 m/sec ² 2.5 m/sec ²
Traction Power System	750 V DC, Overhead Line

1 Introduction

Subject of this Outline Operation Concept is the Edinburgh Tram Network (ETN) System. The Operation Concept forms the overall basis for the operation of the proposed Light Rail Transit (LRT) System. The system engineers as well as the separate sub-system suppliers will use the information given in this Concept for the engineering planning of the different systems and sub-systems respectively to consider all kind of daily tram operations.

This Outline Operation Concept does not replace the operation plans or the general rulebook and operational manuals, which have to be developed by the Operator in due course of the project execution.

The descriptions, features and requirements mentioned in this Outline Operation Concept apply to the specifications as laid down in the Invitation to Negotiate (ITN) and the Employer's Requirements issued by the Transport Initiatives Edinburgh (tie).

This Outline Operations Concept deals with the requirements for the Standard Tender to design and build the whole Edinburgh Tram Network, generally assuming a tram frequency of

- 8 trams per hour between the Edinburgh Airport and Ocean Terminal and further
- 8 trams per hour between Granton and Newhaven.

2 System Lines and Phasing

The Edinburgh Tram Network is being developed under the Edinburgh Tram Acts as a two line system comprising:

- Line 1:

A north Edinburgh loop connecting the city centre with Leith, Newhaven and Granton and passing through the Waterfront Development Area. The route will run from Haymarket along the former Roseburn railway corridor, along the shore front to Ocean Terminal Shopping Centre and onwards to Leith returning to the city centre via Leith Walk. The route through the city centre will be via Princes Street.

- Line 2:

The line starts at the shore front at Ocean Terminal, will run to Haymarket and follows a western corridor from the city centre to Gyle, Edinburgh Park and the Airport. A future spur will lead to Newbridge. The preferred corridor approximately follows the main Edinburgh – Glasgow railway line between Haymarket and the new station at Edinburgh Park, then heads north west to the Gyle, Gogarburn and the Airport respectively Newbridge. Most part of the route along the western corridor will be fully segregated from other traffic.

Transport Scotland and GEC have developed a prioritisation of separable phases from the two line system, as outlined below:

- Phase 1a: Newhaven to Edinburgh Airport
- Phase 1b: Roseburn to Granton
- Phase 2: Granton to Newhaven
- Phase 3: Ingliston to Newbridge North

The Edinburgh Tram Network relates to construction works for Phase 1a and Phase 1b only.

Future Phase 2 will close the loop for Line 1 along the sea front between Newhaven and Granton including provision of Lower Granton Road stop.

Future Phase 3 will extent Line 2 operation from Ingliston Park & Ride to Newbridge North

Furthermore there are plans to add a Line 3 section starting from the junction of Princes Street/South St. Andrew Street to Royal Infirmary.

The track lengths of the Edinburgh Tram Network are:

- Phase 1a: approx. 18.8 km
- Phase 1b: approx. 5.5 km

Figure 1 shows the line configuration for Phase 1a and Phase 1a+1b.



Phase 1a



Phase 1a+1b

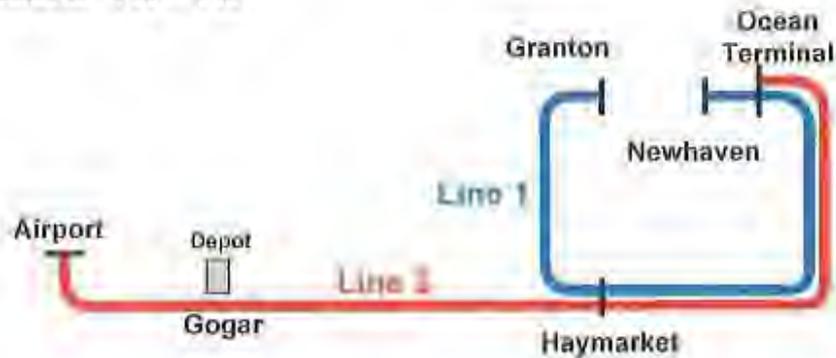


Figure 1: Line Configuration (Phases 1a and 1b)

The line lengths and the number of tramstops for Phases 1a and 1b are shown in the following table. The line lengths are valid from centre to centre of terminal:

Line	from terminal to terminal	Line length	No of tramstops	average stop distance
Line 1:				
Phase 1a	NER – HAY	7.2 km	12	655 m
Phase 1a+1b	NER – GRS	13.5 km	21	675 m
Line 2:				
Phase 1a+1b	AIR – OCT	17.6 km	21	880 m

Table 1: Line lengths and number of tramstops per line

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The ETN will operate as a 'line-of-sight' tramway with tram priority at signal controlled junctions (see Track Layout).

The route in the city from Newhaven to Haymarket and from West Granton Access to Granton Square runs mainly on-street with varying degrees of segregation. The Roseburn corridor is a segregated off-street alignment, shared with a combined footpath and cycleway. Most of the route between Haymarket and the Airport is segregated from road traffic.

The Depot will be located at Gogar adjacent to Line 2. The Depot will be part of Phase 1a construction.



3 Ridership

Information on system ridership (passengers per day and/or hour) and/or maximum link loads (passengers per hour, direction) are not given.

It is assumed that all Transport-Modelling and patronage and revenue forecasts will be performed by the SDS-JRC Modelling Suite. BBS will address relevant requirements as defined from the SDS Agreement with **tie**.

The line capacity is determined by the given headways of the Standard Tender Service Scenario 8&8 and the capacity of the proposed 43m trams.

4 Tramstops

The Edinburgh Tram Network (Phase 1a+1b) comprises a total of 31 tramstops (stations), thereof 22 for Phase 1a and 9 tramstops for Phase 1b as shown in Table 2. An additional halt for staff only will be located at Gogar Depot.

Transport Interchanges to other transit modes will be provided at

- Edinburgh Airport
- Inglisston Park & Ride
- Edinburgh Park Station
- Haymarket
- St. Andrews Square
- Foot of the Walk
- Crew Toll

All tramstops are equipped with low level platforms. The platform height will match the requirements of the tram to ensure level access in accordance with RVAR (Rail Vehicle Accessibility Regulation).

Platforms will be long enough to cater for nominal 43m long trams. A stopping tolerance of +/- 2m will be allowed for in the platform length. Side platforms will have a minimum width of 3m, island platforms 4m.

Each platform will contain facilities to provide the passengers with weather protection in the form of a canopy or shelter.

Each shelter will include the following components:

- Passenger Help Point
- Passenger Emergency Call Point
- Braille assistance
- Lighting
- Information Panel
- System Logo and Stop Name
- Perch rail/seat



• Advertising panel

No	ID	Tramstop (Station)	Platform Style
Phase 1a			
1	AIR	Edinburgh Airport	1 centre
2	IPR	Ingliston Park & Ride	2 side
3	GOG	Gogarburn	2 side
	DEH	Depot Halt (staff only)	2 side
4	GYL	Gyle Centre	2 side
5	EDP	Edinburgh Park Central	2 side
6	EPS	Edinburgh Park Station	2 side
7	SGA	Bankhead	2 side
8	SRN	Saughton	2 side
9	BAR	Balgreen	2 side
10	MUR	Murrayfield Stadium	2 side
11	HAY	Haymarket	2 side
12	SHP	Shandwick Place	1 centre
13	PSW	Princess Street	1 centre
14	SAS	St. Andrew Square	1 centre
15	PIP	Picardy Place	2 side
16	MDR	McDonald Road	1 centre
17	BAS	Balfour Street	1 centre
18	FOW	Foot of the Walk	2 side
19	COS	Bernard Street	1 centre
20	OCD	Port of Leith	1 centre
21	OCT	Ocean Terminal	1 centre, 1 side
22	NER	Newhaven	2 side
Phase 1b			
23	GRS	Granton	1 centre
24	GRW	Sallire Square	2 side
25	CAP	Caroline Park	2 side
26	WGA	West Pilton	2 side
27	CRT	Crewe Toll	2 side
28	WGH	Telford Road	2 side
29	CRA	Craigleith	2 side
30	RAD	Ravelston	2 side
31	ROS	Roseburn	2 side

Table 2: Tramstops: Locations, Platform Style, Interchanges

Closed Circuit Television (CCTV) will be provided on each platform to enable coloured pictures to be displayed at the Control Room and other CCTV monitoring authorities.

Loudspeakers (Public Address) will be provided at each lighting pole location and within the shelter to enable passengers to receive audio messages.

Bench seats will be positioned on each platform and within each shelter a perch rail/seat.

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Ticket Vending Machines (TVM) and/or ticket validators will be located within or adjacent to the shelters. Ticketing equipment is not within the scope of BBS Consortium.



5 Network Diagram and Track Design

The Network Diagram (Schematic Track Layout) is shown in Annex 1. The actual track layout includes 44 turnouts (without Depot area), automatic and manual operated (see Track Layout).

The whole Edinburgh Tram Network will consist of double track. Track gauge is 1,435 mm. The maximum operating speed will be 80 km/h.

Minimum desirable horizontal radius on running lines and in depot will be 50m, in exceptional cases 25m on running lines and 20m in depot.

Maximum desirable gradient value is 5%, exceptional limited value 8%.

The network differ various track categories as (% of total track length)

- Integrated on-street tramways (25%)
- Segregated on-street tramways (5%)
- Off-street tramways (70%)

The design of the network will allow services to be turned back at the locations detailed in the following table:

ID	Turnback Locations
EPS	Edinburgh Park Station
HAY	Haymarket Yards
SHP	Shandwick Place
YOP	York Place
FOW	Foot of the Walk (Leith Walk)
OCT	Ocean Terminal
CRT	Crewe Toll

Table 3: Turnback Locations (crossovers)

The turnback facilities will allow special maintenance working at certain times of the year and individual services when sections of the System will be closed for example for Hogmanay, the Edinburgh festival and other special events and festivals.

Trams are also allowed to be turned back at Gogar Depot. The facility to allow this will be provided. An additional siding is located at Haymarket (HAY) for turnback.

The terminals Edinburgh Airport (AIR), Newhaven (NER) and Granton (GRS) are arranged with double-crossovers in front. Ocean Terminal (OCT) includes an additional (third) track for reversing of Line 2 trams.

At Edinburgh Airport (AIR), Ocean Terminal (OCT), Granton (GRS) and Haymarket (HAY) facilities will be provided for driver comfort breaks. In addition, crew change facilities will be provided at the Depot Halt (DEH) and at Haymarket (HAY).



6 Operating Hours, Service Patterns and Frequencies

The Edinburgh Tram Network will support a daily service, all year around. The time period between the last tram returning to the Depot at night and the first tram leaving the Depot in the morning is anticipated with 4hrs 30 min. The operating hours are anticipated between 05:15 and 00:45.

The proposed service patterns for the Lines 1 and 2 are based on the headway scenario for the Standard Tender. Figures are to be understood as 'trams per hour' (tph) per direction:

- Standard Scenario: 8 & 8 tph (7.5min & 7.5min)

This Standard Scenario gives 16 tph (3.75min) on the common line section in the city between Ocean Terminal and Haymarket.

Trams will be co-ordinated between OCT and HAY to give an even service pattern.

The service scenario is based on following assumptions and conditions,

- Edinburgh Airport service tram frequency is ramped up/down from Ocean Terminal, Granton (Phase 1a & 1b) or Haymarket (Phase 1a only) service tram frequency is ramped down up/down from Newhaven.
- Trams going into service between Gogar Depot and Ocean Terminal/Newhaven will run 'in service' from the Gyle (first tram Gyle to Ocean Terminal approx. 05:15 Monday through Saturday).
- Haymarket or Granton service trams going 'out of service' running between Haymarket and Gogar Depot will run 'in service' as far as Gyle.
- Edinburgh Airport service trams going out of service will run 'in service' from Ocean Terminal to Edinburgh Airport with a short 'dead run' from Edinburgh Airport to Gogar Depot.
- Service proposals are based on the requirement to always have a tram present at the Airport tramstop.
- The period of time between the last tram returning to the Depot at night and the first tram leaving the Depot in the morning is about 4hrs 30min. Consequently the maintenance window will allow work on the System Infrastructure for about 3hrs 45min, depending on location each night and allowing time for the implementation and withdrawal of isolations.

The network will be future proofed with the trams per hour increased by 50% throughout, resulting in:

- Standard Scenario: 12&12 tph (5min & 5min)

These increased frequencies result in 24 tph (2.5min) on the common section in the city between Ocean Terminal and Haymarket.



Time Elements	Line 1 Phase 1b		Line 2 Phase 1a+1b	
	NER-GRS	GRS-NER	OCT-AIR	AIR-OCT
Runtime	00:45:04	00:43:56	00:48:50	00:49:40
Minimum layover time 8 & 8 tph	NER 00:04:15 GRS 00:04:07 Total 00:08:22		OCT 00:04:55 AIR 00:07:30 Total 00:12:25	
Minimum round trip time 8 & 8 tph	01:37:22		01:50:55	
Time Elements	Line 1 Phase 1a			
	NER-HAY	HAY-NER		
Runtime	00:29:13	00:29:07		
Minimum layover time 8 & 8 tph	NER 00:04:00 HAY 00:04:00 Total 00:08:00			
Minimum round trip time 8 & 8 tph	01:06:20			

Table 4: Round Trip Times for Lines 1 and 2 – Standard Scenario 8&8
 (refer to Employer's Requirements Part 2 Operations and Performance,
 Section 2.7 1.3)

9 ETN Sub-Systems

9.1 Trams

The delivery of trams is subject of the Rolling Stock Supplier (Tranco) and not within the scope of the BBS Consortium.

The trams will be articulated in order to negotiate the track alignment. They will be fully bi-directional and capable of being driven from either end. They will have doors on both sides. They will be capable of being operated by one person.

Normal service trams will comprise one vehicle, but trams will be capable of running coupled together for the purpose of one tram recovering another failed tram from any point on the System. An emergency coupler will be provided at each end of each tram. It will be used only for hauling or propelling a defective tram. An empty tram will be capable of both hauling and propelling another empty tram.

The length of a tram unit will be approx. 43m. The tram body will be a nominal width of 2.65m.

According to the Employer's Requirement the passenger capacity (places) of the tram will be:

- Seated: 80
- Standees: 190 (at 4 pers/m²)
- Total: 270

The trams will be capable of being operated continuously for twenty hours in each day.

The tram will have

- a maximum operating speed of 80km/h,
- a minimum operating capability of at least 100,000 km per year,
- a maximum axle load at AW5 loading (standees at 8 persons/m²) of 12 tonnes,
- a minimum of 66% adhesive weight on motored axles.

The tram will be equipped with at least 4 pairs of bi-parting sliding-plug doors on each side of the vehicle for the passenger saloon. The minimum clearance width will be 1,300 mm.

The trams will be fitted with equipment to automatically indicate their position to and communicate with the Operation Control Centre (OCC). A voice radio system will be permanently available between the driver and the OCC.

Rear-views will be provided by CCTV equipment. Automatic, audible announcements for destination and stops will be made by means of a digital voice announcement system.

The tram will be fitted with six external destination displays, one at each end above the cab and two on each side. Internal saloon displays will be used to show information concerning the next stop. They will also display the local time, and should also be able to display public service information.



Passenger alarm devices will also be located in the saloon area. These devices will allow communication with the driver.

The driver's cabs will be air-conditioned.

9.2 Supervisory Control and Communications

9.2.1 Tram Position and Detection System

The Tram Position and Detection System (TPDS) will monitor the efficient and effective movement and overall regulation of trams running on the Edinburgh Tram Network. TPDS will include both tram borne and trackside equipments.

Each tram driver will be responsible for safe operation using 'line-of-sight' principles, with the TPDS identifying and setting the correct route ahead of the tram and providing tram regulation and monitoring facilities to Control Room Staff.

The TPDS will collect in real time the following information from each tram for transmission to the Control Centre:

- Tram number,
- Tram run number,
- Tram destination,
- Driver staff identity number,
- Driver duty number,
- Tram in service / out of service.

The TPDS will provide a number of functions which will include:

- Tram identification,
- Tram position on network (outside depot),
- Tram progress monitoring,
- Route setting,
- Processing of manual and automatic 'Tram ready to start' and advance signal demand requests from trams.
- Permit tram to safely transverse tram/road crossings,
- Provide controlled entry to and exit from the depot facilities.

On the approach of a tram to each tramstop and at the termini, where scheduled departure time will also be displayed, the TPDS will provide updates to the Passenger Information Display system, via the Tram Management System.

The driver of each tram will enter the details of journeys for the particular tram for his entire operating day into the tram on-board computer at the commencement of service. Any change to these data e.g. as result of an incident affecting the service will be initiated by the driver.

Tramway signal heads will be positioned at all signal controlled Track and Road Junctions and Pedestrian Crossings to allow optimum sighting for the tram driver.

Tramway signal heads will indicate the acceptance of the signal demand by the system to the tram drivers.

9.2.4 Public Address System

Loudspeakers and Audio Loops located at each tramstop platform will form part of the ETN Public Address (PA) System. The Operational Data Network will connect amplifiers/controllers to the Control Centre. Public Address facilities will also be provided at Park & Ride facilities.

9.2.5 Operational Radio System

An Operational Radio System (ORS) will provide two-way communication enabling voice and data exchanges between the Control Room staff and:

- Drivers on board individual trams, group of trams and/or all trams,
- Drivers of road and other support vehicles for the ETN,
- Individually or in groups with other mobile ETN operations staff using hand portable equipment along the Network and in the Depot.

The main operator interface with the ORS will be provided by workstations installed in the Control Room (for Control Room staff), and tram mounted mobiles (for tram crews), road vehicle mounted mobiles and portable equipment for other mobile staff.

9.2.6 Passenger Help / Passenger Emergency Help Points

Each tramstop platform will be equipped with at least one Passenger Help / Passenger Emergency Help Point that will be connected to the Control Centre by the Operational Data Network.

Each Passenger Help / Passenger Emergency Help Point will be sited so that it is visible by the CCTV camera.

Additional Passenger Help / Passenger Emergency Help Points will be provided, as a minimum, at Park & Ride facilities.

9.2.7 Closed Circuit Television

The Edinburgh Tram Network will be provided with a digital colour Closed Circuit Television System (CCTV).

The tram CCTV system will interface to the City of Edinburgh Council (CEC) citywide CCTV system.

Each tramstop platform will be equipped with at least one CCTV camera that will be connected to the Control Centre by the Operational Data Network.

Additional CCTV cameras will be provided to give full coverage of Park & Ride facilities.

The Edinburgh Tram Network Depot complex will be equipped with a dedicated digital CCTV System as part of the Depot Security System.

All CCTV cameras will be provided with pan, zoom and tilt facilities both automatically within preset limits and under manual control, and be programmed to

zoom in on the Passenger Help / Passenger Emergency Help Point when they are used, and to the Ticket Vending Machine when an alarm is initiated.

9.2.8 Supervisory Control and Data Acquisition

A Supervisory Control and Data Acquisition (SCADA) System will be provided primarily to provide controls, status indications, alarm indications for the Traction Power System and log significant events.

In addition, the SCADA system will provide, as a minimum, indication and control of auxiliary systems and services at tramstops (e.g. Ticket Vending Machines and Ticket Validators) and trackside.

The current status of the Traction Power System as presented by the SCADA system will be available as a display to the Control Room staff at all times.

9.2.9 Operational Data Network

The Operational Data Network will provide the communications 'backbone' between tramstops, substations, other remote equipments and the Depot and will convey data for a variety of applications including

- Tram Positioning, Routing and Detection System,
- Passenger Information Displays,
- Telephone Network,
- Public Address,
- Operational Radio Network (optional),
- Passenger Help / Passenger Emergency Help Points,
- Closed Circuit Television,
- Point Control and Indication,
- Point Heating Control and Indication,
- Supervisory Control and Data Acquisition,
- Ticket Vending Machines.

9.2.10 Control Centre

The Central Control Room (CCR) is the focal point for the control and operation of the Edinburgh Tram Network. The Control Room will be located in the first floor of the Depot building.

The Control Room comprises a number of workstations, at which Control Room staff control or retrieve data from the System. The operator interface will be designed to carry out control functions in an ergonomically efficient manner.

The CCR Workstations will provide indication and control of auxiliary systems and services as follows:

- Tram Position and Detection System status and alarms,
- Operation of Passenger Help / Passenger Emergency Help Point System,
- Traction Power System,
- 'No-break' power supply status and alarms,
- Communications Systems status and alarms

9.4 Depot

The Depot, located at Gogar, will provide maintenance and stabling facilities for the entire fleet of trams operating on the initial network, and the infrastructure. It will also contain the administration and management offices, including Operations and Control Centre (OCC).

The Depot layout will accommodate a minimum of 35 trams of 43.6m length. The stabling facility will accommodate a minimum of 31 trams.

The Depot building will include the main tram workshop, other workshops, stores, management, administration, operations and maintenance offices and staff welfare facilities and the Control Room for the complete Edinburgh Tram Network.

The building workshop will accommodate a minimum of two tram maintenance roads, a wheel lathe road and a further tram service road.

The Depot will be provided with the appropriate electricity supplies including 440V/415V for individual items of workshop equipment both inside and outside the building, 230V for internal domestic use and 110V for small tools.

Detailed description of the Depot and Workshop equipment are contained in the Employer's Requirements.



10 Regular Operations

10.1 Principles of Operation

The ETN System shall be operated according to 'line-of-sight' principles with tramway signalling provided at tramway crossings where appropriate.

For the operational scenarios it is assumed, that a pre-emption is installed at all signalled traffic junctions giving trams priority over public traffic.

Point Position Indicators (PPI) will be provided adjacent to all facing points so as to assist the driver in determining the position of the points.

10.2 Tram Driving

The tram driver, who will be the only operational staff present on the vehicle, shall observe safe tram operation. He shall be fully trained and examined before being passed as qualified for the role of driver. The Duty Roster based on the relevant operating day shall inform the tram driver about his actual shift and the service duties. The tram running number shall determine route and timetable to be run.

All drivers shall start their working time at the Gogar Depot or at pre-determined locations (e.g. terminals). When reporting for duty at the Depot, the driver shall receive information about the location of the tram from the Tram Crew Supervisor. He also shall be given special information about the daily operation.

Starting duty at the Depot tram drivers shall report to the Engineering Controller that the tram is ready for departure. When the driver has received orders to depart from the Depot, he shall proceed from the stabling area via the transfer track on the line (transition area).

Tram drivers starting duty have to ensure to be informed about special service conditions. They shall contact the Operations Controller in the event of any conditions deviating from Regular Operation.

During operation the tram drivers shall observe the tracks, potential obstacles and the selection of the correct route. The latter to be supported by the wayside signals and Point Position Indicators. He shall pay attention to public traffic especially cruising in shared traffic corridors and at signalled traffic junctions.

Beneath the parameters determined by the alignment or the operational regulations the general running speed shall be defined by the line side visibility. The tram driver shall stop the tram accurately at the proposed boarding and alighting zones at platforms. He shall operate the doors and decide when the vehicle is ready for departure. Before and during departure the tram driver has to observe the platform areas via the tram borne CCTV.

The tram driver shall be responsible for passenger announcements via the onboard Public Address System. In situations deviating from Regular Operations the tram driver shall report to the Operations Controller and support passengers as far as applicable.



When returning from main line operation, the tram driver enters the transfer track in front of the Depot area. Informed via tram radio about the proposed stabling track the driver shall handle the route setting manually as required and proceed into the Depot. The driver shall stable the vehicle at the defined stabling position, check the vehicle on damages or failures for report to the Tram Crew Supervisor and sign off.

10.3 Operation on the Line

After passing the loops in the transition area to line or at dead end sections of the line the tram routes will be requested automatically according to the trip number. A cyclic data transmission will take place between the OCC and the onboard unit, where the relevant static data like the numbers of the tram, the line, the trip, the car and the driver number will be combined with the dynamic data like the relevant location of the tram.

The provided interlocking system will ensure an release of the route selected by the tram identification after successful check, route setting and finally interlocking of the requested route.

Via the onboard information system the data will be transferred to the onboard information transmission unit. Here the data will be converted subsequently into route setting orders transmitted to the trackside information transmission equipment. This will include a safeguard of the chosen route and the information of passengers.

10.4 Timetables

The timetables of the ETN System will be determined by the basic system data and the passenger forecast and shall contain all data required for the expedient tram operation in Regular Operations.

The base of all timetable planning will be the graphical timetable, which is presented by means of ascending and descending time-distance-paths. It is showing all scheduled and proposed tram runs – even out of service runs - during the daily operating hours and constitutes the base for planned tram runs in Regular Operations and steps for Degraded Operations.

10.4.1 Working Timetables

As extract of the graphical timetable the working plans or schedules shall be provided for the use of operational staff only. Most of them will be elaborated in tabular form and contain all necessary information and data of every tram run, e.g. tram number, starting of turnaround, departure and arrival time.

The **Rolling Stock Diagrams** will be the basis for the service planning of the tram units and give details of when trams leave and return to the Depot. Derived from the graphical timetable, it shows service and maintenance times, periods of immobilisation and operations reserve standby times of each train unit.

The **Drivers Duty Rosters** will give full details about signing on and off times, meal reliefs and details of the journeys to be worked. They will be derived from the service times and the graphical timetable. Combined with the round trip data the



Duty roster displays the train driver's daily tasks. It will indicate the beginning and end of the driver's service time, trains to be operated, the round trips to be carried out etc. They will also indicate where reliefs are to be taken or drivers changed over.

The **Stabling Plan** will list all regular movements in the stabling area of Depot. Derived from the rolling stock roster, the Stabling Plan will help to co-ordinate the maintenance work, track occupation and shunting movements.

The **Servicing and Maintenance Schedule** will determine - in contrast to the stabling plan - the components of shunting movements in the Depot area. All maintenance tasks have to be planned and represented in the servicing and maintenance schedule. Under these conditions the occupation of the separate maintenance equipment, e.g. washing plant, underfloor wheel lathe, will be scheduled as far as applicable.

10.4.2 Public Timetables

The Public Timetables as an additional extract of the graphical timetable will be the commercial offer of the ETN System prepared for passenger utilisation. They shall be easy to use and to provide quick reference.

Additionally the ETN System will be equipped with line diagrams showing the line direction and stations indicating the interchange facilities with other public transport systems available. The line diagram will be displayed abundantly on the station platforms and inside of trams.

The DOP shall have to detail the most effective ways of returning the System to Regular Operations following faults, which are disruptive to passenger service. The plan shall not only consider alternative modes of operation, but also manual intervention that may be required prior to, or in association with, the alternative mode of operation to be employed.

Provisions have to be considered for dealing with system irregularities and accidents with the fixed installations and by the definition of strict procedures to be followed, whereby an effective communication between the Control Room and tram drivers will be essential. Plans of action have to be worked out and should be rehearsed regularly.

12.4 Recovery Strategies

Safety, security and convenience of customers shall be the prime objective of the System design. The duties of the individual members of staff shall be explained in detail in the DOP and the related manuals to be prepared by the Operator.

The objective shall be to minimise the impacts of failures on the whole network and service. Where the service has gone adrift from the timetable, steps will be taken to get the service back to this timetable as quickly as possible. The main target of the recovery strategies shall be to recover normal operation as soon as possible and as far as applicable.

12.5 Stalled Trams

The principal method for recovery of a stalled tram will be the pushing of the broken down tram by the following tram. The tram drivers shall receive instructions from the Operations Controller via radio communication. As far as applicable both the defective and the pushing tram shall move to the next platform where passengers of both trams will be able to disembark.

Considering the total length of both trams two stops of the coupled units will be required for this procedure. Due to the fact that the actual design of the alignment does not provide sidings, the defective tram has to be pushed 'out of service' to the nearest terminal or directly into the Depot.

This procedure will cause a disruption of service due to the fact that both trams may have to pass several tram stops 'out of service' resulting in a confusion of passengers waiting at platforms. Therefore special attention has to be paid to passengers while trams passing the platforms. In the event that the broken down tram, now stabled at one of the Terminals, cannot be repaired locally by the maintenance crew, this vehicle will be transferred to the Depot when the service time is finished.

Generally all operations will take place under the permanent co-ordination of the two tram drivers and the Operations Controller, whereby passengers shall be informed by using the onboard public address system. The detailed procedure will depend on the available communication facilities and the real failure of the stalled tram. Effects on the coupling procedure of both trams caused by the detailed failure and characteristic of line sections shall be explained in the DOP.

13.6 Rolling Stock Failures

13.6.1 Door Failures

The following door failures shall to be considered:

- failure to open or close doors,
- failure to lock doors,
- failure to indicate status of doors.

The driver shall lock the defective door and inform the Operations Controller, who shall decide in co-operation with the Engineering Controller when the tram shall be taken out of service for repair.

These failures may result in a decrease of transport capacity and affect passenger convenience.

13.6.2 Communication Failures

When a failure of the public address system on the tram occurs, the tram driver shall operate the tram and the tram borne facilities like doors at tram stops under utmost caution. The tram may, however, continue the scheduled service until relieved by a reserve tram or instructed otherwise.

Generally a tram will be equipped with tram radio sets; each one in one of the driver cabs. In the event that the total radio communication fails, driver's will be able to inform the Operations Controller using mobile phones and continue service as under normal conditions.

13.6.3 Brakes

In the event of a mal-function of the braking system the driver shall inform the Operations Controller immediately and analyse the situation. In the event of a failure of the electric brake the tram can be stopped using mechanical brake only. If the tram driver can restore the brakes to normal, he may continue the scheduled turnaround. Otherwise the tram will have to be taken out of service.

13.6.4 External Lights

Failures of a tram head or tail lights will not affect the safety of passengers and require the tram to be taken out of service, but should be reported to the Control Room. Effects on other public traffic partners shall be considered in detail. A complete failure of the external lights shall require the tram to be taken out of service immediately.

13.6.5 Bogie

The following failures shall be considered:

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Annex 1 Track Layout

31st March 2008 Submission

Edinburgh Tram Network

Section 3: Technical Descriptions

Part 1 – Trackwork Superstructure



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1 Introduction

This Document is prepared to provide an overview of the principles of the Design of the Trackwork Superstructure proposed for the Edinburgh Tram Network project.

2 General

The track will be of an economical design which reflects economy of use and maintenance in providing all the functionality required by the.

The design, implementation and operation of the works will be in accordance with the functional and performance standards and limits specified in this document.

The following standards and regulations will be used:

- ISO International Organization for Standardisation
- UIC International Union of Railway
- EN European Standards
- VDV Verband Deutscher Verkehrsbetriebe
(Association of German Transport Services)
- DIN (Deutsche Industrienorm – German Industry Norm)

Local specific requirements, practical and efficient will be observed.

2.1 Trackforms

Various trackforms are required to suit the different domains in which the track lies along the route and in the Depot and sidings. The different trackforms provided will comprise, but not necessarily be limited to:

- Street running track (System Rheda City);
- Grass track (System Rheda City);
- Direct fixation track (single fastening points);
- Ballasted track; and
- Special trackforms in the depot or at tramstops.

2.2 Track Alignment

The line comprises

- the tracks as shown in the ETN Track Layout_20080222 ,
- the stabling tracks and workshop tracks within the depot area as given in drawing ULE90130-06-DEP-00001 Version 7.

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Due consideration shall be given to sight lines and clearances to existing infrastructure, in accordance with the Railway Safety Principles and Guidance and with the requirements of the developed kinematical envelope.

In all cases implemented solution shall take due cognizance of the interface with the party responsible for the Rolling Stock.

Track Alignment and Geometry criteria are contained in tables 1-1 to 1-18 (see Employer's Requirements, chapter "Track, Track Alignment and Geometry").

The tolerances in respect to the acceptance of the tracks will be in line with Trackwork Specification ULE90130-SW-SPN-00050 V3.



3 Track, Technical Description

The trackwork shall take account of the interaction with the tram and its running gear (wheel / rail interface), the need to meet the specified track installation and maintenance acceptance criteria and whole life cost assessment, reliability, availability maintainability, safety, operational, maintenance and spares requirements.

Track shall be a standard tramway track with steel rails set to standard gauge (1.435m).

Earthing will follow the overall earthing philosophy as layed down in the systems Earthing & Bonding Concept.

In order to minimise stray current, the rail insulation versus earth has to be of high quality.

The rail to earth resistance is defined as given in EN 50122-2.

The conductance per unit length between the running rail and earth or structure earth shall be low.

EN 50122-2 recommends values for the conductance per unit length between running rails and earth or structure earth of a single track for design purposes. The specified values are

- 0.5 S/km for open formation in open air (this corresponds to 2 W·km),
- 2.5 S/km for closed formation in open air.

The clean initial track shall be tested for finding of possible installation faults e.g. random connection of fixation screw of running rail to reinforcement. Following values are recommended:

- Conductivity G of initial test of single track shall be about $G \leq 0.1$ S/km instead of < 0.5 S/km in open air according to EN 50122-2.
- Conductivity G of initial test of single track shall be about $G \leq 1$ S/km instead of < 2.5 S/km in closed formation according to EN 50122-2.

Thus additional mats or collector bars in embedded trackforms for stray current protection are not necessary.

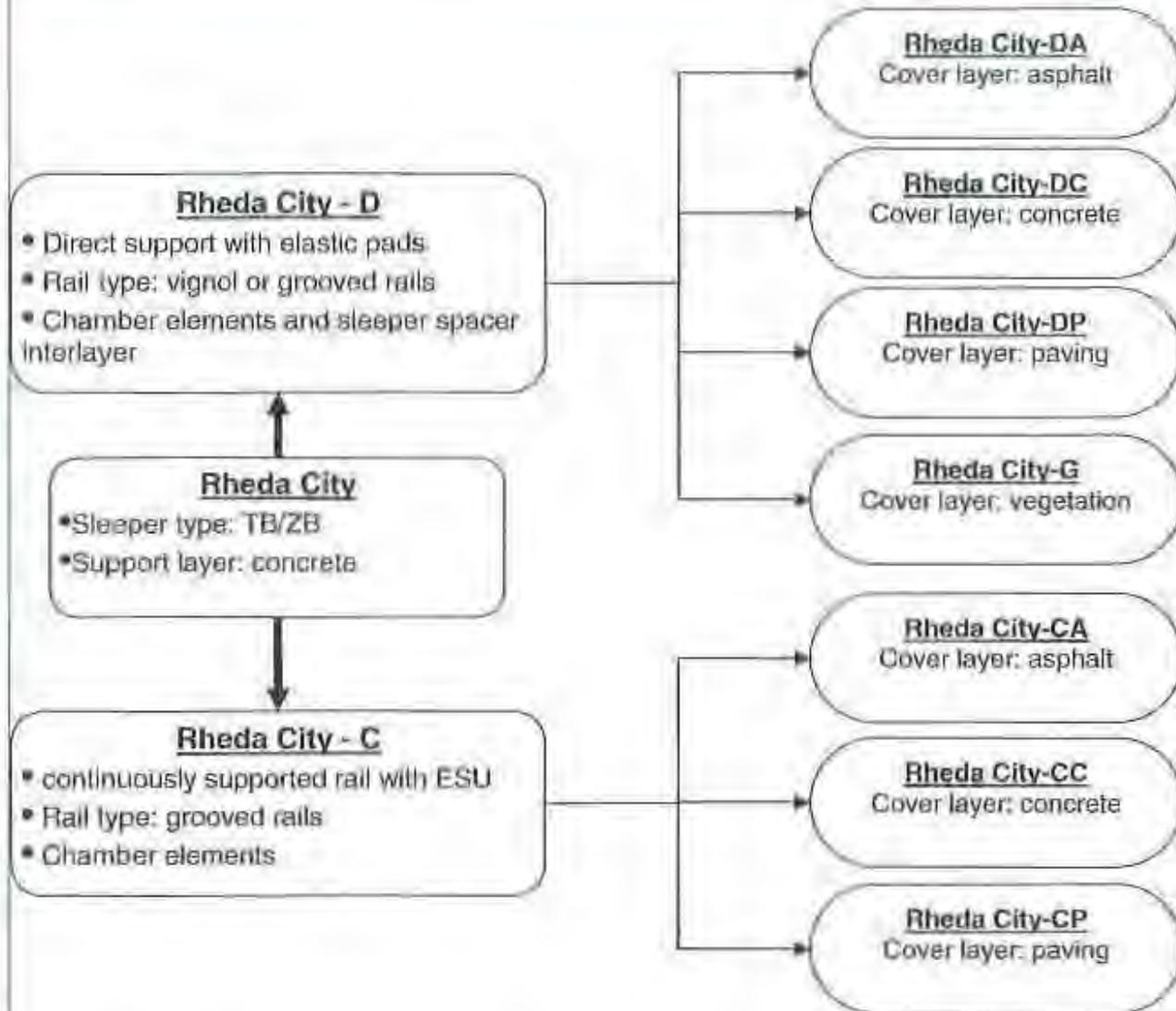
- Electrical insulation of the rails against stray currents
- Minimization of structure-born noise
- Components shall be recyclable.

3.1.1.1 Classification of the RHEDA CITY family

RHEDA CITY is characterized by a simple structural technology: modified bi-block sleepers are installed and guarantee a precise track gauge at the same time.

3.1.1.2 System structure

RHEDA CITY system consists of modified concrete bi-block sleepers concreted into place with lattice girders, to form a monolithic concrete track-supporting layer. The result here, depending on the track model, is either a system of elastic point support, or alternative a continuously elastically supported track. Means basically there exists two different basic approaches of RHEDA CITY systems: rail support on discrete supporting points „RHEDA CITY-D“ (D = Discrete Supported Rail) and continuously supported rails „RHEDA CITY-C“ (C = Continuous Supported Rail). Both construction principles will be described in detail:



Primary function of the slab track system is a safe transfer of the loads due to the track vehicles and road traffic into the sub-soil. In consequence of the rail deflection the loading cases will be distributed on supporting points (RHEDA CITY -D) or onto the area of the bottom of the rails (RHEDA CITY -C). In the case of using supporting points, the vertical deflection of the rail is feasible by using of defined elastic rail pads. In the latter case of a continuously support system, by using of an elastically rail flange sheathing (ESU). The sleepers function as a connection between the rail fasteners and the supporting layer.

On straight lines will be implemented the Rheda City C-type, while on curves with a radius less than 100 m Rheda City D-type will be used.

For Green Track Rheda City G-type will be used.

The thickness of the concrete slab containing the sleepers will be 23 cm for Edinburgh Tram resulting in a total dimension of 40 cm from top of rail to formation. The deformation or stiffness modulus at formation will be in

off street sections E_{v2} (stiffness) = 80 MN/m² and in on street section E_{v2} (stiffness) = 120 MN/m².

3.1.1.3 RHEDA CITY -C

In the present case that the rail is not mounted on a specific number of supporting points, but consistent on the total track length, this system is defined as a continuously supported rail. Hereby the sleeper takes over the function of a temporary tie rod during the track installation. For this kind of support, instead of the spring coefficient, the bedding modulus is the characteristic parameter for the design of the slab track. The sleeper intervals are set within 1.5 m. For an easier re-railing in curves < 100 m RHEDA CITY-D with sleeper intervals of 0.75 m. will be installed.

Due to the fact that the joint between the rail and the road surface will be critical, special attention will be paid to the specific requirements.



Picture: continuously supported rail



- | | |
|------------------------------------------|-----------------------------------------|
| 1 grooved rail | 2 rail joint sealing compound |
| 3 chamber elements: a) outside b) inside | 4 gauge and clamping profile, incl. ESU |
| 5 adjustment bolts | 6 caps (optional) |
| 7 cover layer | 8 sleeper type TB/ZB |
| 9 concrete supporting layer | 10, intermediate layer (if applicable) |

Picture: cross section RHEDA CITY -C, embedded in ESU

3.1.1.4 RHEDA CITY -D

In the present case of a discrete supporting rail, the rails will punctually fix over the range of the sleepers. Generally the sleeper interval is set to 0.75 m. The deflection of the rails results on the stiffness of the used elastic pads (Zw). As a characteristic parameter, the spring stiffness of the elastic pads under the rails is defined.



Picture: discrete supporting points (green marks)



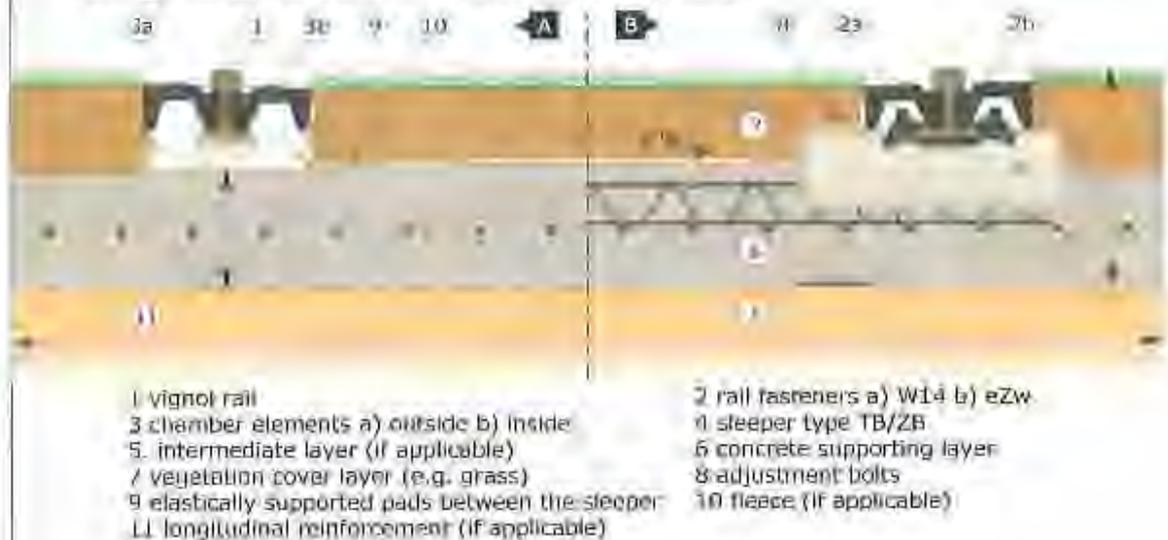
- | | |
|-----------------------------------------|----------------------------------------|
| 1 grooved rail | 2 rail joint sealing compound |
| 3 chamber elements a) outside b) inside | 4 rail fastening system K-W25 incl. Zw |
| 5 adjustment bolts | 6 caps (optional) |
| 7 cover layer | 8 sleeper type TB/ZB |
| 9 concrete supporting layer | 10 intermediate layer (if applicable) |

Picture: cross section RHEDA CITY -D, supported on elastic rail pads Zw

3.1.1.5 Grass Track (Rheda City – G)

The picture below shows a typically core cross section for green tracks. Because of the system components (chamber elements, fleece and elastically supported pads between the sleepers) the direct contact of the cover material (e.g. humus) and the rails is prevented. This includes also an effective electrical isolation against stray currents. Fleece (membrane) will be applied across the total double track formation.

Longitudinal reinforcement will not be applied.



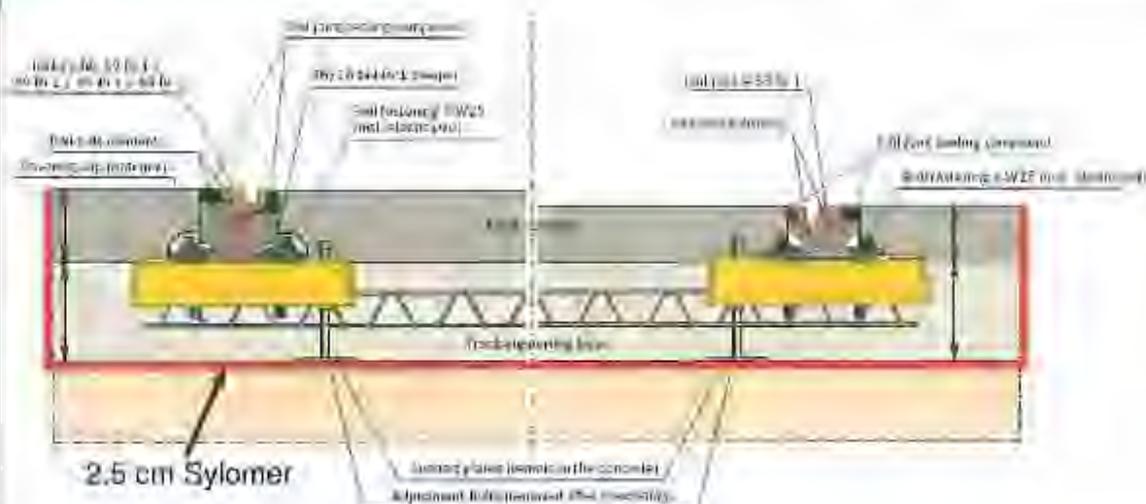
- | | |
|--------------------------------------------------|--------------------------------|
| 1 vignot rail | 2 rail fasteners a) W14 b) eZw |
| 3 chamber elements a) outside b) inside | 4 sleeper type TB/ZB |
| 5. intermediate layer (if applicable) | 6 concrete supporting layer |
| 7 vegetation cover layer (e.g. grass) | 8 adjustment bolts |
| 9 elastically supported pads between the sleeper | 10 fleece (if applicable) |
| L1 longitudinal reinforcement (if applicable) | |

Picture: cross section RHEDA CITY-G

3.1.1.6 Floating Slab (Rheda City)

As a measure to mitigate significant noise impacts for residents and other noise sensitive receivers in the vicinity of the routes, a floating slab construction could be applied. Noise sensitive receivers like dwellings, schools, libraries, hospitals, theatres and concert halls, and places of worship currently bordering the route are not yet defined and has not been included in this proposal. However it should be noted that a minimum length of an installation will be around 120 meters.

An appropriate stiffness characteristic will be determined for each installation.



3.1.1.7 Installation sequence (Rheda City)

The basically construction steps for the system Rheda City will be described in the following in detail. In all system variants, the system construction will be done in top-down. By this construction method the top of the rail is used as a reference point for the surveying and installation of the track components. In a result, inadvertent tolerances during the construction of the single layers got no effect to the exactness of the gauge and the positioning of the track.

The track slab will be installed as a cast concrete slab in one construction step with a thickness of 23 cm instead of 25 cm for the project Edinburgh with rail type R159. This reduction is possible when concrete with a strength category of C30/37 will be used. Because of the designed track, generally the track slab should not drop below the width of 240 cm. In the case of crowded clearances it is possible to modify the measurements of the slab track. Only in this case, a constructive reinforcement on the slab track sides is recommendable.

1. Checking the substructure supplied by the civil contractor
 This will be done by testing the formation, examining the survey-data and a visual and physical inspection of the provided substructure. The relevant value of E_{v2} (stiffness) is subject to the final development of the track design and confirmation by the SDS before commencing of works.
2. Positioning of the bi-block sleepers
 The bi-block sleepers will be laid in the given intervals on the ready installed frost protection layer.
3. Assembling of the elastic rail flange sheathing (ESU)
 The rails will be fit in with the elastic rail flange sheathing.
4. Installation of the rails



Figure: Example for Ballasted Track

3.1.3.1 Ballast

The wheel of the vehicle transmits horizontal and vertical loads towards the track. Additionally longitudinal loads resulting from the continuously welded rails come into account due to changes of the air-temperature. All these loads are transmitted via the rails and the sleepers to the ballast layer. The ballast transfers these loads via the sub-ballast layer (made of sand) to the sub-structure. In order to achieve a good transmission of the operational loads to the sub-structure, the thickness of the ballast should be as high as possible. For urban traffic a thickness of 20 cm (measured under the sleeper at the not canted rail) is the minimum value. This is to avoid an addition of the pressure transmitted by two adjacent sleepers. The following aspects are crucial to assure a track of high quality:

- quality of ballast
- installation procedure
- homogeneity of ballast.

A tamping of the ballast in layers with modern tamping machines will cause a higher stability of the track.

The ballast material is made of broken and sieved natural rock and has to fulfil the requirements as follow:

weather resistance (proven with freeze/thaw-test)

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durability (proven in drum mill)

- resistance against pressure (proven by compression or impact tests)
- no contents of organic materials, clay etc.
- shape of the stones shall be cubically and sharp-edged

The ballast used will be according European standards and will meet the requirements of a Tram system.

3.1.3.2 Sleepers and Fastenings

Pre-stressed mono-block concrete sleepers form the support for the ballasted track.

The sleeper carries both the loads of the vehicle and keeps the right gauge. It has to transfer the loads transmitted by the rail into the ballast and must have sufficient contact surface in order to avoid an overstress at the formation.

It transmits the

- horizontal forces resulting from the rolling of the vehicle rectangular to the track
- centrifugal forces in curves
- longitudinal braking and accelerating forces
- longitudinal and buckling forces due to temperature caused stresses and strains of the continuously welded rails

The forces rectangular to the track will be taken by the typical shape of the sleeper. This ability is called breadth displacement resistance.

The sleepers are used on ballasted track and designed for load characteristics consistent with the design of the passenger and service vehicles and with the performance requirements of the system.



Figure: Example of Concrete Sleepers

The pre-stressed mono-block sleepers have a length of 2.400 mm or 2.600 mm. Four or more pre-stressing tendons will effect the tension. The reinforcement will be located uniformly. Every tendon shall be loaded with an equal force.

The surface supporting the rail will be inclined towards the track axis. As rail fixation the Vossloh W14 fastening is an appropriate solution. Plastic dowels will assure the connection of the fastenings to the sleeper. The dowels will not be canted or distorted and are removable.

The shown system may be changed or adopted due to the findings made during the design phases, but will have equivalent features. As a result of these design activities and the cost efficiency, fastening systems by Pandrol or other suppliers may be used.



Figure: Fastening for Concrete Sleeper



The shown system may be changed or adopted due to the findings made during the design phases, but will have equivalent features. As a result of these design activities and the cost efficiency, fastening systems by Pandrol or other suppliers may be used.

3.1.3.4 Ballast Track Methodology

1. Checking the sub layer of ballast supplied by the civil contractor. This will be done by examining the survey-data on excavation and -after filling and compacting, including a visual and physical inspection of the provided ballast layer.
2. Formal acceptance of (parts) of the substructure.
3. Checking if all measurements have been taken to ensure a safe working-environment
4. Constructing ballast-track. The main steps in this are:
 - a. Building the turnouts;
 - b. Putting the sleepers in position;
 - c. Mounting the rail;
 - d. Welding of the rail;
 - e. Tamping the track.
5. Performing a survey on the track and turnouts and checking if all requirements are met.
6. Handover of documents regarding this piece of track.
7. Formal acceptance of this part of the superstructure.

3.1.3.5 Road Crossings

According to document ULE90130-SW-SPN-00050 V3, three at-grade crossings with panels are required. These panels will cover the ballast with a non electrically conductive material.

3.1.3.5 Re-railment platforms

In the depot area 9 turnouts and 1 crossing are foreseen with wooden flush finish for re-railment purposes.

3.1.4 Special Trackforms

For the tracks inside the workshops, special trackwork systems are required. Embedded track systems are foreseen for areas in which trains as well as cars, forklifts or similar vehicles shall be able to cross or pedestrians shall be able to walk safe. Some areas of the workshop are equipped with pits in order to enable access under the trains.

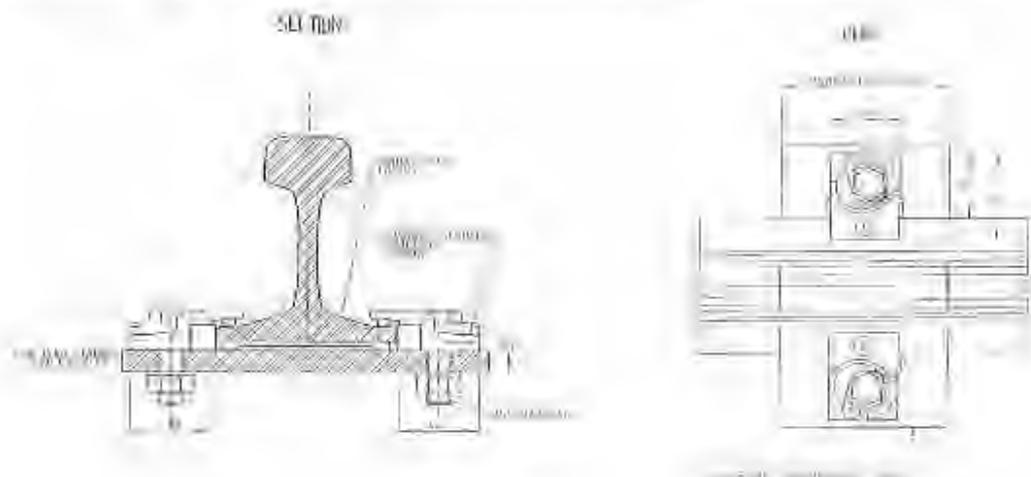
Special solutions, e. g. for the train washing plant, will be defined during the detailed design of the trackwork.

Embedded Tracks

The embedded tracks will be constructed in the workshop area. They will be incorporated in a reinforced concrete floor base. The rails will be installed in a rectangular recess in the floor base and casted in with grout.

Pit Tracks

Inside the pits the rails will be installed on columns or aprons (steel or concrete). For this purpose, special fastenings will be used.



Example for special fastenings on columns/aprons

3.2 Rails

The maximum length of the rails will be 18.00 m.

Flat bottom rails with a radius of less than 100.00 m and grooved rails with a radius of less than 500 m shall be pre-curved in factory or on site.

All welds will be alumino-thermic welds and tested ultrasonically. Particular attention will be given to the dressing of the weld area. Track in depot will be fishplated.

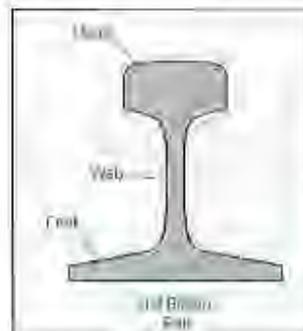
The standard rail in embedded track is of type 60R2 as stated in 3.2.2. All rails in ballasted tracks, plinth tracks, green tracks and in the depot and storage yard will be of type S 49E1.

All rails will be of a hardness of 700, except turnouts and crossings. These rails will be of a hardness of 900.

Guard rails will be applied over 200 m of the line adjacent to steep embankment alongside Murrayfield Stadium as required in document ULE90130-SW-SCH-00085 V1.

3.2.1 Standard Flat Bottom Rails 49 E1

The standard form of rail used around the world is the "flat bottom" rail. It has a wide base or "foot" and narrower top or "head".

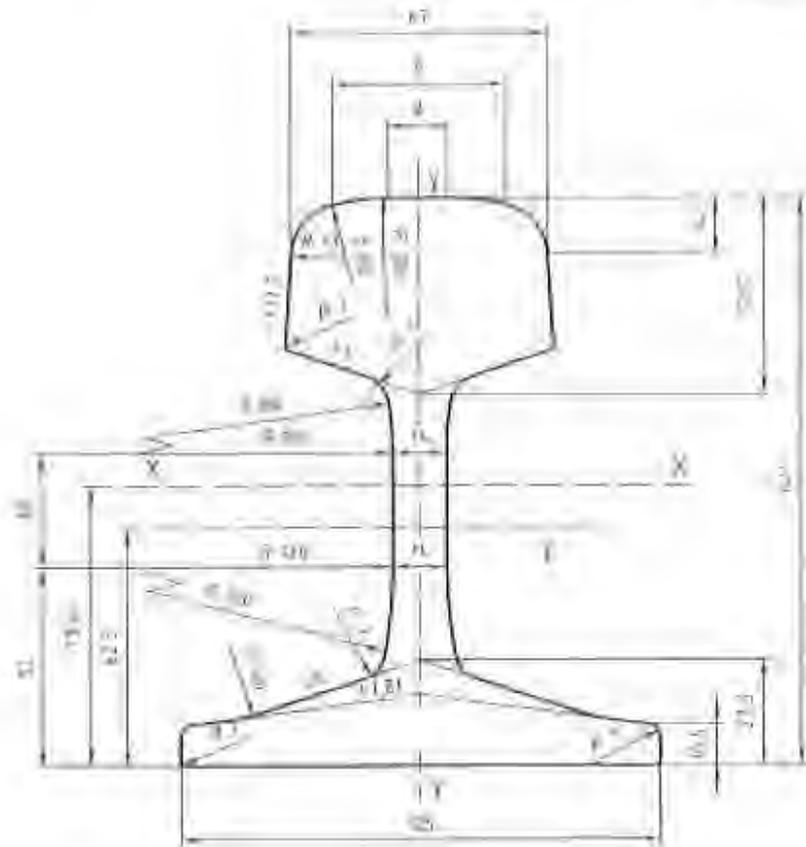


Rails are named according their weight per meter (for instance 49 E 1 = app. 49 kg/m).

During the manufacturing process the rails were rolled. In modern rolling mills the rails will be rolled in lengths of up to 120 m. For a better transport the rails after rolling are cut into pieces of 18 m or longer.

The standard EN 13674-1 is valid for the supply of the rails.

Dimensions in millimetres



Key

()	Centre line of branding		
	Cross-sectional area	62.92	cm ²
	Mass per metre	49.32	kg/m
	Moment of inertia x-x axis	1315	cm ⁴
	Section modulus - Head	340.2	cm ³
	Section modulus - Base	247.6	cm ³
	Moment of inertia y-y axis	319.1	cm ⁴
	Section modulus y-y axis	31.0	cm ³
	indicative dimensions: A = 15.267 mm		
	B = 46.335 mm		

Figure: Rail Profile 49 E 1

3.2.2 Grooved Rail 60 R2

In the embedded track sections the 60R2 grooved rail is proposed to be used. The design is based on European standards. The rail head section matches the 49E1 rail head section.

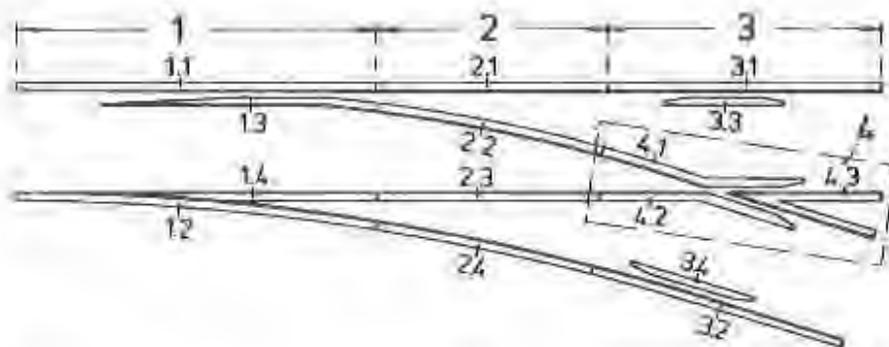
The further development of the wheel/rail interface study will define where local modification of the rail to a wider groove (59R2) might be required.

3.3 Turnouts and crossings

The turnouts and crossings applied for the LRT Edinburgh project are used to allow dividing a track into a diverting position to connect two routes or to provide changeover and crossing facilities for the rolling stock.

A typical turnout consists of the following components (please note Fig. hereto):

- turnout switch section (1);
- straight stock rail (1.1);
- curved stock rail (1.2);
- curved switch rail (1.3);
- straight switch rail (1.4);
- intermediate section (2);
- straight intermediate rail (2.1) and (2.3);
- curved intermediate rail (2.2) and (2.4);
- frog section (3);
- running rails opposite check rails (3.1) and (3.2);
- check rails (3.3) and (3.4);
- frog (4);
- wing rails (4.1) and (4.2);
- diamond (4.3).



For further information regarding turnouts please refer to Annexes 1 (TS070015) and 2 (VAE_GRTurnouts_en).

Definition of turnout types required – suitable for tramway operation!

Scope of Supply

The scope of supply include switch and stock rail assemblies, frog, check rails, intermediate and closure rails, plates and fastening material.

Marking

To ease installation on site the turnout components that belong together are marked with paint and a particular turnout number before they are shipped. They are packed and supplied in suitable lots.

Storage

The switch devices as well as all other bundles shall be stored on a dry and level area. Parts should be supported by suitable wooden posts.

Radii and Geometry

The types and the geometry of the turnouts will be as given in the document ULE90130-SW-SCH-00072, V2 "Switches and Crossings Schedule" as far as applicable.

3.4 Expansion Joints

Expansion joints are structural elements enabling a compensation of rail length to be performed. Expansion joints are usually placed on the transition zone between bridge structure and embankment. They have to take up the longitudinal movement of the bridge (extension by temperature) without causing too high a compressive strain in the rails. Therefore, the slip resistance selected is lower than the resistance of the sleepers to the longitudinal displacement avoiding the occurrence of plastic deformations. Switch blade and stock rail are shifted against each other in the expansion joints.

Manufacture drawings, prepared by the contractor, shall contain all the dimensions by taking the track gauge of rails 1,435 mm.

The requirement and the location for expansion and / or isolation joints will be defined during design stage.

3.5 Continuous Welded Rails

The welding of the rail to form a continuous welded track reduces the dynamic forces exerted on the permanent way and the cars. The aluminothermic welding technique shall be used in this project:

First a casting mould is fixed around both rail ends. In a crucible, the chemical reaction of iron oxide and aluminium powder yields fusible

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thermite steel that is poured into the casting form, welding the rails together. Different alloying elements are added to the thermite portion that make the characteristics of the butt comply with modern qualitative demands.

For the welding process the appropriate UIC standard and the technical description within the tender documents have to be considered.

3.6 Track Ends

At the end of tracks sand pits will be installed that prevent vehicles from moving beyond a designated point.

Rail Stops

Where buffer stops cannot be placed outside the workshop area rail stops will be provided.

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390050	Water boxes in grass track	pcs	0
390060	Grouting at guided bus way	m	2,800
390070	Guard rails	m	400
390090	Road crossings	pcs	3
390100	Point bars as required in ER V, 3.3 under 26.10.1	pcs	70
390110	Adequate rerailment facilities for turnouts in depot area (for 9 turnouts and 1 crossing)	ls	1
390120	Isolated rail joints (as given in ULE90130-SW-SCH-00085 V1)	pcs	0

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Gauge (mm): 1435

Rail Cant: No inclination

laid-on: wooden sleepers

Rail profiles

Rail Profile: 49E1 (S49)

Switch Rail Profile: 49E1A1 (Zu 2-49)

Check Rail Profile: 33C1 (UIC33)

Quality of material

Stock Rails: R260 (900A)

Switch Rails: R260 (900A)

Running Rails: R260 (900A)

Check Rail: R260 (900A)

Crossing - Closure Rails: R260 (900A)

Crossing - Wing Rails: R260 (900A)

Set of Spring Rail Switches "ZV-FSCH"

• Description

A set of spring rail switches consists of switches made from the special asymmetrical or symmetrical switch rail profiles. They are forged at the heel end (forging) to match the standard rail profile and are electrically flash-butt welded to the adjoining standard rail. The weld is located in the moveable part of the switch and is secured with safety fishplates. The standard rails can be provided with a foot relief to reduce the setting forces.

One set of spring rail switches consists of:

- a) Two finished stock rails, made from the Vignol rail profile (standard rail profile). The stock rails are machined in the switch-stock rail contact area, all holes are provided and deburred.
- b) Two finished spring rail switches, made from the switch rail profile and welded to the standard rail. The switch profile is forged at the heel end to the Vignol rail profile. The forged area is machined so that it matches the Vignol rail profile. The forged switch profile is welded to the standard rail using electrical resistance welding and the weld is secured by 2-hole fishplates. The spring rail switches are machined on the running surface and the contact surface of the rail head and foot, bent and set and adjusted to the stock rails. If to be provided, the holes for the switch attachments are drilled in the rail foot or web.
- c) The switch supports, adjusted to the stock rails and the spring rail switches, are mounted on the stock rails. In the case of outside supports, they are fitted and mounted on the stock rails.
- d) The anti-creep device.

The complete and half sets of spring rail switches "ZV-FSCH" and "HZV-FSCH" are ready for installation and

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are delivered pre-assembled. If required, locks are fitted and supplied as well. If the set of switches of a single turnout is mounted on sleepers with plates, it is possible to deliver the switches completely mounted on the sleepers. If sets of switches are delivered without sleepers or if only half sets of switches are supplied, the switch is delivered bundled together with the corresponding and adjusted stock rail so as to prevent them from damage during transport and to avoid any confusion.

It is not recommended to exchange individual stock rails or switches without re-adjusting them to each other.

■ Advantages

- Well proven and cost effective design
- Low setting forces
- High wear and tear reserves
- Suitable for medium to high speeds
- Suitable for medium axle loads/annual loads
- For high demands on position stability and creep resistance
- Use of an elastic rail fastening is possible

■ Technical Characteristics

- The forged area is subjected to a heat treatment to prevent the formation of soft spots:
 - All switch rails > 63.14 kg/m, corresponds to profile 49E1A1 (Zu 2-49), in material grade R260 (900A) are normalized to guarantee a uniform hardness gradient
 - All switch rails <= 63.14 kg/m, corresponds to profile 49E1A1 (Zu 2-49), are normalized only after agreement
 - All head-hardened switch rails are treated in accordance with the material specification to guarantee a uniform hardness gradient
- For used switch rail profile and rail material grades see chapter 'Profiles' and 'Materials' and/or commercial offer

■ Quality Inspection

- Visual and geometry checks
- Penetration test: Flash-butt weld, forged area
- Hardness test: Forged area and heat affected zone for head-hardened switch rails

Common Full-Flip Crossing "EHZ COMPACT 1400"

■ Description

The crossing vee is machined from a rolled slab made of tempered steel. This makes it possible to use a homogeneous material (without welds) with a corresponding strength in the transition area. The length of the crossing vee depends on the rail profile and the geometry of the crossing. The welding joint between crossing vee and closure rails is in any case in the area where the wheel overrun of wing rail/crossing vee is completed. Distance blocks are welded onto the crossing vee. The closure rails are machined from rolled rail profiles. They are welded together in the area of the head and foot and connected to the crossing vee by means of flash-butt welding. The wing rails are also made from rolled rail profiles, machined and bolted to the welded crossing vee by means of distance blocks. All distance blocks are machined and adjusted to the support areas of the closure and wing rails during final assembly. This guarantees on the one hand an exact position of the distance blocks and on the other hand adherence to the required flangeway tolerances.

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■ Advantages

- + Design possible for all types, like
 - common crossings
 - obtuse crossings
 - = multiple and special crossings
- + Excellent elasticity because of bolted design
Therefore, optimal integration into the elastic behaviour of the track
- + No special appliances and patterns required
Therefore, economical even for small quantities
- + Extension of service life by built-up welding in the track
- + "Bending" of the assembled crossing at a later stage possible
Therefore perfectly suitable for all types of curved turnouts
- + Guaranteed interchangeability
- + Can be thermite welded into the track
- + Through tempering of the crossing vee a high yield point is achieved with at the same time sufficient elongation and thus high wear resistance is obtained in the wheel overrunning area with the typical dynamic compression stress

■ Technical Characteristics

Materials:

- + Rails: Please refer to chapter 'Materials' and/or the commercial offer
- + Crossing vee: 51CrV4 according to EN material no. 1.8159
Tempered to tensile strength (elongation min. 8%) 1200 – 1400 N/mm²

■ Quality Inspection

- + Visual and geometry checks
- + Penetration test: Flash-butt weld, welding seams
- + Hardness test: Crossing vee

Bolting of the Crossing "High-Tensile"

■ Description

This type of bolting is used for durably connecting the main components (wing rail, crossing vee, closure rail, guard rail and joggled rail) of common, obtuse and multiple built-up crossings.

The components are connected to each other by means of high-tensile metric bolts (properly class 8.8 or 10.9) and hexagon nuts. In order to make sure that the seat of the rail head and the hexagon nut is level, special shims are used. These shims have a special form in the contact area of the rail web so that the best possible contact surface is achieved. Possible settling loss can thus be kept to a minimum. To achieve the rectangular contact of the head of the bolt and the nut, hardened spherical disks and ball sockets are used. They guarantee a 100% rectangular contact area of the head of the bolt and the nut. Self-locking nuts are used to make sure that the bolt does not get loose.

■ Advantages

- Secure and durable connection because of high pre-tension force
- + Easy to re-tighten the bolting during operation, if necessary. Specified tightening torque has to be considered
- + Bolting can be used various times (e.g. if single components of the crossing are exchanged)

■ Technical Characteristics

- Bolts: Property class 8.8 or 10.9

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Foot Fastening

Superstruttura "VOSSLOH SKL 12" (Tension Clamp)

■ Description

For the fastening of turnout components on ribbed base-plates "SKL 12" tension clamps from VOSSLOH are used. The clamps guarantee a lasting clamping of the turnout components on the ribbed base-plates. Ribbed base-plates for turnouts are preferably made from rolled ribbed web material or from flat steel with welded-on rib cams. Tilting movements of the rails are resiliently absorbed by the middle band of the tension clamp. The achieved creep resistance and torsion resistance fulfill the demands made on a continuously welded track (CEN EN 13481).

The tension clamps can be used with or without elastic pads between the turnout components and the plates. The defined mounting position guarantees the full tensioning force of the tension clamps for different rail profiles and pads of different sizes. A plastic deformation of the spring arms is not possible. The fastening needs no maintenance.

Preferred application of the "SKL 12" tension clamp from the point of view of turnouts:

- Universal clamp: approx. 13 kN tensioning force at approx. 14.5 mm spring deflection
- Torsion stability during mounting
- Suitable in the fishplated area
- Pre-assembly possible
- + Large construction length (sometimes inconvenient)

If only limited space is available within the turnout, welded-on stop faces or specific clips are used according to the definition in the layout plan.

The tension clamp is fastened on the ribbed base-plate with T-bolt, double spring washer and nut. At the beginning of the tension, both torsion spring arms rest on the rail foot. When the T-bolt is tightened, the middle bend is lead to the rail foot. The optimal mounting condition is reached when the middle bend is max. 2 mm away from the rail foot. The necessary torque moment is approximately 180 - 200 Nm.

Tension clamps with special functions:

Tension clamps which allow the sliding of turnout components, e.g. rail expansion joints, are designed with less tensioning force. At the moment, a type called "SKL 12B" is available. These tension clamps secure the longitudinal guidance of the components and prevent tilting under the load of the wheel.

■ Advantages

- Good creep- and torsion resistance for use in the continuously welded track
- Durable elastic clamping
- + High tilting stability through middle band
- Long service life
- Low space requirement

■ Technical Characteristics

- The tension clamps are supplied with corrosion protection
- For clamp material see chapter 'Materials' and/or commercial offer (spring steel according to manufacturer's specification)
- For design attributes see VOSSLOH brochure

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• Quality Inspection

- Test certificate 2.2 according to EN 10204 of the manufacturer

Block Rail Supports

Inner Stock Rail Fastening "IBAV-VAE"

• Description

For the fastening of rails, spring elements are frequently used. For turnouts, slide chairs are mounted on the inside of the stock rails, on which the switches slide. In the area of these slide chairs, conventional spring elements can not be used. This system represents a device for the flexible fastening of stock rails in the slide chair area.

Structure:

The slide chair has a tunnel-shaped recess into which the long plate-like spring element is loosely inserted towards the stock rail. A stop face is welded onto the base-plate and this stop face interacts with the end of the spring elements facing away from the stock rail and secures this spring element even in case of vibrations. Once the spring element is in its final position, a clamping wedge is hammered into a diagonal hole in the slide chair. In this way, the middle part of the spring element is clamped down and the stock rail is flexibly held down. The holding-down force corresponds to the one of a standard spring element.

Mounting:

After the spring element has been placed in the recess, the wedge is hammered into the diagonal hole of the slide chair by blows on the rectangular head. A square shoulder on the wedge limits how far it can be hammered into the hole. With a simple disassembly tool the wedge can be removed again.

• Advantages

- + Good creep and twist resistance for the use in continuously welded track
- + Permanent elastic fastening of the stock rail
- + High stability
- + Long service life
- + Low space requirement
- + Maintenance free
- + The shape of the elements makes incorrect installation impossible

• Technical Characteristics

- + Welded construction made from rolled steel

• Quality Inspection

- + Visual and geometry checks

Fastening of Check Rails:

Arrangement of Check Rail 33C1 (NCSG)

Check-Rail Chair in Block Construction

• Description

The check rail guides the axles of the vehicles in such a way that they can not enter the wrong flangeway and do not touch the front area of the point of the crossing and damage it. To be able to fulfill its function the check rail is positioned in such a way that the parallel flangeway lies opposite the unguided part of the crossing. It is absolutely necessary that the defined check gauge (the distance between running edge of the crossing and

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guiding edge of the check rail in the parallel flangeway) be complied.

The check rail is made from the rolled profile 33C1 (UIC33), which is machined in the area of the entry and the check end flare. The check-rail chair is made as a stable welded construction (block construction). The fastening of the running rails depends on the specific requirements. The check rail rests on the check-rail chair and is fastened with screws. For a correct adjustment of the check-rail flangeway and the check gauge, shims can be positioned between check-rail chair and check rail. Maximum possible compensation 13 mm.

• Advantages

- Easy to mount, check-rail chair with check rail is not directly connected to the running rails
- The check-rail flangeway is easy to adjust and therefore also the check gauge by inserting shims in case of wear
- The worn check-rail can be exchanged without manipulation of the running rail

• Technical Characteristics

Materials:

- For check rail profile see chapter 'Materials' and/or commercial offer
- Check-rail chair min. S275, tensile strength of 430 N/mm²

• Quality Inspection

- Visual and geometry checks

Wooden Bearers "Oak" (H)

• Description

Turnouts, diamond crossings and other layouts can be laid on wooden bearers. The bearers secure the gauge and geometry of the layout and transfer the loads of the railway traffic to the ground, preferably the ballast bed. In addition, they secure the position stability of the layout through their resistance to longitudinal and transverse displacements. Moreover, the excellent elasticity of wood is very compatible with a ballast bed.

Turnout bearers are made from hardwood according to UIC 863 resp. EN 13145. The bearers can be treated as per the "Rüping" method with wood preservative, type WEI C, with a content of Benzo (A) pyrene below 50 ppm. The average absorption quantity of oak bearers is approx. 45 kg/m².

The processing of bearers takes place under ISO 9001-2000 controlled processes. The bearers are drilled just prior to the fastening of the plates. The diameter and depth of the pocket hole are adjusted to the used coach-screws. This guarantees optimal retaining force and electrical insulation.

VAE is certified to ISO 14000. Therefore, we mainly use wood from sustainably cultivated forests. The used preservation agent emits the lowest possible volatile substances, so-called VOC. Biocide concentration is also minimized with all the same time highest possible protection against dry rot.

• Advantages

- Good damping behaviour
- Good compatibility with ballast
- Long service life
- Economical for single piece and small batch production
- Recyclable

• Technical Characteristics

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- Oak (*Quercus robur*, *petraea*, *pubescens*): 850 - 900 kg/m³
- Cross section and form according to UIC 863 cl. 2.3.2, see also chapter 'Materials' and/or commercial offer
- Impregnation, see 'Description' and chapter 'Materials' and/or commercial offer
- Braced ends
- Length increments: 0.2 m (or according to agreement)

SAFETY PRECAUTIONS

As far as the handling of treated bearers and wood is concerned:

- Care must be taken that gloves are used (type/quality generally contained in the safety sheet of the preservation agent).
- When treated bearers are cut or processed in a manner that creates dust, care should be taken that dust-proof protective masks and eye protection (glasses) are worn.
- National regulations concerning the wear of working clothes (a company cleaning service may be required) and possible demands for the storage of civilian and working clothes in separate lockers, etc. are to be observed (there exist no standardised regulations, but the aspect of civil law relating to the passing on of pollutants via clothing must be fully accounted for).

• Quality Inspection

- According to UIC 863, for fresh-cut bearers
- According to EN 13145 and Technical Terms of Supply No. TL001 of VAE for bearers finished in the turnout plant

Scope of supply

- switch device
- build up crossing
- check rails
- running and intermediate rails
- all base plates incl. Fastening material
- all wooden sleepers up to the use standard sleepers

The scope of supply does not include:

- switch machine
- locking device
- fishplates incl. Bolts



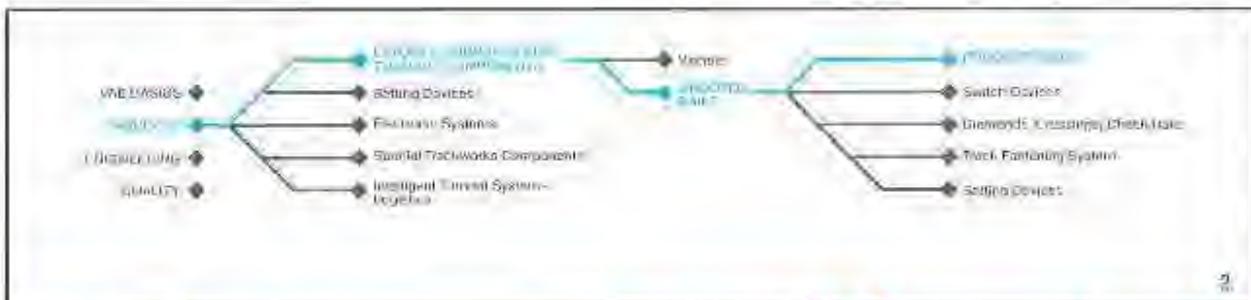
WARLOS



Grooved Rail Turnouts

VAE GmbH
www.voestalpine.com/vae

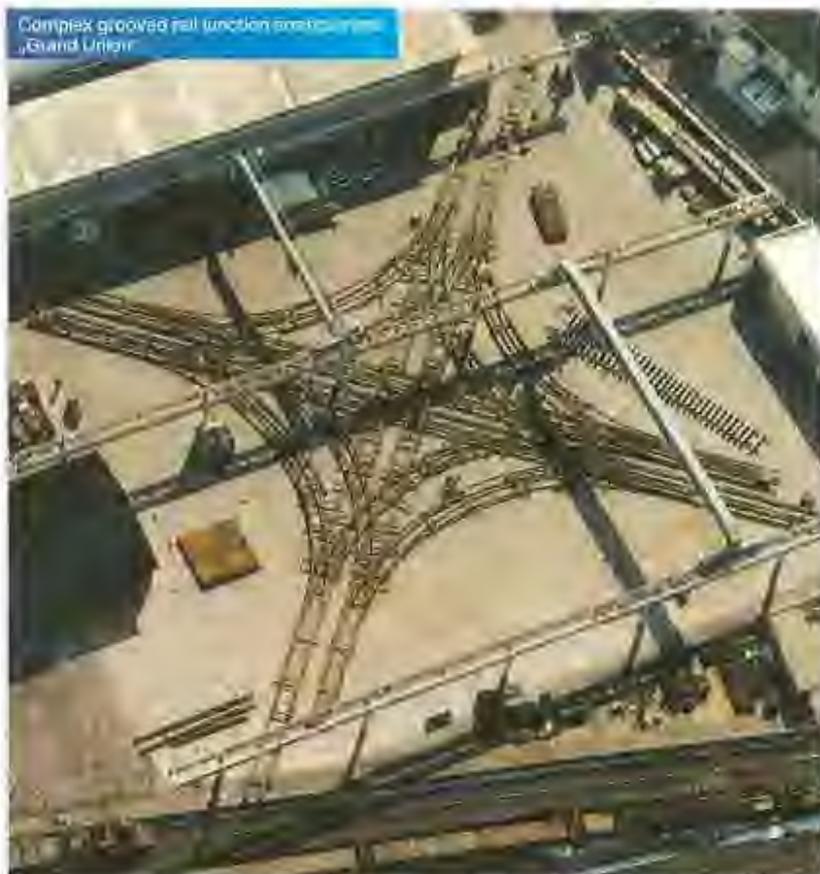
voestalpine
ONE STEP AHEAD.



Product Range



Complex grooved rail junction and turnout „Grand Union“



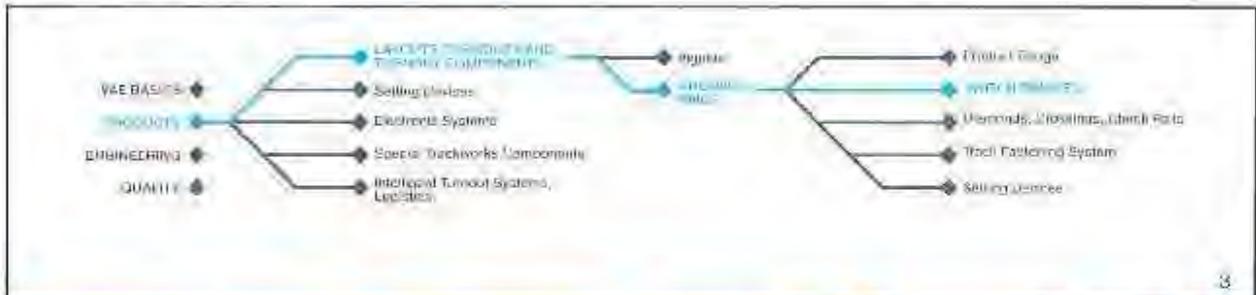
Product Range

- ◆ Single turnouts
- ◆ Similar and contraflexure turnouts
- ◆ Equal split turnouts
- ◆ Interlaced switch devices
- ◆ Diamond crossings
- ◆ Single and double slips
- ◆ Expansion joints
- ◆ Ramp crossing turnouts
- ◆ Track panels
- ◆ Twin tracks
- ◆ Double track junctions
- ◆ Fixed bull switches
- ◆ Complex layouts
- ◆ Switch machines

VAE has vast experience in the design and manufacture of grooved rail turnouts, diamonds and complete layouts as well as switch machines complying to international standards or specific

customer requirements. For all applications and required gauges. In addition to standard grooved rail sections we also design for low sections like RI 53.





Grooved rail switch devices

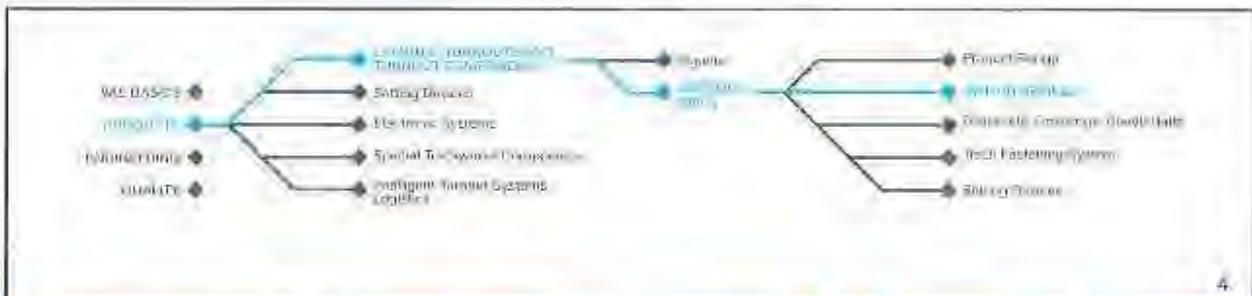


From Hong Kong to Dallas - grooved rail turnouts from VAE are used worldwide.



Grooved rail switch devices for light rail / tram systems consist of two sets, connected by tie rods. Standard geometries have radii of 20, 25, 50, 100 and 150 m. Special designs are also possible.





Grooved rail switch devices



Low-section flexible switches



Types

flat bed design
 Switch section with flash-butt welded grooved rail
 Switch section fastened by a wedge

deep bed design
 Switch made from an asymmetrical switch section which is not fastened to a continuous sliding plate but is placed on individual sliding chairs
 Switch section fastened by a wedge

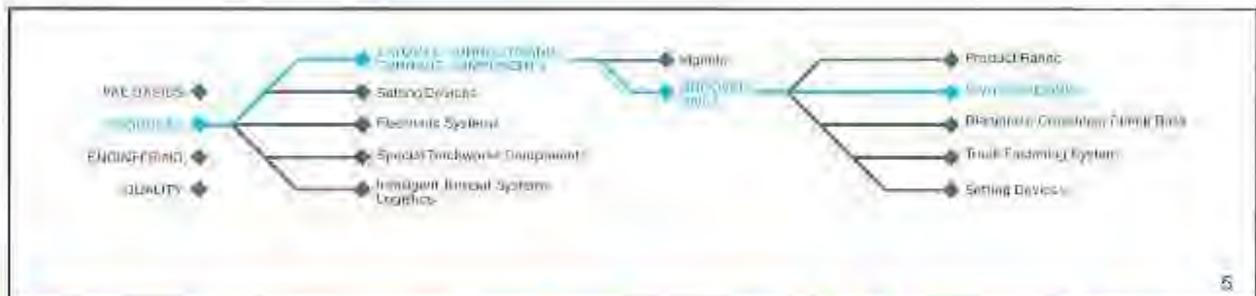
Spring rail switches with wedge fastening



Advantages

Wedge fastening

- Easy replacement of the rail
- No need for locking bolts
- No rail jamming



Grooved rail switch devices




Technical characteristics

- Material grades of switches**
- S700 naturally hard (CEN:220) or with hardfacing at the running surface and/or the guiding surface
 - S900 naturally hard (CEN:260) or heat-treated
 - High-manganese steel, naturally hard
 - HSH (Head Special Hardened, CEN:350 HT), HSHM, HSHL

Advantages

- Switch devices in deep bed design**
- Low wear intervals between cleaning are possible due to optimized design with regard to self-cleaning



Diamonds, Crossings, Check Rails



Check Rails

- Depending on the crossing design, the check rails are manufactured either with shallow or deep grooves.
- Special RI 60 VK or VKD 180/105 sections are used with grooved rails RI 60 or RI 59 in case of shallow grooves.
- In case of deep grooves, the UIC33 check-rail profile is used for adjustable check rails and full-head profiles with machined grooves for the non-adjustable version.

Technical characteristics

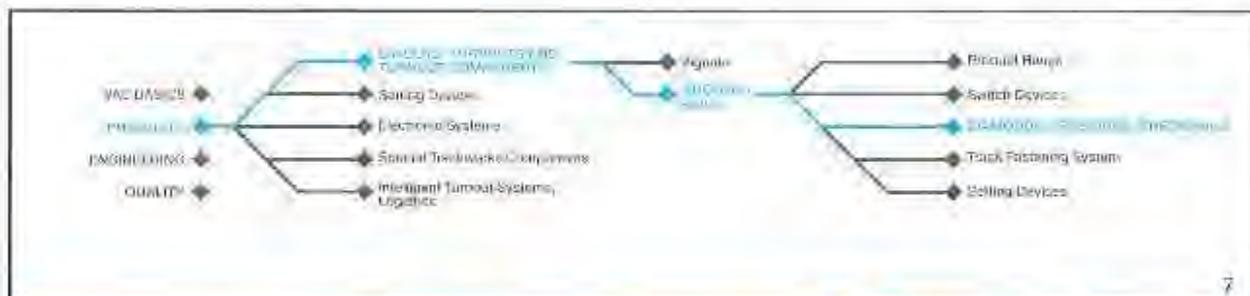
Material grades of crossing blocks

S800 naturally hard (CEN 220) or with hardfacing on critical areas
 S900 naturally hard (CEN 280) or heat-treated
 High-manganese steel of natural hardness or explosion-hardened

Material grades of check rails

S800 naturally hard (CEN:220) or with hardfacing on critical areas
 or (tempered VKD) 180/105 also possible

Crossings for grooved rail turnouts for light rail / tram systems with shallow or deep grooves, depending on wheel sets, grooves and crossing angle conditions.



Diamonds, Crossings, Check Rails



For smaller crossing angles

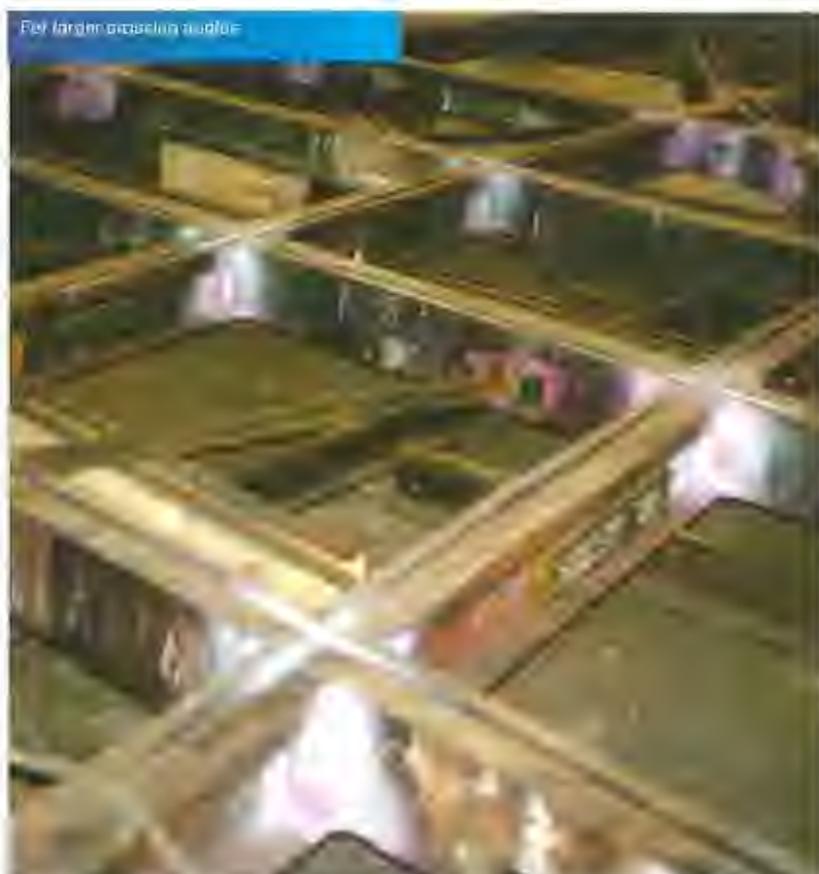


Types

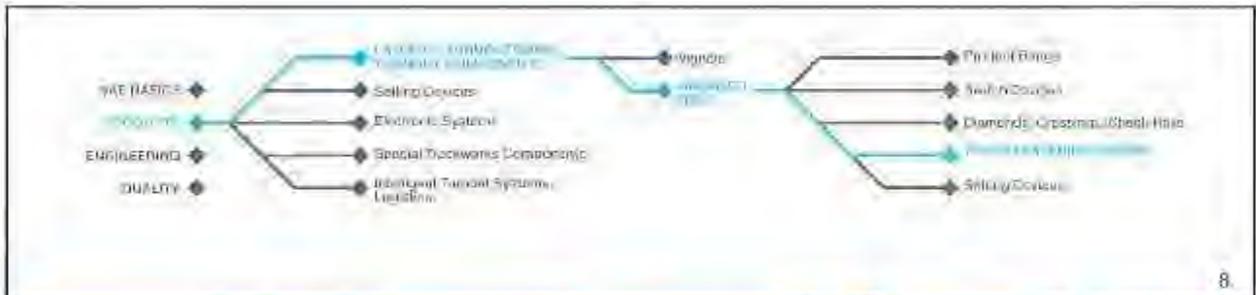
For smaller crossing angles
 a forged or rolled block with welded-on full-head rails is used. For crossings subjected to highest loads a design with welded manganese or with a manganese insert is offered.

High-manganese steel is characterized by its excellent resistance against stress typical of crossings.

For larger crossing angles



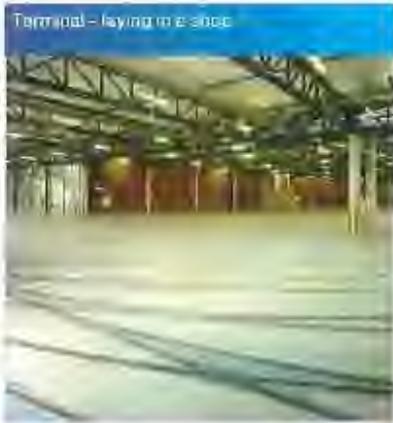
For larger crossing angles
 a design consisting of welded block rails or full-head rails is used.



Track fastening system



In accordance with the specific demand, VAE's grooved rail turn-outs are suited for laying on concrete slab with tie rods or for laying on wooden or concrete sleepers.



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 ONE STEP AHEAD

SIEMENS

31st March 2008

Updated Proposal Submission

Edinburgh Tram Network

**Section 3: Technical Descriptions
Part 2 – Depot Workshop Equipment**

Depot and Workshop Equipment – Alternative Offer

1 Introduction

1.1 Document Scope

This Document is prepared to provide an introduction in the principles of the Depot Layout proposed at Gogar site for the Edinburgh Tram Network project and the functional relations and dependencies during Depot operation and Maintenance activities for the E&M part.

When BBS Consortium (BBS) is used in this document (or its Annexes), it stands only for the E&M part of the Edinburgh Tram Network."

Furthermore this document describes and defines the preliminary basic scope of maintenance equipment required for the maintenance of BBS scope to be provided for this Project adapted for the initial needs of the system. Deviations to the basic offer and to the Employer's requirements are marked. The indicated alterations will ensure the functionality of the system maintenance as well.

1.1.1 Compliance

This document is prepared to provide compliance with the Invitation to Negotiate (ITN) and the Employer's Requirements regarding Depot facility equipment aspects, as not indicated otherwise, and functional requirements to maintain the system.

2 General

The Depot will be of an economical design which reflects economy of use and maintenance in providing all the functionality required by ite.

The Depot will combine high levels of reliability and performance and will provide the operator and the maintainers with the facilities to operate, service, repair and maintain a completely reliable passenger service.

The Depot (also called Maintenance Facility) includes the following features that have been described in the ItN:

Main maintenance building with the main tram workshop, other workshops, stores, management, administration, operations and maintenance offices and staff welfare facilities (support accommodation) and the control room for the complete Edinburgh Tram Network.

- Car washing section to handle Trams
- Sanding facility with sand container to service Trams
- Stabling area for vehicle fleet



2.1 The Site

The proposed site in Gogar will be assumed as the location for the erection of the depot.

The Depot layout provided with the ITN documents will be the base for the future design works and the technical proposal is based in general on this layout.

Special design requirements, resulting on constraints imposed upon the Depot design by the Civil Aviation Authority due to the proximity of the Emergency Runway of Edinburgh International Airport or on factors and restrictions to be accommodated in the construction of the Depot that will necessitate detailed discussions with the aviation authorities, are not considered yet.

A separate building/area for the preparation works of larger line equipment (rails, catenary equipment etc.) required for corrective maintenance purposes as well as for storage of larger line side maintenance equipment should be considered in the next design steps.

Furthermore design requirements, resulting on the final tram car design have to be evaluated in the future design stages and the layout has to be adapted accordingly.

2.2 Access

Road access from the A8 Gogar roundabout link road will provide both entry for normal Depot operations traffic and also for delivery and egress of trams up to nominal 43,6 m in length with the minimum of impact on other facilities.

2.3 Maintenance Facility Equipment

The maintenance facility equipment is state of the art facility equipment with regards to industrial building design as well as the most current technology and equipment for maintenance and repair systems for E&M part and cleaning, wheel re-profiling, sand filling and lifting of Tram Cars featured by:

- energy performance/efficiency/conservation for materials and equipment
- water quantity and sewage treatment
- quality controls
- minimizing environmental impacts
- general environmental protection

3 Maintenance Facilities – Conceptual Design Overview

3.1 General

The configuration of the depot and the equipments contained therein will minimise disturbance to neighbors.

The Depot will be secure and be provided with security systems as appropriate.



3.2 Description and Location of Facilities

The depot has to fulfill the following main functions:

- Inspection and Maintenance of Trams
- Stabling of Trams
- Shunting of Trams
- Cleaning of Trams
- Testing of Vehicles after repair and major overhauls during a re-commissioning
- Inspection and Maintenance of Railway Electrification system
- Inspection and Maintenance of Communication system
- Inspection and Maintenance of Signalling and Controlling system
- Inspection and Maintenance of Trackwork
- Inspection and Maintenance of Infrastructure

To assure the reliability and availability of equipment, the depot as well as the workshop is designed and equipped to meet the maintenance requirements of rolling stock and the other systems.

The maintenance facility design shall incorporate special tools and equipment required to consistently achieve the required preventive and corrective maintenance tasks within the cycle times required to meet the fleet availability for service.

The basic preconditions for this design are:

- the rolling stock maintenance requirements and technical details
- the system maintenance concept
- the system design
- the system emergency concept
- the system safety concept

3.2.1 Maintenance Yard & Facilities

The general arrangements for Maintenance Yard and Facilities are given in the corresponding layout ULE90130-06-DEP-00001, Rev.6. The area will readily accommodate the initial fleet of 27 Tram cars.



The Yard area is arranged in such a way that the Trams when entering and leaving the Yard will be able to do so over the two inbound and outbound tracks connected with the mainline.

For the future phase the stabling has to be built according drawing to stable in total 36 Tram cars.

This arrangement provides maximal flexibility for shunting operation and minimizes delays while putting the Trams in and out operation on the main track.

The take in and take out of Trams to/from the Yard will be arranged by switch-combinations from the main track, so that every Tram at any time in each direction can enter or leave the Yard without blocking the operation on the main track.

All Trams, which leave the line (first priority), will be controlled from this point by the Depot Controller.

All Trams will enter via the inbound tracks for entering the different locations according to the operating and maintenance requirements. The Depot controller will distribute the Trams to the stabling yard or passing the stabling yard to the tracks for inspection and light maintenance, heavy maintenance, washing and internal cleaning/sanding.

The exit of the Yard is given via the Yard lead track from the stabling area, from the washing plant and from the inspection and maintenance tracks.

The maintenance yard and facilities will be designed to provide sufficient storage space for the initial Tram fleet of 27 43,6m-tram cars, and a planned extension possibility to 36 tram cars. In addition, the yard will have a maintenance building to maintain both the Tram fleet and wayside equipment. Accordingly the yard and facilities will be built for:

- Servicing and maintaining the fleet of 27 Trams, (initial phase)
- Stabling for up to 27 Trams
- Two inbound and two outbound to the mainline for the Tram fleet
- Storage yard, maintenance building, washing plant, sanding facility, underfloor wheel lathe
- Access roads, guard house, parking area for 150 cars (automobiles) and with provisions for expansion of the parking areas to accommodate the future expanded system
- Fencing, paved walkways and gate.

3.2.2 Workshop Area

- The wash plant will be located inside a shelter (track 4) limiting the inside operating conditions to a minimum temperature of 0°C, allowing the equipment to operate effectively even when the ambient outside temperatures reaches temperature conditions of minus 5°C. The facility will



- Dirty Workshop
- Clean Workshop
- Battery Room
- Equipment & Communications Room

The shops will be equipped with facilities and machines necessary to perform the maintenance works specified.

Equipment such as forklifts will be used for transportation purposes within the depot area.

Storage areas will be:

- Storage for heavy parts
- Storage for small parts
- Rolling Stock material
- Consumables/Spares

3.2.10 Areas for Special Functions

In the depot and workshop area technical rooms for building and services will be provided.

These rooms are mainly arranged within the maintenance/operation administration area of the building but depending on the required size and technical requirements to be covered, it is possible that a provision of separate technical buildings will become necessary.

3.2.11 Infrastructure Maintenance/Service Vehicle Area

This area of the maintenance building will be used for stabling of service vehicles and infrastructure components and is designed with a terminating track.

3.3 Preliminary Schedule of the Maintenance Equipment.

3.3.1 Subsystem Description

The following section describes the sub-system Depot and Workshop Equipment.

The scope of works will comprise the engineering, co-ordination, preparation of layout's, testing at factory, supply of materials and transportation to site, documentation, installation, commissioning and training of the equipment specified for the maintenance services.



Special tools and equipment solely dedicated for preventive and corrective maintenance works on single tram components should be provided within the Tramco supply. The initial spare part stock for the first years of operation as well as the special tools required for the BBS scope of supply and not contemplated in the employer's requirements are to be considered in the maintenance scope.

This subsystem is based on the following guidelines:

- Best and most efficient maintenance practice
- Reduction of the running costs
- Lower investment for maintenance and the required equipment
- Reduction of maintenance manpower capacity

The concept is, that all of the maintenance work, which can reasonably be subcontracted will be outsourced under a maintenance contract.

The remaining works will be done by Maintenance Company to be established for the LRT System.

All maintenance activities will be described in the maintenance concept. The workshop building is integrated in the depot and adapted to the requirements of the operational and maintenance concept. The main purpose of the workshop is to service, maintain and repair the components of the rolling stock system and the system components.

Therefore the indication of the rolling stock maintenance requirements and technical details are an essential part for all design activities regarding layout and arrangements within the depot area.

These works includes:

Type of Maintenance and Repair Works	
Type of Maintenance	Works
Preventive Maintenance	regular service routine inspection scheduled preventive maintenance overhaul works
Corrective Maintenance	trouble shooting non-scheduled maintenance



- Low Voltage electrical equipment 72/23/CEE, EN 60204-1
- Electro-magnetic compatibility 89/336/CEE
- Safety specification CEE 89/342
- Noise level CEE 86/188m
- Pressurized equipment 97/23/CE

Overhead Cranes

- BS. FEM Section IX
- AWS D14.1 Code for Welding
- DIN 18800, Page 7 Construction for Quality of Welding
- DIN 15018, Page 2 Crane design and construction
- DIN 8563, Page 3 welding classes standards
- DIN 15401 Single Hooks
- DIN 15404 Certification of Hooks
- IEC 60204-32
- VDE 0113
- VDE 0100
- IEC Recommendations 24-1, 34-5 and 72-1
- Motor selection on Swedish norm IKH 6.30.01
- All motors are approved by the CSA
- ISO/DIS 6336/II-6336/V (DIN 51150)

Electronic Equipment

- DIN EN 61010 Safety regulations for electrical measuring, control and Laboratory devices
- VDE 0100 Erection of power installations with rated voltages below 1000 V
- VDE 0700-1 Safety of electrical devices
- UVV VBG-4 Protection regulations for accidents, Electrical plants



Washing Plant

- DIN 24446 Security of machines and vehicle washing plants
- Safety regulations for vehicle washing plants from Central Organization of Employer's liability insurance, Ref.-No. ZH 1/543.
- Guidelines for spraying equipment from Central Organization of Employer's liability insurance, Ref.-No. ZH 1/406.
- EC-machine guidelines dated June 14, 1989 (89/392 EWG) - 9th decree to equipment security regulation; EC-guideline for Electromagnetic pollution control dated May 03,1989 (89/336/EWG), EC-guideline for Low voltage control dated February, 19 1973 and July 22, 1993 (93/68/EWG)
- Actual guidelines for accident protection
- Guidelines of the Deutsche Bahn AG (German Federal Railway) including internal regulations of the DB AG

Service Vehicles

- EN 60529 Protection class
- ISO 3864-1 Graphic symbols
- UIC 505-1 Railway vehicles-gauges
- UIC 510-2 Roller profile for railway vehicles
- UIC 533 Earthing of metallic parts
- DIN 20021-2 High pressure hoses
- DIN EN 6700 Welding of railway vehicles
- EN 50121-3-2 Electromagnetic compatibility/rail application
- 98/37 EG EC-directive for declaration of conformity of machines
- EURO III European emissions standards
- EU reg. 79/157/EU incl. 96/29/EU European regulation for exterior noise dampening
- EU reg. ECE-29 European regulation for cabin construction
- EG 94/20 European prescription for trailer couplers
- VDE 0879, part 1 and 2, DIN EN 55012 Regulations for electronic emissions for vehicles

3.3.3 Machines, Tools and Equipment

The functional areas as well as the auxiliary areas will be equipped with facilities and machines necessary for the maintenance and repair of the Trams and system components.

3.3.3.1 Bill of Quantity BBS

The following list gives an overview about the maintenance facility equipment supplied under BBS contract.

	Description	Required / Provided Qty	Comments
1	Set of Measuring Tools for Trackwork (hand tools)	1	Track Measurement Equipment (ER pos. 9.5)
2	Set of Catenary Tools	1	Stagger gauge, Stray current Tester (ER pos. 8.2)
3	Bridge Crane, 63 kN Maintenance Area	1	Workshop Crane (ER pos.2.4)
4	Tram lifting system	1	(ER pos.2.2)
5	Set of Lifting Attachment for the E&M part	1	Craneage (ER pos.2.12 / 2.13)
6	Set of general Lifting Attachment for the E&M part	1	Craneage (ER pos. 2.12 / 2.13)
7	Drive through Tram Washing Plant with fix mounted brushes	1	<ul style="list-style-type: none"> • Spray Bay to be within a shelter • Be complete with end wash facilities • To be suitable for operation at zero degrees centigrade and above (ER pos.1.4)
8	Ultrasonic cleaning bath for the E&M part	1	Parts washer (ER pos.1.6)
9	Fixed high-level Access Platforms	2	To access tram roof and pantograph with end gates for tram length (ER pos.2.3)
10	Shelving Pallet System	1	Stores, Shelving (ER pos.3.1)
11	Shelving Two Tier System	1	Shelving (ER pos.3.4)
12	Tool Distribution	1	Shelving (ER pos.3.4)
13	Set of Work Benches	1	Depot Furnishing (ER pos.3.5)
14	Set of workshop stools	1	Depot Furnishing (ER pos.3.8)
15	Set of special Racks (e.g. for door, window, AG-unit)	1	Shelving (ER pos.3.4)
16	Security Storage Cupboard	2	COSHH cupboard (ER pos.3.7)
17	Set of Ladders	1	Infrastructure tools (ER pos.5.1)
18	Set of Steel cabinet wardrobe, lockable	1	Cupboards (ER pos.3.6)



	Description	Required / Provided Qty	Comments
19	Demountable conductor wire maintenance man basket (>=2 man) for Road/Rail vehicle	1	(ER pos.10.1)
20	Road/Rail,, self-propelled two way vehicle with crane 6t and platform for approx. 8 t payload Remark: Snow plough and winch attachable to the above mentioned vehicle included.	1	Road/Rail type (ER pos.10.1) Able to transport the re-railing equipment mentioned below; Alternative reduced payload
21	Rail groove cleaning equipment	1	Vacuum cleaner mountable on Road/Rail vehicle as defined under No 20 (ER pos. 1.5)
22	Rail/road trailer incl. OLE siccors working platform	1	Road/rail trailer (ER pos.10.3)
23	Mini Bus	0	Other road vehicles (ER pos.10.2)
24	Pick-up	1	Other road vehicles (ER pos.10.2), not required for maintenance. Operator demands not considered
25	Fork lift truck, 30 kN	1	Fork lift truck (ER pos.2.9)
26	Set hand guided mobile transport equipment for the E&M part	1	Pallet truck + Hand trolleys (ER pos.2.10 / 2.11)
27	Set waste container for the E&M part	1	
28	Underfloor Wheel Lathe with swarf removal	1	UWL (ER pos.4.3)
29	Power Hacksaw	1	Machine tools (ER pos.4.5)
30	Hydraulic Press	1	Machine tools (ER pos.4.5)
31	Double Ended Grinding Machine	1	Machine tools (ER pos.4.5)
32	Column Drilling Machine, 30 mm with bits	1	Machine tools (ER pos.4.5)
33	Turning Machine, 1000 mm	1	Machine tools (ER pos.4.5)
34	Tools for Fibre glass work	1	Machine tools (ER pos.4.5)
35	Sheet Metal Bending Machine	1	Machine tools (ER pos.4.5)
36	Hand Lever Shear	1	Machine tools (ER pos.4.5)
37	Set of Trackwork Tools (Hand Tools)	1	Small tools (ER pos.9.2 - 9.4)

3.4 Draft Specification of major Workshop Equipment

3.4.1 Compressed Air System

The compressed air system consists of compressor plant, a piping system and the connection points at the workshop. The general pressure provided will be 7,5 bar. To reduce the noise level the compressor is located in a separate compressor room at the workshop.

3.4.2 Vehicle Lifting System

The fixed Vehicle Lifting System is located at track 2 b of the Workshop Building.

It will be used for lifting one tram vehicle consisting of 4 bogies for maintenance- and repair works as well revision and overhaul.

After positioning of the vehicle on the track, the operator starts the lifting process with the 4 platforms. For safety reasons flashing lights will be installed on both sides of the track. These are for indicating the lifting sequence.

The lifting height has been chosen with a maximum of 1,6 m ToR to get mainly upright working positions on the tram vehicle. If the vehicle is at the preferred height, the car body supports can be positioned manually.

To change one bogie each platform can be operated separately.

This bogie can be pushed out by hand on track below the lifted vehicle.

A new bogie can be moved from the Bogie Repair area to the respective position in the same way.

After assembling the vehicle will be lowered to the floor and can drive out of the workshop.

The drive system of each lifting platform is mounted in an under floor pit to provide a floor leveled lifting system. The platforms will be operated via central control board and monitored by means of a PLC to assure a synchronous lifting of the tram.

The system is designed to deal with a load of 15 ton per platform or a fully functional, unladen tram vehicle with a load of 60t (AW01).

The train washer shall be equipped with a water recycle system which shall neutralize, remove solids and filter the water automatically. The PH level of the processed water and all effluent discharge to the sanitary sewer will be monitored.

The effluent to the sanitary sewer shall also be processed through an oil water separator.

The train washing plant will allow for different wash modes and the equipment provided will comprise the following main components:

- One (1) pair pre wet spraying stands
- One (1) pair detergent application brushes for sides
- One (1) pair water wash brushes for sides
- One (1) swivel brush for Tram front/rear washing
- One (1) pair final rinse stands
- Pre-wet pump and detergent solution / water wash pump
- Detergent metering pump
- Rinse pump
- Storage tanks
- Water reclamation system
- Driver indication entry lights
- Auto start up / shut down system
- Electrical control panel

The equipment supply will include system installation details including foundation, water supply, drainage and entry light requirements.

TECHNICAL DATA

LRV speed through wash plant	max. 3km/h
Number of vertical (side) brushes	4
Number of front/rear brushes	2
Water tank Capacity	approx.2000 litre
Wash plant Overall Size	50000 mm long X 8000 mm wide (through brush section)
Maximum Height	approx. 6000 mm (to top of rail)
Pump House Size	approx. 7000 mm X 5000 mm
Electrical Supply	400 Volts, 3 phase, 50 Hz
Water supply	approx. 4 bar max.

The complete system will be controlled via PLC.

The bogies can be cleaned at the tram wash apron outside of the washing hall by high pressure cleaner.

3.4.4 Underfloor Wheel Lathe

The Underfloor Wheel Lathe used to re-profile the wheels of the tram is situated at track 3 b in pit with rails running on top.

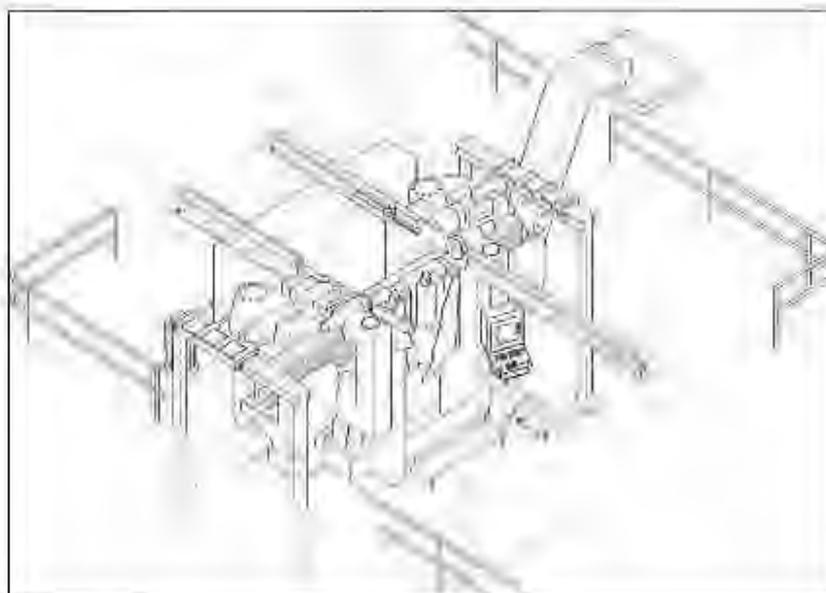
An Overhead line above the track provides the power to move the tram in and out themselves. During the re-profiling process of the wheels the tram will be moved by means of an electrical shunting vehicle to achieve the accurate positioning of the tram.

Once the tram is proper positioned above the machine the wheel will be support the rail removed and the axle or bogie clamped. After the wheel is measured the turning process starts to re-profile the wheel (one axle will machined at once). The whole process will be controlled via a special Numeric Control with integrated PLC.

The main parts of the machine are:

- moveable rails with connection to the standard rails used in the workshop
- machine with drive wheels, cutting tools, control, measuring unit etc.
- Downholder, to clamp the axle during cutting
- Chip container incl. conveyer

Principle sketch of a lathe on pit:



3.4.5 Rail Road Conductor Wire Vehicle with crane

The Conductor Wire vehicle will be a two ways rail /road vehicle based on a standard road truck e.g. Mercedes Benz Unimog U 400. This truck can carry up to 3 persons at the cabin during work on road and rail.



In addition to the standard truck this vehicle will be equipped with:

1. Rail guiding system

Track guiding wheels fixed on swivel arms

The swivel arms are moved by hydraulic piston, controlled from the cabin

Hydraulic and mechanical lock of track guiding axles during road mode

Steering lock during rail mode

2. Crane and platform

Hydraulic crane type is fitted at the rear end

The crane is of at least 6 m/t class and has got a hydraulic reach of approx. 4 m

4 outriggers providing the required stability during crane works.

Furthermore a loading platform to transport equipment will be provided with the admissible payload given by the basic vehicle design.

3. Demountable conductor wire maintenance basket

To do the installation and maintenance works for the Overhead line

Able to carry the load of 2 persons.

The turning and lifting function can be operated from the platform.

31st March 2008 Submission

Edinburgh Tram Network

Section 3: Technical Descriptions

Part 3 – Railway Electrification



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1 Railway Electrification

When BBS or BBS Consortium is used in this document (or its Annexes), it stands only for the E&M part of the Edinburgh Tram Network. All information regarding phase 1b) (Russel Road Junction to Granton Square) within this document are for information, only. This current proposal is for phase 1a), which is the tram line from Edinburgh Airport via Russel Road Junction to Newhaven. As far as design considerations are concerned, phase 1b) operation was also taken into account (that phase 1a) can be considered as stand alone. As far as OLE extension is concerned, at the connections between phase 1a) and future extension to phase 1b), regarding poles of phase 1a) will be considered as appropriate to be able to attach phase 1b) without the need of replacing (as far as pole function and static is concerned). No further extension to phase 1b) is needed for phase 1a), since OLE of phase 1b) can be attached to phase 1a) within in couple of night shifts where no operation of phase 1a) can be allowed. Phase 1b)-poles closest to phase 1a) are estimated to be at least 10m from phase 1a). Therefore, to make pole foundations for these poles later on, when phase 1a) is already finished, should not be an issue.

1.1 Introduction

This document describes the technical system parameter, solutions proposed as well as the scope and services for design, manufacturing, installation, commissioning, documentation, operation and maintenance training and trial run for the railway electrification system (REL) composed of the integrated systems traction power supply (TPS) and overhead line equipment (OLE).

1.2 Referenced documents:

[1]	"Employer's Requirements", document number PRO-INFRACO-1399; Rev. 4, In particular Part 31 for OLE and Part 30 for TPS
[2]	"System Wide – Section 1, 2 and 3; 750V DC Power; Feeding and Sectioning Diagram (3 sheets)"; document number ULE90130-SW-OLE-00007, Rev. 3
[3]	"System Wide – Electrification Demarcation Diagram", document number ULE90130-SW-OLE-00010; Rev. 2
[4]	Invitation to Negotiate ("ITN") for the Procurement of the Infraco for the Edinburgh Tram Network – Information Release – Infraco ITN and Appendices – 30 March 2007
[5]	"Edinburgh Tram – Tram Technical Information Submitted Data" "UKPB1-#52182-v9 Tram_Technical_Information.DOC; received 2007-11-28
[6]	Note on OLE clearances dec07 v03.doc; received 2007-12-13
[7]	refer to appendix 6.3.1)

1.3 System Outline

1.3.1 Operational Concept

The proposed REL system will be capable to work with operational scenarios described in [1], which can be summarized as follows:



1. Scenario:

8 TPH Airport to Ocean Terminal + 8 TPH Haymarket to Newhaven

2. Scenario:

10 TPH Airport to Ocean Terminal + 5 TPH Haymarket to Newhaven

In both scenarios Haymarket could also be replaced by Granton Square (supposed phase 1b (= Sections C + D, from Haymarket to Granton Square) is also put in operation).

An additional 50% increase of the number of trains per hour travelling on the Edinburgh tram network can be handled by the REL system in peak hours for 2 hours time. This would lead in the most frequented sections to up to 24 TPH (this equals a calculated average headway of only 2.5 min, which can be considered as very little for a LRT system). For more details, refer to revised traction study (8.3.1).

1.3.2 Vehicle and other traction simulation input data

Systemengineering work performed for this proposal is based on input data provided by tie . Compared to information provided with tender documents, these data were updated and completed by tie (e.g. vehicle data, topographical data, speed limits). For details on input data used for simulation refer to attached "Network calculation with train simulation", appendix 8.3.1.

Different input data may lead to different requirements for the REL system or parts of it (e.g. traction transformer power ratings, cable cross-sections). Siemens also assumes, that the vehicle can meet the required timetable with the overhead voltage shown in simulation results (e.g. minimum overhead line voltage for worst case scenario; (8+8)TPH+50% plus substation outage is given in appendix 8.3.1). In case the used input data changes, the network calculation needs to be redone. With the outcomes it can be determined, if a modified REL system needs to be offered by Siemens.

1.3.3 Environmental Conditions

Altitude	
Height above sea level	0-200 m
Temperature and Humidity	
Absolute Maximum Temperature outside	43 °C
Absolute Minimum Temperature outside	-13 °C
Maximum average daily temperature outside	18 °C
Minimum average daily temperature outside	1 °C
Relative humidity outside	75 % - 84 %
Maximum long term temperature indoor	30 °C



Maximum peak temperature indoor	40°C
Wind	
Mean wind speed	4.6 m/s
Maximum speed	19.5 m/s
Design wind speed (exposed route)	40 m/s
Design wind speed (normal route)	30 m/s
Rainfall	
Average monthly precipitation	39 mm – 83 mm
Wet days per month (> 0.1 mm)	14 - 18
Wet days per year (> 0.1 mm)	181

1.4 Scope of Supply

At this stage of the project, system defining information, like ratings, cable cross sections, number of cables in parallel, conductor material, components used, etc. may be subject to change, although they do reflect the current status of design activities and the general concept offered will remain unchanged. The functional parameters given in [1] and specified in this document will be met by the system offered. Further design optimization is one goal of the detailed design phase, which will be performed in an early phase of project execution.

1.5 Standards Compliance

In general the REL system follows European Standards currently valid, which in many cases, have also been issued as BS EN standards in the last years.

EN 50128 and EN 50129 are not valid for REL system and cannot be used for REL system. European Standard EN 50126¹ will be followed for REL as far as RAMS is concerned.

1.5.1 Standards for Overhead Line Equipment System

Standard	Title
DIN EN 50119 Draft (07.06) EN 500119 (01.06)	Railway Applications – Fixed Installations – Electric Traction Overhead Contact Lines
DIN EN 50122-1 (12.97) EN 50122-1 (06.97)	Railway Applications – Fixed Installations; Part 1: Protective Provisions Relating to Electrical Safety and

¹ Specification and Demonstration of Reliability, Availability, Maintainability and Safety for Railway Applications, September 1999



	Earthing
DIN EN 50124-1 (04.06) EN 50124-1 (03.01) +A1 +A2	Railway Applications – Insulation Co-ordination; Part 1: Basic Requirements; Clear-ances and Creepage Distances for All Electrical and Electronic Equipment
DIN EN 50149 (10.01) EN 50149 (03.01)	Railway Applications – Fixed Installations – Electric Traction; Copper and Copper Alloy Grooved Contact Wires
DIN EN 50152-1 (07.98) New Draft (08.06) EN 50152-1 (06.97) Draft (03.06)	Railway Applications – Fixed Installations – Particular Requirements for AC Switch-gears
DIN EN 50152-2 (03.98) New Draft (08.06) EN 50152-2 (06.97) Draft (08.06)	Railway Applications – Fixed Installations – Particular Requirements for AC Switch-gears; Part 2: Single-Phase Disconnectors, Earthing Switches and Switches with $U_m > 1$ kV
DIN EN 50163 (05.9) EN 50163 (11.04)	Railway Applications – Supply Voltages of Traction Systems
DIN EN 60383-1 (05.97) (DIN VDE 0446 T1) EN 60383-1 (11.96) +A11 (10.99)	Insulators for Overhead Lines with a Nominal Voltage Above 1 kV; Part 1: Ceramic or Glass Insulator Units for AC Systems; Definitions, Test Methods and Acceptance Criteria. Note: also applies to insulators in DC contact lines.
DIN EN 60865-1 (11.94) EN 60865-1 (12.93)	Short-Circuit Currents – Calculation of Effects; Part 1: Definitions and Calculation Methods
DIN EN 50122-1:1997-12-01	Railway Applications; Special Provisions for Fixed Installations
DIN VDE 0141 (01.00)	Earthing System for Special Power Installations for Nominal Voltages Above 1 kV
DIN EN 50122-2:1999-05-01 DIN EN 50162:2005-05-01	Protection Against Corrosion Due to Stray Currents of DC Installations
DIN EN 50341-3-4:2002-09-01 DIN EN 50341-1:2002-03-01 DIN EN 50423-1:2005-05-01 DIN EN 50423-3-4:2005-05-01	Planning and Design of Overhead Power Lines with Rated Voltages Above 1 kV
DIN VDE 0216 (02.86)	Fittings for Overhead Contact Line and Conductor Rail Equipment; Static Mechanical Behaviour, Requirements and Testing
DIN VDE 0228 Part 3 (09.88)	Proceedings in the Case of Interference on Telecommunication Installations by Electric Power Installations, Interference by AC Traction Systems



DIN VDE 0228 Part 4 (12.87)	Proceedings in the Case of Interference on Telecommunication Installations by Electric Power Installations, Interference by DC Traction Systems
DIN VDE 0100 (05.73)	Regulations for the Erection of High-Tension Installations with Rated Voltages up to 1000 V
DIN VDE 0446 Part 2 (03.71)	Regulations for Insulators for Overhead Power Lines, Overhead Equipment and Telecommunication Lines; Regulations for Insulators for High-Tension Overhead Lines and Overhead Equipment up to 1000 V as well as Telecommunication Overhead Lines
DIN VDE 0446 Part 3 (05.73)	Regulations for Insulators for Overhead Power Lines, Overhead Equipment and Telecommunication Lines; Regulations for Fittings Permanently Connected to the Insulators
DIN 43138 (09.80)	Flexible Cables for Overhead Equipment and Return Current
DIN 43156 (03.78)	Electric Traction; Conductor Rail, Dimensions and Characteristics
DIN 43167 Part 1 (12.87)	Rod-Type Insulator for Overhead Contact Lines for Operating Voltages up to 1000 V AC and 1500 V DC; Assembly
DIN 43167 Part 2 (12.87)	Rod-Type Insulator for Overhead Contact Lines for Operating Voltages up to 1000 V AC and DC 1500 V; Caps, U-Bolts and Hook Bolt
DIN 43167 Part 3 (12.87)	Rod-Type Insulator for Overhead Contact Lines for Operating Voltages up to 1000 V AC DC 1500 V; Insulator
DIN 48201	Cables
DIN 48217 (06.78)	Notch Connectors for High-Tension Contact Wires and Rail Overhead Equipment
DIN EN ISO 9001	Quality Management System
BO Strab	Directive for the Construction and Operation of Tram Systems

Table 1: List of Standards for OLE

1.5.2 Standards for Traction Power Supply System

Erection of Electrical Installations	
EN 50110-1:2004	Operation of electrical installations
EN 50110-2:1996	Operation of electrical installations (national annexes)
Recipier Transformer	
EN 50329:2003	Railway applications - Fixed installations - Traction transformers
IEC 60076-1, Edition 2, 1:2000	Power transformers - Part 1: General
IEC 60076-2:1993	Power transformers - Part 3: Insulation levels, dielectric

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EN 50124-1/A2: 2005	for all electrical and electronic equipment
Power and Control Cables	
HD 603 S1:1994 HD 603 S1/A1:1997 HD 603 S1/A2:2003	Distribution cables of rated voltage 0,5/1 kV
HD 620 S1:1996 HD 620 S1/A1:2001 HD 620 S1/A2:2003	Distribution cables with extruded insulation for rated voltages from 3,6/6 (7,2) kV to 20,8/36 (42) kV
HD 627 S1:1996 HD 627 S1/A1:2000 HD 627 S1/A2:2005	Power cables - Multicore and multipair cable for installation above and below ground
Earthing and Bonding	
EN 50122-1:1998	Railway applications - Fixed installations - Protective provisions relating to electrical safety and earthing
EN 50122-2:1999	Railway applications - Fixed installations - Protective provisions against the effects of stray currents caused by d.c. traction systems
HD 637 S1:1999	Power installations exceeding 1 kV a.c.
HD 60364-4-41:2007	Low-voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock
Electromagnetic Compatibility	
BS EN 50121-1:2006	Railway applications - Electromagnetic compatibility - Part 1: General
BS EN 50121-5:2006	Railway applications - Electromagnetic compatibility - Part 5: Emission and immunity of fixed power supply installations and apparatus

Table 2: List of Standards for TPS

2 System Design

The aim of system design activities for this proposal was to propose an appropriate REL system considering the functional requirements described in tender documents. As a system designer, we did not follow all technical details to be able to propose a cost effective system, meeting the customer requirements e.g. as far as function and operation is concerned.

Therefore system design activities have been performed by Siemens for this proposal. Attached excerpt of traction study shows exemplary results of first simulations. These are to be considered as preliminary. A more detailed simulation will be performed as part of the detailed design phase. Results will be used for further definition of electrical equipment, like transformer ratings, cable cross-sections, number of cables used in parallel etc..

Some examples deviating from design described in detail in referenced tender documents ([1], [2]) with no effects on required system function are listed as follows:

1. No technical or operational need or advantage for building the (future) Russel Road Substation (initially to be provided as a track paralleling hut without DNO supply) was identified. Power supply is not and will not be in future (taking the information given in ERs into account) an issue at all in this part of the line (other substations are closer to full designed transformer rating than the ones adjacent to Russel Road). As far OLE sectioning is concerned no special building is required, too. We suggest not to build Russel Road substation/ track paralleling hut at all.
2. The reinforcement cable between GRE- and LSE-Substation as shown in tender document ULE90130-SW-OLE-00007, Rev. 3, sheet 1 of 3, is not needed at this point. This reinforcement cable should be designed and installed as appropriate when section 4 (delivery phase 2) will be realized in future. We suggest not to use a reinforcement cable between GRE- and LSE-substation for delivery phase 1 (phases 1a and 1b).
3. In part 3g/ chapter 3.3 of [1] it was asked to provide isolator enclosures for feeder and bypass isolators. For a LRT system as described in the tender documents we suggest to use section isolators mounted on OLE poles. This is common practice and proven design. The installation process is easier and more cost effective and special section pillars will not be needed at all. We suggest to install isolators located in substations in the OCS coupler room (refer to appendix B.3.6) and to mount wayside isolators on OLE poles, outside City Center from Haymarket to Edinburgh Airport. However, in City Center from Haymarket to Newhaven section isolators will be located in trackside cabinets.
4. Cross sections and number of cables in parallel for power cables (e.g. DC-feeder cables or track paralleling reinforcement cables) are selected according to technical need, based on simulation results.

However, first simulation results (refer to 1.3.2) and further investigations proved the adequateness (regarding e.g. minimal OCS voltage (>500V), rail potential

(<60V, for very short times, in one location in one worst case scenario (the rail potential is slightly above 60V; this can be handled with minor optimisation, for details refer also to appendix 8.3.1), current carrying capacity of cables and contact line, power rating of components (e.g. transformers, switchgear) offered) of following (refer also to appendix 8.3.1):

a) parallel reinforcement cable (where single trolley wire is proposed):

1 pc. 1 x 400mm² Cu for the line

or

1 messenger wire 120mm² (where catenary system is proposed)

b) feeder cable (substation to line)

2 pcs. 1 x 400mm² Cu in parallel

c) return cable (line to substation)

2 pcs. 1 x 400mm² Cu in parallel

d) 1 contact wire, 120 mm² copper

e) track bonds every 500m; rail bonds every 250m

f) type of rail

59-type rail in City Center (Newhaven to Haymarket)

49-type rail on Airport Link (Haymarket to Edinburgh Airport)

Items a) to e) also reflect the content of the proposal. Other component ratings derived from this study are given in other locations of this document (e.g. transformer rating). With reference [5], we received first, not confirmed CAF vehicle data. Thereafter, tie provided a complete set of input data to be used for a revised traction study to reevaluate the adequateness of the REL system proposed. Both, input data provided by tie and used for the traction power network simulation as well as the simulation results itself are given in appendix 8.3.1.

5. Interface between substation control and SCADA system databus via databus system rather than a hard wired interface cubicle.

Our proposal is based on the described suggestions. However, in case tie wants to insist on the original described system in the examples listed above, solutions can certainly be offered by Siemens.

More details regarding the offered REL system can be found in the following chapters.

2.1 Substation Control, Monitoring and Protection

As Substation Control System Sitras® SCS with Sitras® PRO is part of this proposal. Attachment 8.3.5 provides an overview about the substation control system and protection concept offered for ETN.

The central substation-control unit will be realized by a PLC (Simatic S7 635 touch, or similar) and does collect, evaluate and distribute all relevant substation control and protection data both substation internal as well as to SCADA system. It will also interface the medium voltage level protection unit from Scottish Power, to be able to trip their "consumer circuit breaker" for protecting tie's substation equipment. In addition some protection parameters will be provided from Siemens to Scottish Power for adequate protection of rectifier and DC-unit in project execution phase. Intertrip and Frame Fault Protection (FFP) are also functions realized in the substation-control unit. For more conceptual information on FFP, please refer to attachment 8.3.3.

The hard-wired emergency trip signal will also be read into this central substation control unit, which initiates the tripping of overhead line feeder circuit breaker (refer also to "tripping functions" listed below). Industry type relays will be used for the hard wired emergency tripping line (refer also to appendix 8.3.2).

For 2nd-level protection, each substation-controller is connected via a multi-core pilot wire to the adjacent substation-control units. In case there is a short circuit on the overhead line, the SCS central unit detecting this short circuit first will trip the relevant adjacent substation via this hard wired connection.

Since we propose not to install a separate RTU with a hard wired interface between substation control and the substation node of SCADA system, the battery charger-, intruder alarm- and fire detection-status message will also be read into the central substation control unit and routed through the substation control system via substation node and SCADA to the central control room for information of the operator. For these status messages, substation control unit acts like a signal forwarding unit, only.

Protection functions for the feeders will be covered by Sitras® PRO unit. One of those units is located in each feeder panel.

For protection of persons characteristics defined in EN 50122-1 will be followed by Sitras® SCD, connecting the return line to earth (refer to chapter 4.3.2 and to single line in appendix 8.3.2) if rail potential limit is reached.

Substation feeder isolators and the bypass isolator will be controlled by the Simatic ET 200S units.

All these devices belonging to the substation control system do exchange relevant data using Profibus DP databus system. The interface to overall SCADA system is, physically the local substation OTN node. The SCS central unit and SCADA's substation OTN node are connected via a databus interface using Ethernet TCP/IP or Modbus RTU (or similar).

Following protection functions can be implemented using Sitras® PRO DC protective unit:



- Overcurrent protection I_{min} and I_{max}
- Current step protection ΔI
- Current rise protection (di/dt)
- Independent definite-time overcurrent time protection I DMT and I DMT_{rev}
- Undervoltage protection V_{min}
- Overvoltage protection V_{max}
- Monitoring of line voltage
- Impedance protection
- Circuit breaker failure protection (trip of higher level circuit breaker)

Tripping functions for staff provided:

1. System Controller, located in control room, can trip 11 kV supply of each substation individually via SCADA.
2. Staff can trip 11 kV supply locally by means of a push button located in substations lobby of each substation, which is read into the central substation control unit.
3. System controller, located in control room, can trip 750 V overhead line in either direction starting from one substation via SCADA.
4. System controller, located in control room, can trip 750 V overhead line in both directions via hard wired mass trip line. The signal will be read into the central substation control unit and tripping of DC feeder circuit breakers will be initiated. DC-feeders of all substations of one group will be tripped by pushing the relevant push button. Substations are clustered into two groups.
5. Staff can trip 750 V overhead line in both directions simultaneously by means of a push button located in substations lobby of each substation, which is read into the central substation control unit.
6. System controller, located in control room, can trip 750 V overhead line section between two adjacent traction substations via SCADA. In addition to the control signals transmitted via SCADA to the substation control systems, the DC feeders of relevant adjacent substations can be tripped using the intertrip pilot wires.

In addition to the listed tripping functions, this proposal is based on, as clarified with tie in meeting on 2007-11-27, feeder and bypass isolator functions as described in appendix 8.3.10. In the depot wayside switches are offered to be manually operated, only.

2.2 EMC, Earthing & Bonding

For system wide EMC and Earthing & Bonding concept, please refer to Folder 3 Part 1 of 2, Section 2, Annex 3 and Annex 4.

3 Overhead Line (OHL)

3.1 OHL System Description – Design

The contractor will design the complete system using the standards, parameters and layouts detailed in this documentation and the technical drawings given in tender documents as listed in appendix 8.3.11.

The OHL equipment is suitable for supplying current to pantographs mounted on the roof of the trains without any significant loss of contact and the resultant sparking, at all speeds up to 80 km/h under the operating conditions given in this documentation is within acceptable limits.

The OHL system has been pre-designed as trolley type without messenger wire and one contact wire per track from Newhaven to Russel Road Junction. A parallel bypass cable laying in the earth will be used. In this part of the line, the design tender drawings as listed in appendix 8.3.11 have been followed for this proposal (bill of quantity). The given design was considered being appropriate for autotensioning solution, which is offered with this proposal. Fixed tensioning solution could also be offered for this part of the line. More considerations regarding contact wire-panto contact quality, panto and contact wire wear/ impact on maintenance, ensuring that contact wire remains under all operational condition within the specified working range and disadvantages due to increased, if not even unacceptable sag needs to be made on this issue. To find an acceptable solution will probably, beyond other modifications, lead into an increased number of poles, and modified pole locations in some areas, compared with the design shown on tender drawings. Increased tensioning forces may help to limit the maximum sag, but needs also further considerations, e.g. as far as contact wire safety (worn condition) and statics of mounting parts (like pull offs) and poles are concerned.

From Russell road junction to the Edinburgh Airport as well as from Russel Road Junction to Granton Square the OHL system has been pre-designed as catenary system with both one single contact wire and one single messenger wire. For this part of the line, the design in tender drawings as listed in appendix 8.3.11 have been used as a basis. Bill of quantities, like number of poles and related equipment has been reduced/ adjusted to use the cost advantages provided by using a catenary rather than an autotrolley system with buried parallel reinforcement cable.

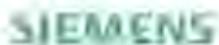
The OHLE shall be preferred auto tensioned along the whole line and depot.

Building fixings will be used where applicable and technically possible. Where building fixings cannot be applied poles shall be used at lines and depot to install OHL supports (cantilevers, cross or head spans and other OHL equipment). Cross spans will be used especially in the city centres, double track cantilevers mostly used in narrow curves, where location of centre poles is not possible.

Consequently, the OHL of the system will have to be designed taking into account different circumstances with priority in individual areas.

The contact wire is staggered to even out the pantograph wear.

According to the simulations carried out and described in the Traction Study a cross section of 120 mm² for contact wire has been found necessary to transfer the traction power during scheduled service.



The material type (copper or aluminium), the cross section and the number of cables (one or two) of the bypass cable will be defined during a later stage.

The messenger wire will have a cross section of 120 mm², material is copper.

In principle the layout design follows the tender (refer to appendix 8.3.11), especially in areas with building fixings, since changes might have a major impact on design and consent process performed by it. The same applies for the whole City Center (Haymarket to Newhaven), where the number and locations of poles and related equipment follows tender drawings as per appendix 8.3.11. Based on these requirements, the proposed design was modified to an autotensioning system to cope with e.g. the given pole distances and environmental requirements (in particular min/max temperature) as well as to provide state-of-the art technique with low maintenance needs.

3.1.1 Design for main line, city loop from Newhaven to Granton Square

For the portion of the City Loop from Newhaven to Russel Road Junction an auto-tensioned contact wire system will be installed for the main line. On the supports the contact wires are supported by bridle suspensions at cross wires or cantilevers. Single cantilevers are preferably mounted at the masts, which should be located between the tracks of the double-track section. For the city loop building fixings will be the preferred solution, wherever possible. The parallel bypass cable will be connected via Y-joints to the contact wire and also both contact wires will be connected to each other in appropriate distances. The exact distances will be defined according to the traction study during the basic design phase.

3.1.2 Design for main line, from Russell Road Junction to Edinburgh Airport

For the Overhead Line System outside the city centre a catenary system with one contact wire and one messenger wire has been foreseen. The huge advantage of this solution is the possibility of direct connection between contact wire, which is the connection to the pantograph and the messenger wire. The long and often connection from cables laying in the earth to the contact wire could be saved. And in addition the span length from support to support could be enlarged, because the system with contact wire and messenger wire has a bigger mechanical stability. However, the bill of quantities for this proposal is based on tender drawings as listed in appendix 8.3.11 adjusted to use the cost advantages provided by using a catenary rather than an autotrolley system.

3.1.3 Design for the Depot area

An tensioned trolley system with one contact wire will be installed in the Stabling Yard and in the Workshop Building.

The contact wire will be tensioned by spring terminations or wheel tensioning devices respectively fixed terminated where applicable.

The cross section of the contact wire will be calculated during basic design phase. Nevertheless it will be not more than 120 mm².

In the workshop a movable conductor rail will be installed on two tracks. One track will be 55 meter and a second track will be 110 meter length.

A locking device for the switches in the workshop is considered. The purpose is to interlock OLE sectioning disconnectors in workshop with high level access platform, movable conductor rail and craneage. The integration of these disconnectors, which will be mounted close by overhead contact wire at workshop building wall, into an overall interlocking concept will be supported by using padlocks.

3.1.4 Requirements for the OHL-System to Earthing

DC railway installations require an earthing and return current system to satisfy the requirements for safety of persons and for protective provisions against the effects of stray currents.

The earthing measures which affect civil works and all participants for the electrification, especially power supply and overhead line system will be coordinated in the overall earthing concept.

The insulation of the running rails is the main parameter for reducing stray currents. Therefore, all exposed conductive parts which are not insulated from earth shall be connected to earth and shall not be directly bonded to the running rails. The support structures of OHL need not to be connected to the running rails via voltage-limiting devices if the insulation of the overhead contact line has been doubled or reinforced.

3.1.5 Building Fixings

The requirement in the tender to use building fixings preferably instead of poles to support OHL equipment wherever it is possible have been considered. The design of building fixings follows the tender, since changes might have a major impact on design and consent process performed by Tie. It is assumed that all necessary permissions from house owners will be available if the contract comes into force and that those will be handled by Tie or others, not Siemens.

The feasibility for using of defined buildings (tender documents) for fixation of building fixings from static point of view will be verified by Tie or others, not by Siemens taking design requirements from Siemens REL into account. Legal permissions (e.g. building fixing agreement) will be handled by Tie or others.

3.1.6 Abnormal load routes

Abnormal load routes and contact wire heights are new in accordance with [6].

3.1.7 Protection of poles

Protection of poles against corrosion has been taken into account. OHL poles will be galvanized and painted. Cable arrangements e.g. for infeed purposes will be carried inside the poles to protect them against outer influences.

3.1.8 Overhead Line under Bridges

OHL equipment will either be fixed under bridges by means of special elastic supports (where necessary) or passed through without direct fixing to the bridge structure if neighbored poles can be used to support them.

The overall earthing concept will consider earthing conductors to be installed under bridges to react against an increase of the bridge potential in case of unintended touch with traction voltage (e.g. in case of faults, where derailed pantograph or broken OHL wire could get in touch with the bridge). Insulating plates shall be installed, if additionally necessary, to protect the bridge structure during those circumstances.

However, it will be part of the interface clarification during implementation of the project to coordinate those details considering local conditions.

3.1.9 Interface to OHL Foundation and Buildings

In general, poles will be mounted on block foundations by means of anchor bolts. The anchor bolts are welded to the reinforcement of the concrete and thus are used for the earthing of the poles.

Foundations of poles will be constructed by the civil work partner according to the design requirements of REL.

3.2 Description of Overhead Line Equipment (OHLE)

3.2.1 Cantilever, cross span and head span arrangements

The OHL system is supported and registered by means of single pole mast mounted cantilevers, back to back and 2 tracks cantilevers, cross span wires and in few cases by head spans. Under overpasses, the system is supported by modified supports (e.g. elastic supports) attached to the structure roof or wall. In the workshop the system is attached to the building structure, in the depot area outside the workshop the OHL mounted via head spans on poles.

The contact wires will be supported by means of bridle suspension at cantilevers or cross spans.

3.2.2 Cross Span Support

Where the localisation does not allow the use of cantilevers, especially in the city centres cross spans will be utilised. Where it is possible the span wire is fixed to a building anchor, otherwise it is installed between poles.

3.2.3 Span Wires

It is proposed at this stage that Bz-wires will be utilised for span wire purpose. The cross section will be determined according to the load requirement and safety.



Contact wire clamps will be of the parallel groove bolted design ensuring the correct fixation of the contact wire even if that is in fully worn condition.

Turnbuckles will be employed at those locations which may need some adjustment during their service life. Keeping this requirement in mind these locations will be finally decided on in the detailed design stage. For the moment at least the terminations of cross span wires, anchoring wires and guy wires will be equipped with turnbuckles.

As an option fully insulated cantilevers made of GFR tubes could be offered. If such solution is favoured the offer has to be revised, because such solution is not part of our offer.

3.2.7 Isolators

Isolators will be used only in the depot area. Manually operated isolators will be operated by means of a permanently mounted handle connected to the isolator by tube or similar arrangement.

The leading, coupling and switching of the main track is realized within the substations by adequate coupling equipment. Only the so called section isolators for coupling in longitudinal direction will be installed directly on the top of the poles outside City Center from Haymarket to Edinburgh Airport. However, in City Center from Haymarket to Newhaven section isolators will be located in trackside cabinets. A preliminary sketch of a cabinet is given in appendix 8.3.9.

A window, which may allow a view to disconnector, to check the position without opening the cabinet door is not planned. This may be subject to vandalism. In addition, disconnecting and earthing the contact line e.g. for maintenance purpose will happen rather seldom. However, the five safety rules needs to be followed in any case, thus e.g. the contact line needs to be earthed using an earthing gear in any case. This is a more obvious indication of contact line status which is in accordance with the five safety rules. That is also the reason, why we do not recommend and did not allow for section isolators with dedicated earthing function.

Further clarification led to the result, that he insists on three position switches with earthing function. These will be provided. The description in appendix 8.3.10 describes two position switches. This is to be disregarded from now on therein.

Further information regarding the proposed functions of the offered isolators are given in appendix 8.3.10.

3.2.8 Insulators

For the open section insulators will be used in the terminations and in the cantilever. Except for the synthetic rope employed in the delta type suspension no flexible insulators will be used in the OHL.

Standard design insulators, which are proven in similar installations will be utilised.

3.2.9 Section Insulators

The design of the section insulators will avoid any negative effect on the reliable operation of the assembly which may be caused by any torque in the contact wire. The section insulator as well permits the full travelling speed in both directions.

3.2.10 Jumper Connections

Jumper connections to the contact wire will be required at feeding locations, overlap arrangements and crossovers. The jumpers will be arranged as to avoid hard spots on the contact wire, which otherwise would create potential safety hazards due to the increased contact wire wear.

One possibility of reducing the negative effect of these jumper connections would be to locate them as close to the suspension as possible. This arrangement would eliminate the negative effect of the weight additionally imposed on to the contact wire.

3.2.11 Poles

In principle the following pole types are the preferred types for a tram system:

Preferred solutions (variants not in order):

- Variant 01: H-beam steel poles (no longer considered for ETN, except for depot, where H-beams may remain an option)
- Variant 02: Round steel poles
- Variant 03: Round steel poles (2-stepped)
- Variant 04: Round steel poles (3-stepped)

Alternative solutions (variants not in order):

- Variant 05: Conical tapered column poles
- Variant 06: Hexagonal tapered column poles
- Variant 07: Octagonal tapered column poles

Due to the fact, that the visual impact is very important in the Edinburgh City Centre, we considered there three stepped round steel poles. Also for the area from Russel Road to the Edinburgh Airport we considered three stepped round steel poles. For the depot three stepped round steel poles or H-beam poles will be used, depending on the detailed static calculations, which will be carried out during the basic design phase.

All poles are welded to a base plate incorporating holes for easy attachment on to the mast foundations. The variety of pole diameters will be limited as far as reasonable due to the tension applied to it. All feeding poles will have cable access by means of an embedded conduit to the centre of the pole.

Pole lengths are considered between approx. 7,5 and 9,5m. Diameters at the pole base are estimated between approx. 280 and 470mm. This large variation is due to different pole types (function, system, forces and moments applied) and is dependent on further design evaluation in basic design phase.

SDS reference design shows a high number of pole variants for both stepped and tapered poles. Our offer considers stepped poles for the complete line. For this



prevent live equipment from sagging below 5200 mm above the highway. Off highway, it may sag lower provided that it remains out of reach of pedestrians. Connections between the pole and the contact wire should be mechanically weaker than the contact wire system itself to ensure that if a pole is damaged, the connection will break before the live equipment is dragged down.

3.2.16.1 "5,2 m" – Requirement

The proposed design in City Center (shared tracks) was revised to comply with this requirement.

For off highway sections, where catenary system is offered (refer to chapter 3.1 and 3.1.2), it is assumed that pedestrians do not have access to general parts of the line. Where crossings are, the situation is different. However, it is noted, that reference [6] considers 4m as minimum contact wire height, it is also noted, that EN50122-1 asks for 3m in public areas and 2,6 in non-public areas in normal situation. During design phase, this subject will be investigated further. If necessary, outcomes could be further evaluated in a risk assessment.

3.2.16.2 "Support Weaker than Contact Wire" – Requirement

The "Support Weaker than Contact Wire" – Requirement cannot be met by BBS. As discussed in meeting with tie on 2007-12-05, it is also believed by tie that this requirement does not need to be demonstrated. However, compliance to this requirement is excluded from this proposal.

3.3 OHL Assembly Drawings in the annex

Number of drawing package: UK4-Z1100-0201 (32 pages).

Page	Title	Date
1	Cross section cross span (wall anchor)	16.03.2007
2	Cross section with single track cantilevers	16.03.2007
3	Cross section with two track cantilevers	16.03.2007
4	Manufacturing and installation tolerances for OHL Equipment	16.03.2007
5	Simple contact wire system simple cantilever with steady arm on center pole	27.03.2007
6	Simple contact wire system simple cantilever with steady arm on side pole	27.03.2007



single line which is part of appendix 8.3.2. From there, a bill of quantities, reflecting the proposed system, can be derived.

4.1 Medium Voltage Level/ Interface to DNO

Medium voltage level is 11kV for Edinburgh tram network. As described in the tender documents, medium voltage connections between the substations are, or will be realized by Scottish Power (=local DNO in Edinburgh) and is therefore not considered within the scope of this proposal. The requested separate "SP Compartment" for Scottish Power gear, like MV-switchgear, metering unit, etc. will be provided in substations (refer to substation layout sketches). The Scottish Power Room was enlarged in attached layout, as advised by tie in meeting on 2007-11-13 to a size of 4mx4m.

For the interface of MV-level switchgear to the rectifier and DC-unit, also as far as scope of supply is concerned, different scenarios may apply:

1. Scenario

All SP Compartment contents (e.g. RMU MV switchgear, metering, protection, "SP Consumer Circuit Breaker") are in Scottish Powers' scope of supply. Siemens will provide control cables and required parameters to enable Scottish Power to adjust their protection unit in an agreed on and appropriate way (e.g. that the SP Consumer CB can be tripped by Siemens' control system for protection of rectifier transformer)

2. Scenario

For most possible independability from Scottish Power in terms of technical interfaces, Siemens could provide tie's own MV switchgear, which would comprise basically one incoming and one outgoing feeder for each substation together with an own MV protection unit. In contrast to the 1. scenario, this would not have a (wired) connection to Scottish Power's protection system (although technical clarification and mutual fine tuning with Scottish Power would still be important). On the other hand, the two mentioned additional feeders are technically pure not needed and are therefore leading to extra costs (for e.g. switchgear, protection unit, room).

3. Scenario

Except the MV cables entering the substation building, everything could be considered within Siemens' scope of supply. Meaning even Scottish Powers' incoming feeder, the "SP Consumer Circuit Breaker", Scottish Powers' MV protection unit, Scottish Powers metering. Although this scenario seems to be the most comfortable solution for tie, it is certainly not the most cost effective e.g. as far as interface clarifications are concerned. Furthermore, DNOs usually have their preferred switchgear, metering and protection units, etc.. That is why we suggest, that these units should remain in SPs scope of supply (design, procurement, installation and testing).

As being instructed by tie in meeting on 2007-11-13 one 11 kV circuit breaker is to be considered per substation in addition to Scottish Power 11kV switchgear. This applies also for substation in depot for both, depot and mainline, not for auxiliary

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This concept and the corresponding design of the component itself enables the rectifier to carry a DC-side busbar short-circuit until the HSCB in the Incoming Feeder panel opens.

4.3 DC 750 V Switchgear

The DC switchgear will be a Sitras@ DSG system, consisting of a combined incoming and return current panel (as discussed and agreed on with tie in meeting on 2007-11-27), two (three for depot) line feeder circuit breaker panels.

The combined incoming and return current panel uses disconnectors, one each for the incoming and the return line. Both devices can be integrated into one panel to save room in substations refer to appendices 8.3.2 and 8.3.6.

For more information on Sitras@ DSG, refer to appendix 8.3.7.

4.3.1 DC rectifier and feeder circuit breakers

In each section feeder panel, one HSCB will be located.

HSCBs (high-speed circuit breakers) are mounted on trucks as draw-out units. Each section feeder panel includes the HSCB with arc chute, the line testing device and the associated components necessary for a smooth and effective operation of the switchgear.

The circuit-breaker panels are erected in a standard profile section construction and clad with steel panel walls. They closed off at the front by two lockable steel panel doors. The upper door leads to the partitioned-off low voltage compartment in the upper part of the panel and the lower one gives access to the switchgear truck. The lower door is able to be closed in any defined truck position.

Each circuit-breaker panel consist of a stationary part and a switchgear truck.

Stationary part

The stationary part consist of a standard sectional construction and partitions. The busbars with the isolating mating contacts are installed in this part. Furthermore, the mechanical parts for locking the withdrawal movement, the truck guide bars and the truck grounding bar as well as the devices at traction voltage (test contactor, test resistor, isolating amplifier) are provided here. The test circuit is completely isolated from the traction voltage when the truck is withdrawn.

Current or voltage indicators, alarm indications and Softbuttons will be realized with Sitras PRO displays. In the upper lockable steel panel door remote/local selector switches. The control devices are behind this in a low-voltage recess.

Switchgear truck

The switchgear truck is moveable and operable. It is capable of being withdrawn without the use of tools or other aids.

The switchgear truck frame is made from the same standard sectional construction as the stationary part. The DC high-speed circuit breaker with its self-coupling

isolating contacts to the busbar is installed in the central section on the switchgear truck.

The switchgear truck is equipped with a safe withdrawal and locking device. In the operating and isolated/test positions the switchgear truck is completely located behind the closed lower door.

Limit switches on the interlock lever, switch-OFF / disconnect the breaker before unlocking and releasing the draw-out unit. The breaker cannot be switched ON / connected, unless it is in connected or disconnected position. A mech. pin indicator is protrude from the panel in the isolated/test position.

The high-speed circuit breaker has been developed especially for use in DC traction systems. It provides highest protection of the DC circuit in conjunction with the integrated digital protection and control equipment SITRAS PRO, which provides inter alia the following functions:

- detecting near and distance short circuits by way of current variation (di/dt)
- individual adjustments of tripping characteristic
- thermal monitoring of the OLE and the DC power cables
- memory functions
- display with function keys

After the circuit breaker has tripped, the DC line is tested by a line testing device, to determine whether the fault has been cleared or not. If the fault is cleared, the breaker will be re-closed automatically. If the fault is permanent, the auto-reclosure unit will lock the circuit breaker after an adjustable time has elapsed.

4.3.2 Short Circuit Device – Sitras® SCD

The short-circuiting device Sitras® SCD is installed for personnel safety reasons and to ensure the voltage limitation between running rails and structure earth. This equipment assures that inadmissible touch potential as specified in EN 50122-1 cannot happen.

If the voltage exceeds the limits, the running rails will be connected to the structure earth. For safety reasons, such a device is located in each traction substation. Each device is interfaced to the SCADA system for remote monitoring, control and annunciation.

4.3.3 OCS coupling switchgear

OCS coupling switchgear consists of one panel for the two feeder isolators and one panel for the bypass isolator.

Behind the lower steel panel door the disconnectors and the busbars are mounted. In the upper steel panel door group-alarm indicating lamps, remote/local selector switches and illuminated pushbuttons / indicating lamps as well as a mimic diagram will be located, in case of motor operated devices. The control devices will be situated behind this inside the low-voltage recess.



conditions of the track and the early detection of insulation deficiencies, thus enabling measures to be taken to prevent damage due to stray current corrosion. The continuous measurement of rail potential, e.g. implemented in substations, is a practical possibility for the assessment of stray current behavior without increasing stray currents.

Taking reference measurements for a functioning system, the actual stray current situation and the rail potentials relating to that are recorded. Afterwards, along the entire line voltage monitoring during operation can be easily performed for comparative purposes.

This method does neither affect the current distribution nor the rail potential in the return system.

The **SITRAS SMS** stray-current monitoring system is used to monitor the track potential of DC railway networks.

This system permits evaluation of the stray-current conditions of the track and the early detection of insulation deficiencies, thus enabling measures to be taken to prevent damage due to stray-current corrosion.

- Continuous monitoring of track potentials during operation
- Automatic location of insulation deficiencies
- Representation, archiving and analysis of track potentials in a central evaluation unit
- Transmission of measured values via the communication network, existing networks can be used
- No interference with stray-current conditions because SITRAS SMS is based on potential measurement.

The measured values are transmitted from the sensors to the central evaluation unit via OTN.

4.6 Traction Power Supply for the Depot

The traction power for the depot shall be supplied separately from the main lines in order to ensure the specific requirements of the Depot supply and those for the main lines in respect of the different earthing concepts for the running rails.

For auxiliary 400 V AC supply for the depot, one auxiliary 11kV/ 400V transformer is part of this proposal. The interface to Scottish Powers 11kV switchgear follows the same concept as described in chapter 4.1.

Besides the fact, that this auxiliary transformer is a regular 3-phase/ 3-phase transformer and not a rectifier transformer with two secondary winding with a phase shift of 30°, the general parameters are similar to the rectifier transformers described in chapter 4.2.1, rated power is taken from tender documents with 800kVA. This transformer is considered to be procured from the free market.

4.7 Cables

Power and control cables will be manufactured and tested in accordance with the related European standards as described in the subsections below. Cross-section and number of cables are dimensioned based on the results of the simulations described in the traction study and may be subject to change during detailed design phase.

4.7.1 Medium Voltage AC Cables

Halogen-free single core cables with stranded copper conductor, XLPE insulation, copper wire screen and PE outer sheath will be used.

Type of cable	2XS2Y 1 x ...RM/.. 6/10 (12) kV
Standard	HD 620 S1 Section 5G and IEC 60502-2
Conductor	circular stranded plain annealed copper in accordance with IEC 60228, class 2
Conductor screening	halogen-free extruded semi-conductive XLPE
Insulation	halogen-free dry-cured XLPE
Insulation screening	halogen-free extruded semi-conductive XLPE
Semi-conductive tape	A halogen-free semi-conductive tape will be applied for embedding the copper screen and ensuring the electrical contact between insulation screen and copper screen
Metallic screen	copper wires with copper contact helix
Outer sheath	extruded black halogen-free PE compound

Conductor screen, insulation and insulation screening will be applied simultaneously in a triple extrusion process.

Similar cables with aluminum conductor and similar electrical parameters may be used instead of the described copper cables.

4.7.2 DC Traction Power Supply Cables

Halogen-free single core cables with stranded copper conductor, XLPE insulation and PE outer sheath will be used.

Type of cable	2X2Y 1 x 400 RM 0.6/1 (1.2) kV
Standard	HD 603 S1 Section 5G and IEC 60502-1
Conductor	circular stranded plain annealed copper in accordance with IEC 60228, class 2
Insulation	halogen-free dry-cured XLPE
Outer sheath	extruded black halogen-free PE compound

Similar cables with aluminum conductor and similar electrical parameters may be used instead of the described copper cables.

4.7.3 Emergency Trip Pilot Wires

Halogen-free multi core cables with solid copper conductor, XLPE insulation and PE outer sheath will be used.

Type of cable	2X2Y 1 x ...RM 0.6/1 (1.2) kV
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Equipment identification

All major equipment will be labeled with nameplates in English. Cable lists with important information will be provided. Individual wires are only marked at outgoing terminals. Internal cubicle wiring will be performed as per the manufacturer's standard and may not be labeled.

6.3 Approvals by the Client or his representatives

The following documents will be prepared and submitted to the Client (reviewable design data) according to progress of the design:

- DC Traction Study
- DC Short Circuit Study
- Single line diagrams of substations
- Layout of the Traction Supply Substations on typical basis
- Circuit diagrams and terminal lists of main components (e.g. transformer, cubicles)
- Cable lists
- Maintenance manuals
- Training documents

Submissions with specification of the equipment will be prepared as described above. Therefore, these documents will be elaborated in close co-operation with the Client and based on the information of the other partners. They will be presented to the Client for approval and will then be the basis for the project planning.

In particular it shall be emphasized that the project schedule dates depend on the approval of the Client being made in time. For technical clarifications the Client shall, if necessary, provide information at short notice.

Design documents shall be forwarded by the Client (where necessary) after their approval to any third party to be involved so that the approval period of time is limited as much as possible.

If any documents submitted have not been answered in writing within a certain period of days (not yet defined) after submission it shall be deemed as approved by all parties involved.

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Tests that refer to the integration of the subsystem after the completion of a location or section shall be witnessed by responsible persons regarding the railway electrification system, to follow up the tests and to sign the certificates accordingly.

B Appendices

8.1 Glossary

AC	Alternating Current
ACB	AC Rectifier Circuit Breaker (= Scottish Power Consumer Circuit Breaker)
BS	British Standard
C	Capacitor
CB	Circuit Breaker
DC	Direct Current
DNO	Distribution Network Operator (for Edinburgh Tram: Scottish Power)
EMC	Electromagnetic Compatibility
EN	European Norm
ETN	Edinburgh Tram Network
FFP	Frame Fault Protection
HSCB	High Speed Circuit Breaker
LRT	Light Rail Transit
LV	Low Voltage
MV	Medium Voltage (for LRT Edinburgh: 11 kV)
NC	Normally Closed
NO	Normally Opened
OHL	Overhead Line System
OLE	Overhead Line Equipment
OTN	Open Transport Network
PLC	Programmable Logic Controller
R	Resistor
REL	Railway Electrification
RMU	Ring Main Unit
SCADA	Supervisory Control And Data Acquisition
SCD	Short Circuit Device
SCS	Substation Control System
SMS	Stray Current Monitoring System
SP	Scottish Power (local DNO)
TPH	Trams Per Hour
TPS	Traction Power Supply



8.2 OHL – Appendices

8.2.1 Assembly Drawings OHL (Bid Phase), 32 pages

8.3 TPS – Appendices

8.3.1 Excerpt - Traction Study

8.3.1.1 Report – Traction Study

8.3.1.2 Spreadsheet – Input Data

8.3.2 Single Lines (Overall and Substation)

8.3.3 Frame Fault Protection Slides

8.3.4 Stray Current Monitoring Slides

8.3.5 Traction Substation Control – Conceptual Overview

8.3.6 Substation Room Layouts

8.3.7 DC Switchgear Sitras® DSG

8.3.8 Short Circuit Device – Sitras® SCD

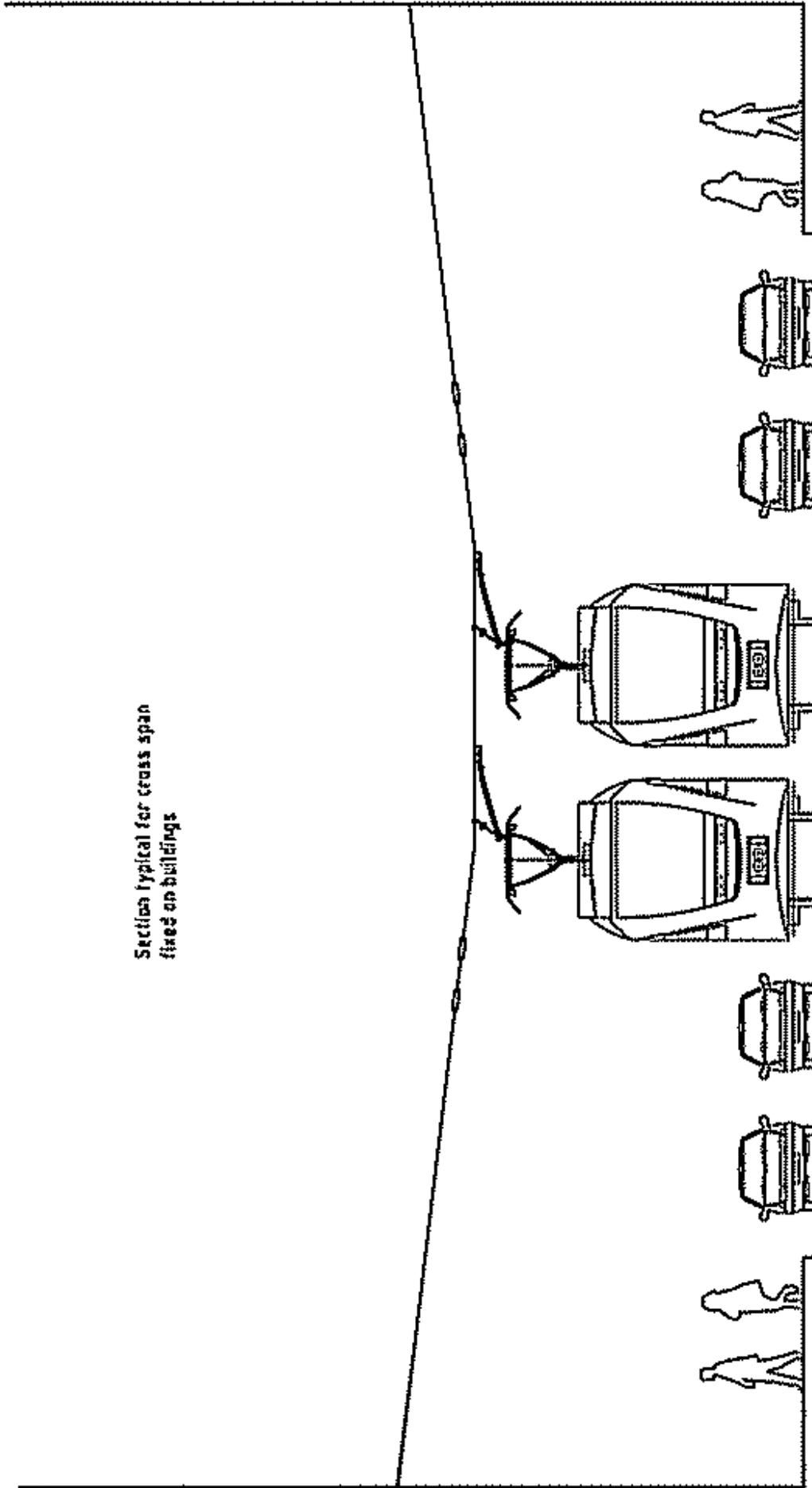
8.3.9 Trackside Cabinet – preliminary Sketch

8.3.10 Feeder and Bypass Isolators – Description of Function in proposed REL-System

8.3.11 List of SDS OLE drawings used for proposed OLE Design

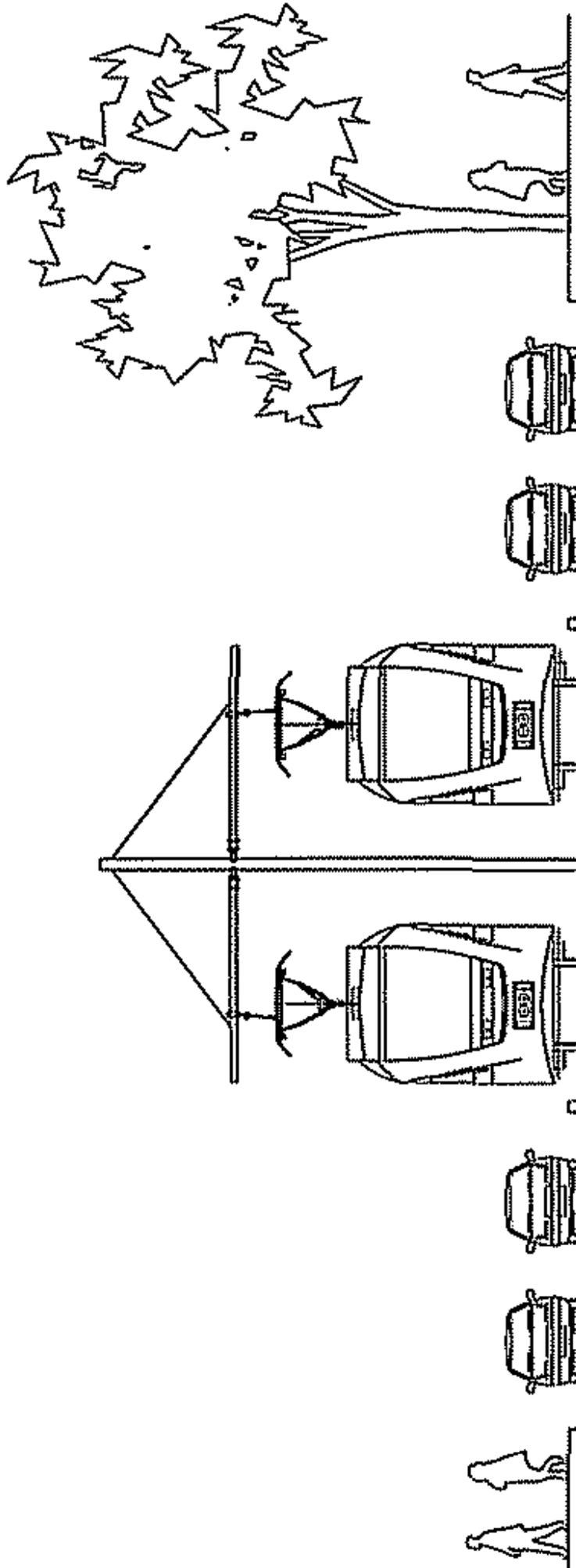
8.3.12 11kV Medium Voltage Switchgear

Section typical for cross span
fixed on buildings

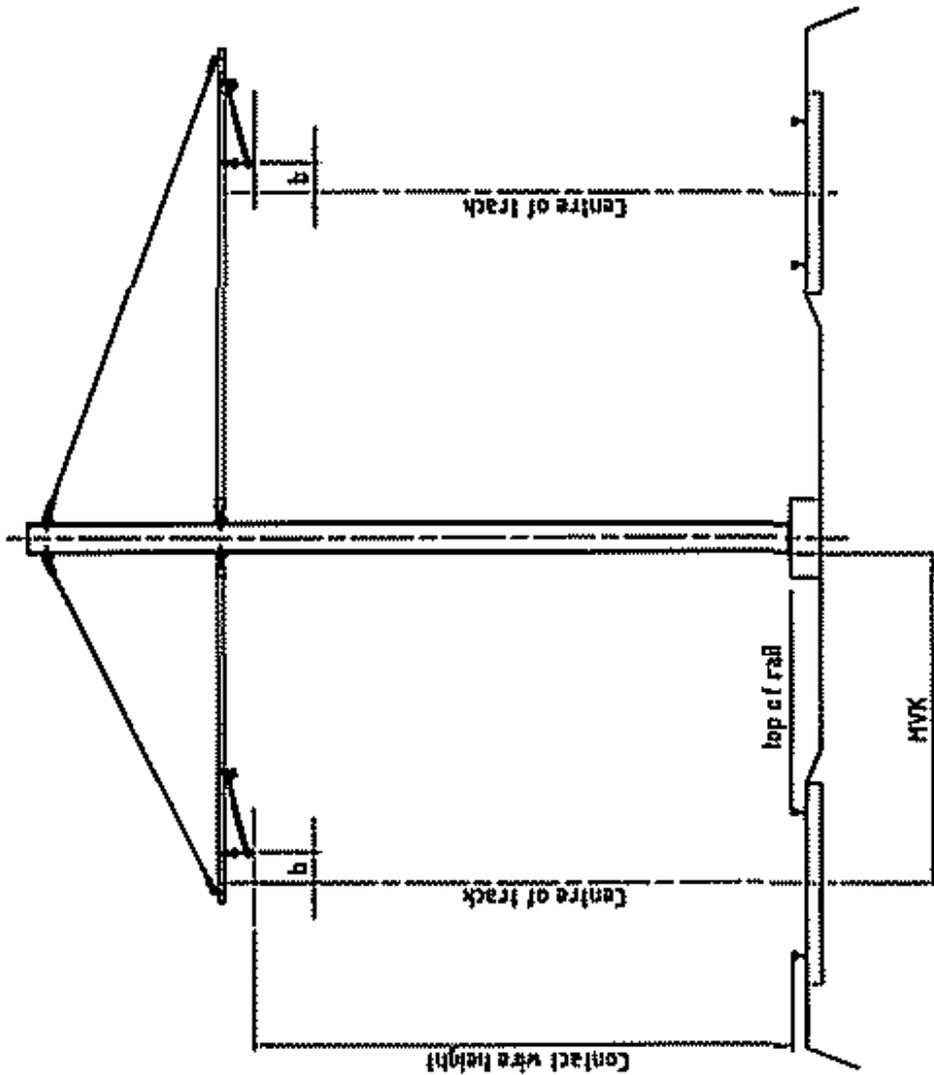


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		297	297	297

Section typical for centre pole
with back to back cantilevers

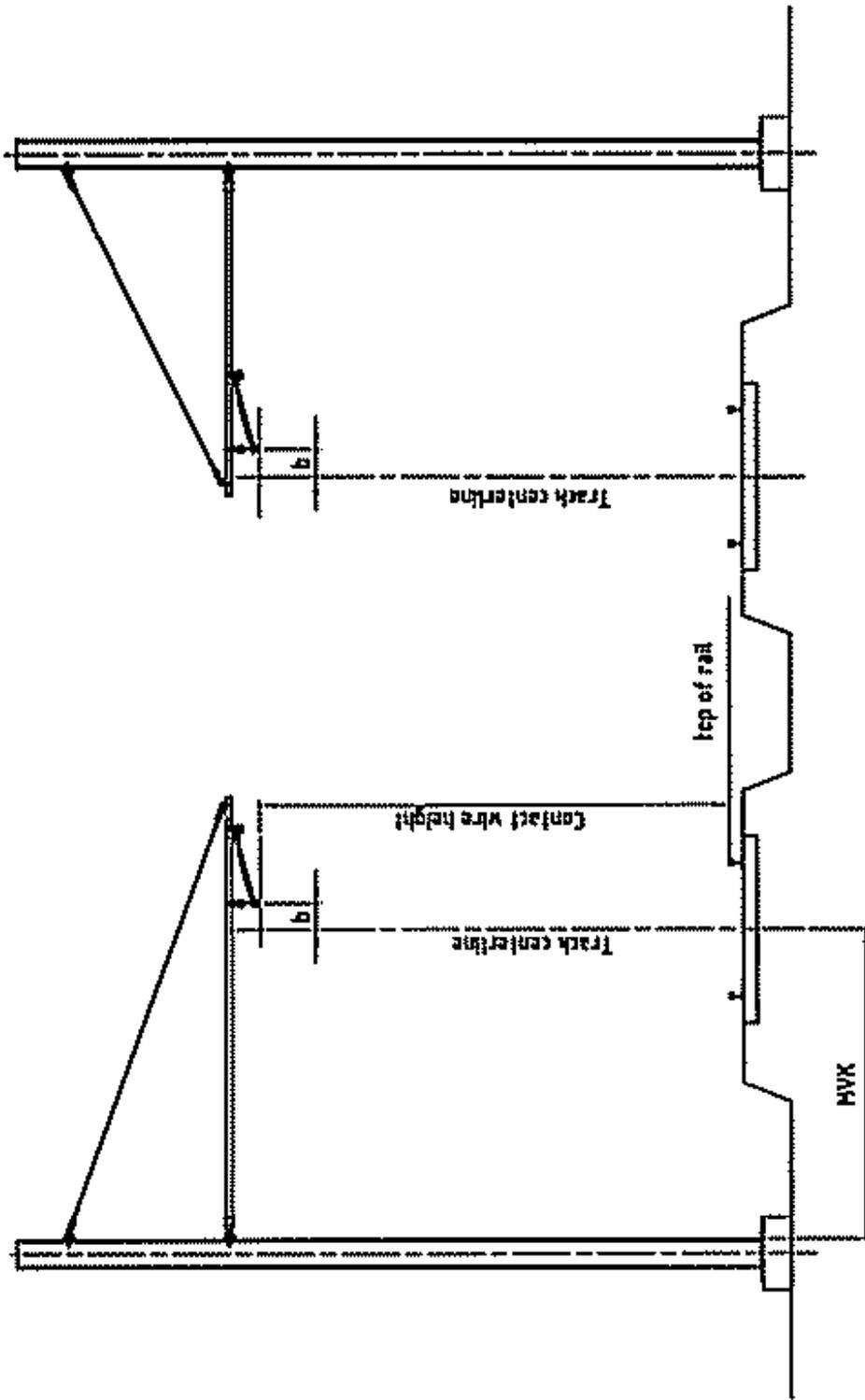


LAT EDINBURGH		SCALE	DATE	AS
		Assembly Drawing (No. 1010 P-101)		
		Cross section with single track cantilevers		
		1010 P-101-011		
		ITEMS		
		ITEMS		



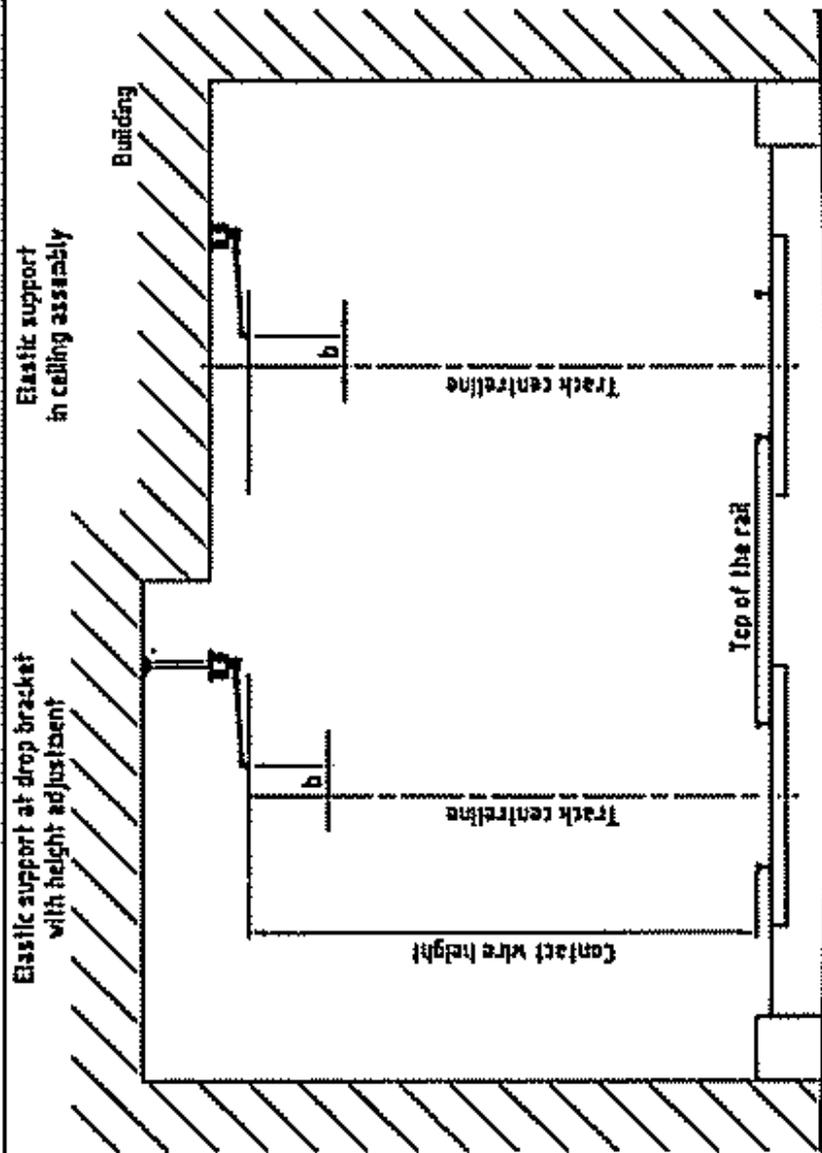
MVK = distance track centerline to face of pole
 b = stagger of contact wire

LRT EDINBURGH		Scale	1	Size	A3
		Assembly Drawing	DRG. (D&A) P&S		
		Simple contact wire system simple cantilever with steady arm on center pole			
		MVA - 2100-4121			
		SIEMENS			



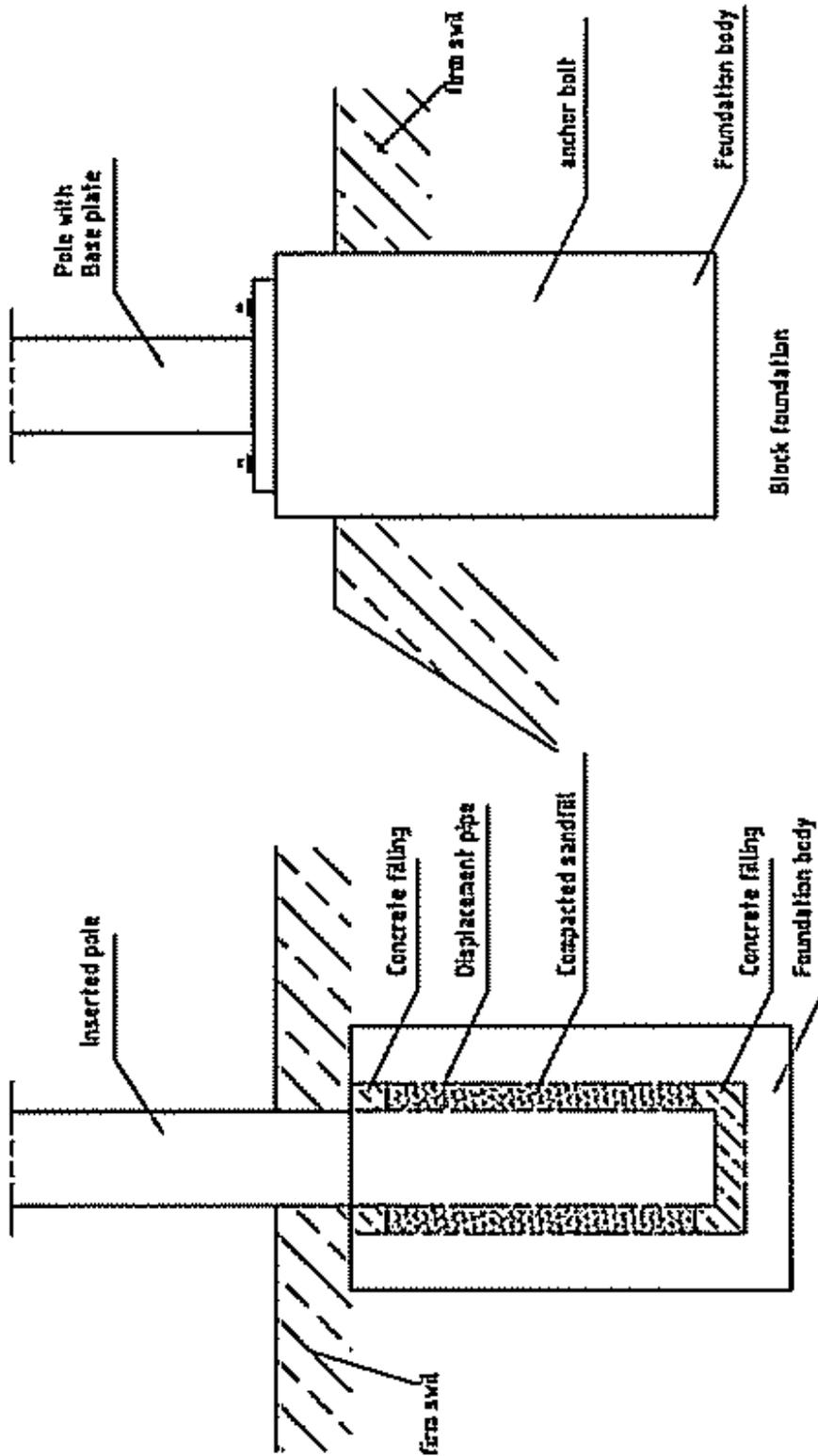
HVK = distance track centerline
to face of pole
b = stagger contact wire

LINT EDINBURGH		SCALE	NOV	DATE	AL
SIEMENS		Assembly Drawings Oct. (Edg/Pour/H)			
SIEMENS		Simple contact wire system simple cantilever with steady arm on side pole			
LX4-2101-0121					

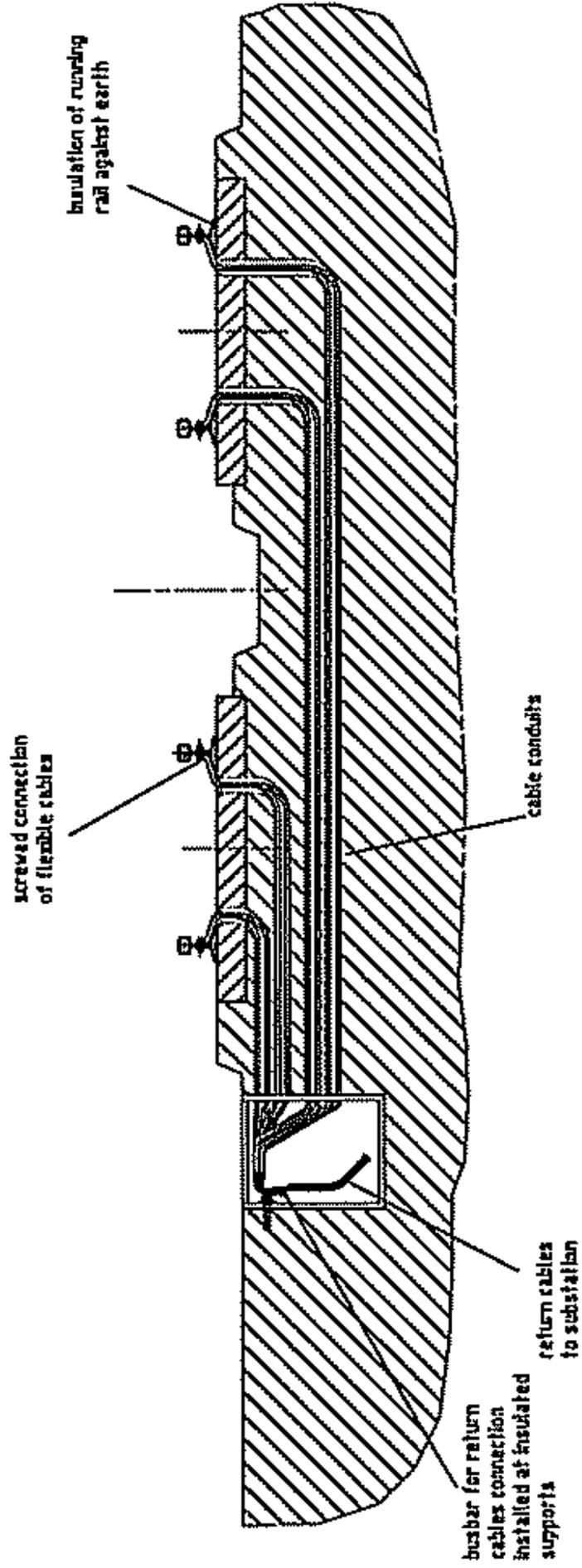


b = contact wire stager

LAT EDINBURGH		Scale:	Scale:	AS
		Already Drawing On B-4 Plans		
		Single contact wire system under bridges, with elastic supports		
		DKA-2113-221		
		SIEMENS		



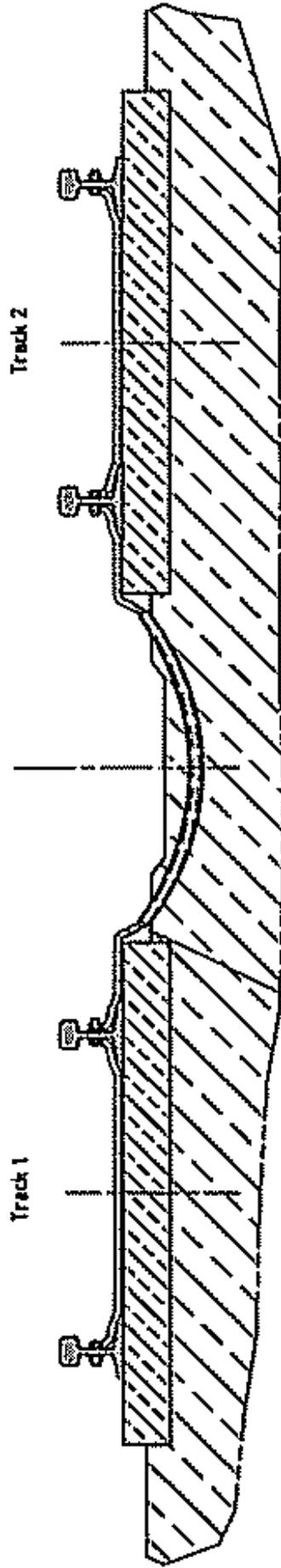
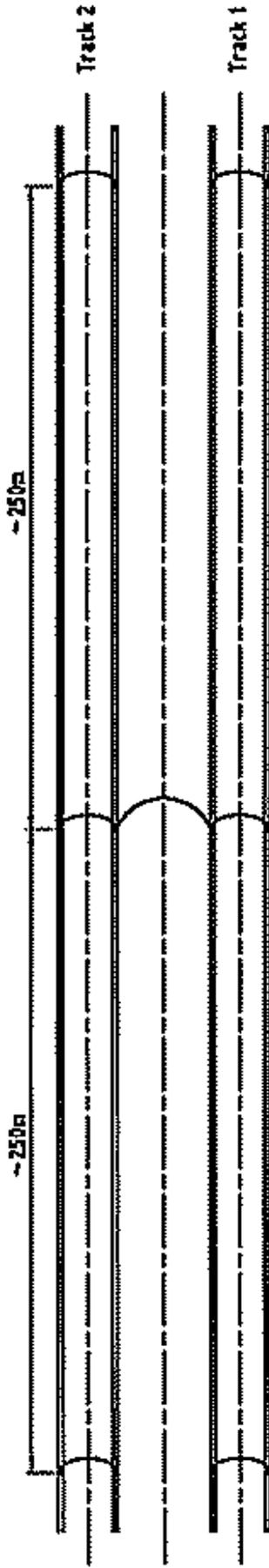
LAT EDINBURGH		SCALE	NO.	REV.	DATE
		Assembly Drawing Of (Description)			
		Examples for Foundations			
		UK1-2100-1111			
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applicable at traction substation

LRT EDINBURGH		3000	2004	1	100	AS
		Assembly Drawing Of (BDFPNU)				
		Example of return cable connection at separate tracks				
		UK1-2100-011				
		SIEMENS				

Exact arrangement of the return conductor connection depending on track work design related to local conditions

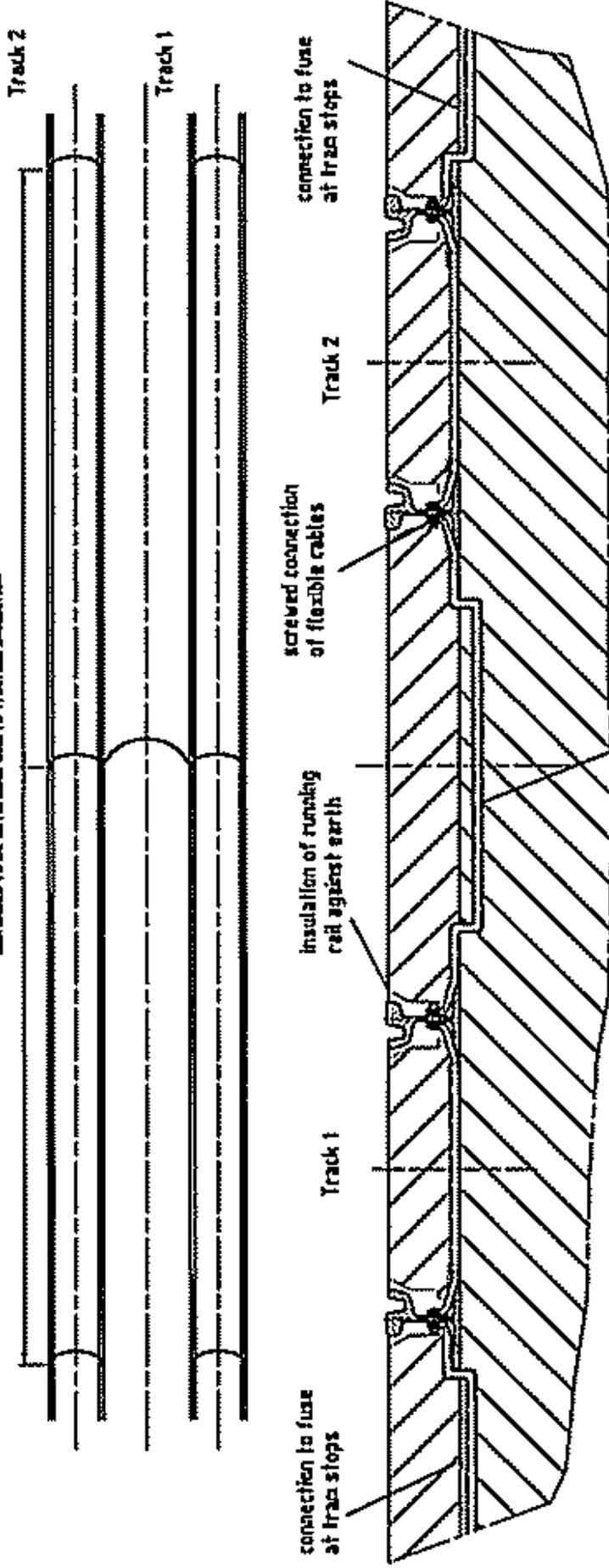


rubber insulated
flexible cable
installed in flexible
resistant PVC-tube

The arrangement of the track and rail current connectors depends on the plant configuration especially in relation with insulated track sections.

LRT EDINBURGH		Track	nom	5-IT	41						
		Assembly Drawing Of (Old Form)									
		Track and rail current connection for two tracks									
		UM 1 - 2100-111									
		REVISIONS									
		<table border="1"> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>				NO.	DESCRIPTION	DATE			
NO.	DESCRIPTION	DATE									

distances to be determined acc. to track cross-sections

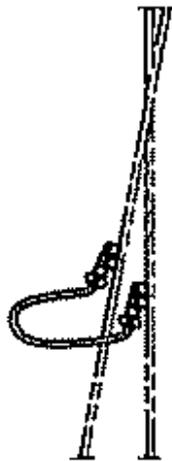


Exact arrangement of the track and rail bonds depending on Track work dealing related to local condition

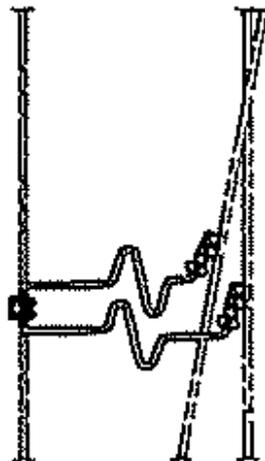
applicable at tram stops

LRT EDINBURGH		SCALE	FORM	DATE	AL
		Assembly Drawings OLR (BdP/114)			
		Principle arrangement of track and rail bonds for embedded track			
		SIEMENS		UK1-2180-0753	
				G	
				11	

Current connector
contact wire-contact wire
between two single contact wires



Current connector
contact wire-passenger wire-contact wire
between category line and single contact wire

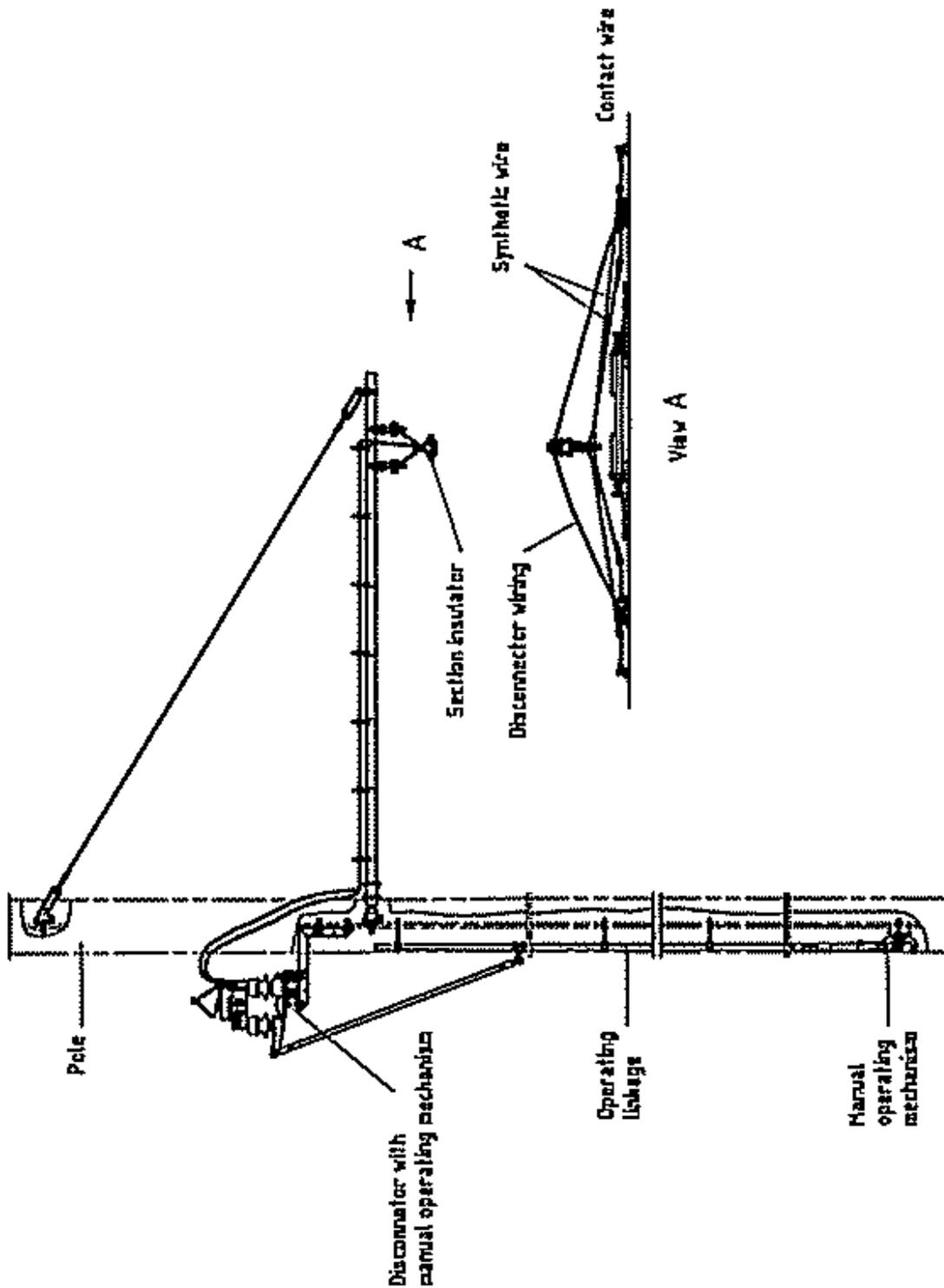


Wire connector
E-copper 126mm² flexible

The arrangements of the current
connectors depended on the contact
line system configuration

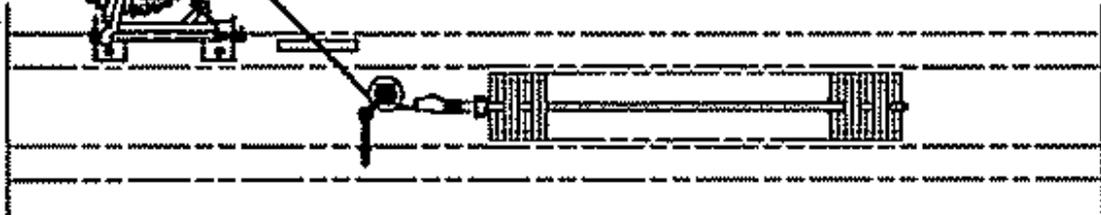
Double arrangement current
connectors a variable

LAT EDINBURGH		SCALE	NO. 1	REV.	DATE
		ASSEMBLY DRAWING OF BID POINT			
		CURRENT			
		CURRENT CONNECTOR			
		UK 3-21153-023			
		SHEET NO.			
		TOTAL SHEETS			
		DRAWN BY			
		CHECKED BY			
		APPROVED BY			
		DATE			



LRT EDINBURGH		DATE	NO.	REV.	AS
		Assembly Drawing O.C. Bid (Pole)			
		Simple contact wire system sectioning for simple cantilever at switchable with disconnector for one pole			
		DCL-2101-0101			
		SHEETS			
		11			

Wheel tensiling device



Messenger wire
Contact wire



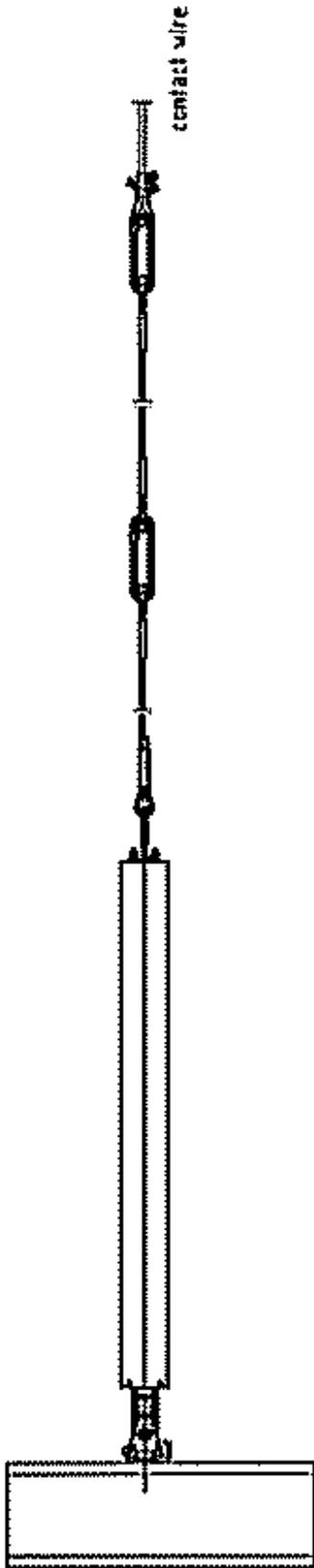
Fixed termination



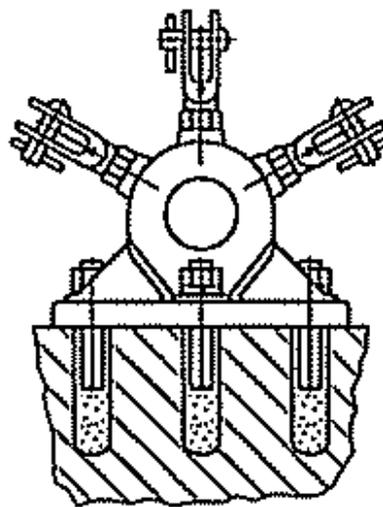
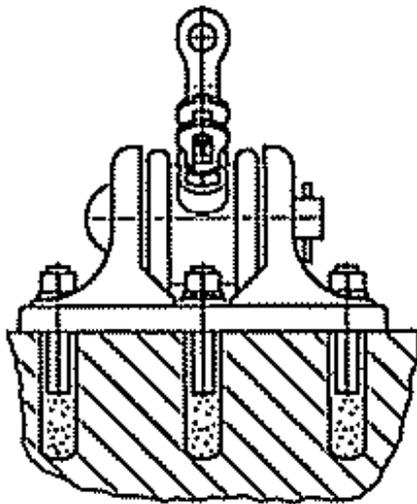
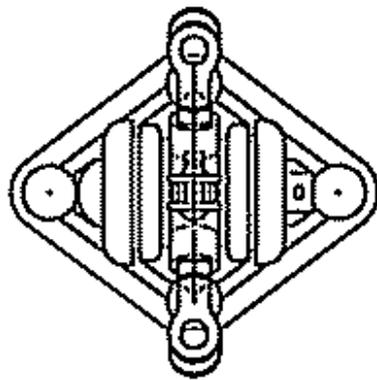
Spring termination



LRT EDINBURGH		LINE	NO	1	328	AL
Assembly Drawing (CL 88/P111)						
Terminations for contact wire/s or catenary system						
CSL 2119-RT1						
SHEET NO						

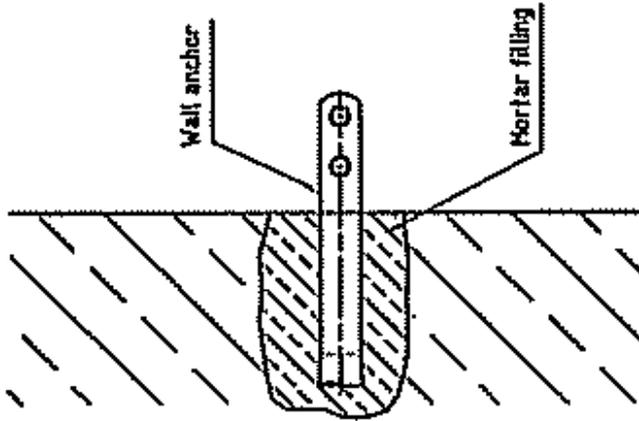


LRT EDINBURGH		DATE	BY	REVISION
		Assembly Drawing of Contact		
		Flexible termination of pole for contact wire with spring		
		D.W. 2705-2331		
		SUPPLIER		
		SIEMENS		

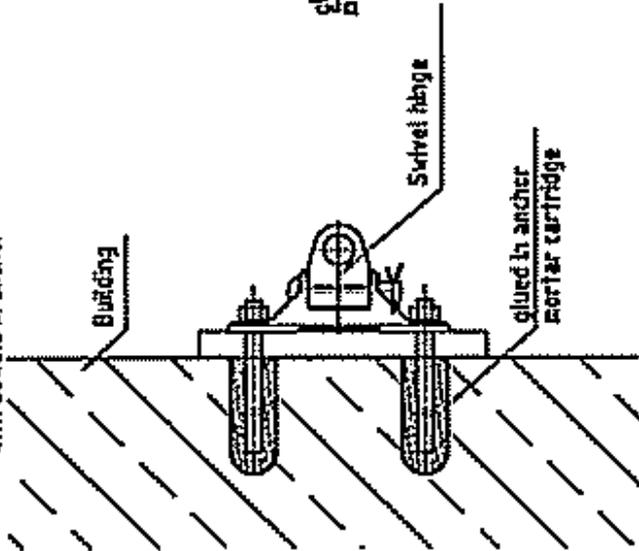


LRT EDINBURGH	Scale	1	Size	A1
	Assembly Drawing (See Part)			
	Project	Building fitting for multiple fixation		
	Part No.	LRS-2103-220		
	Rev.	1		
	Drawn			
	Checked			
	Approved			
	Material	STEEL		
	Quantity			
	Weight			
	Notes			

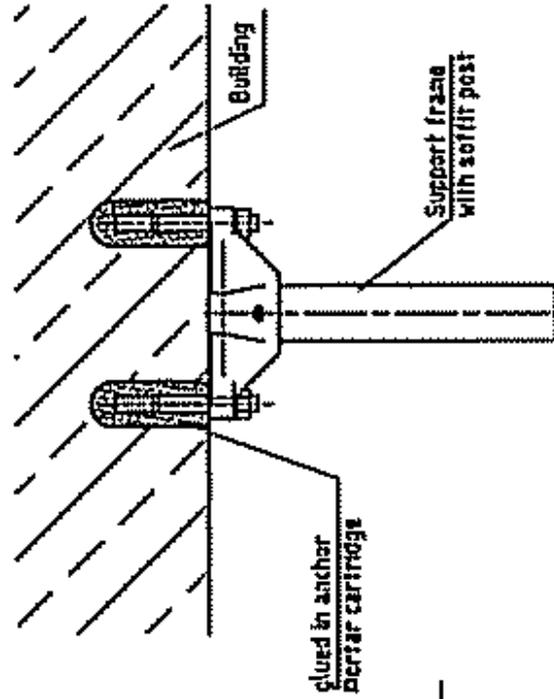
Wall anchor in mortar filling



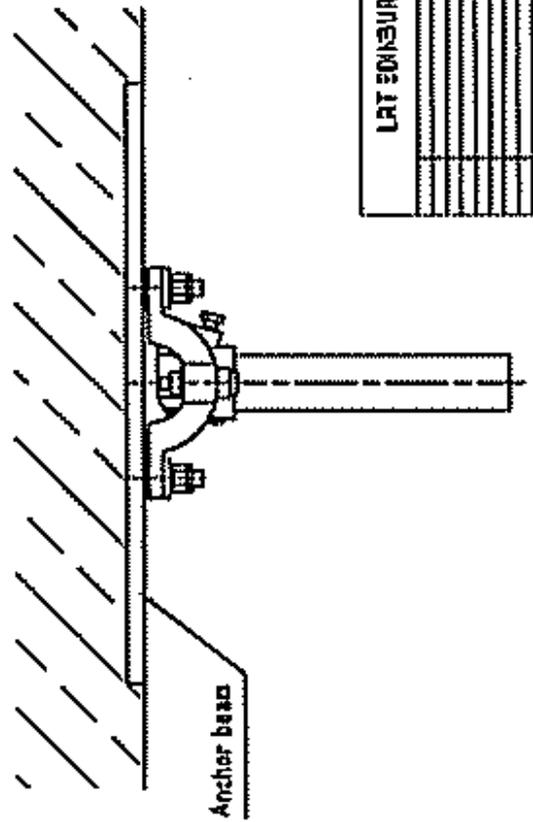
swivel hinge, bracket arrangement with dowel in anchor



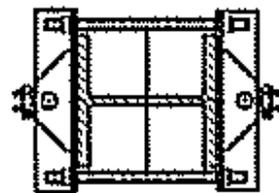
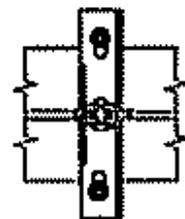
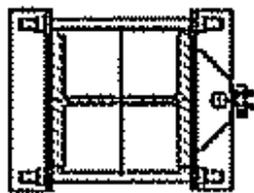
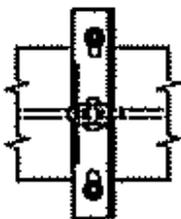
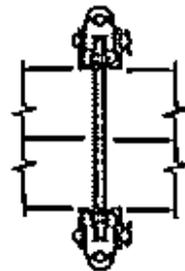
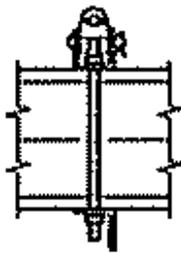
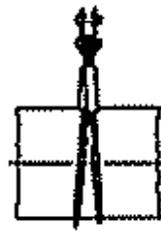
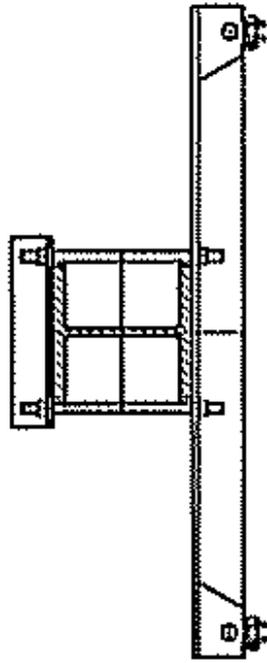
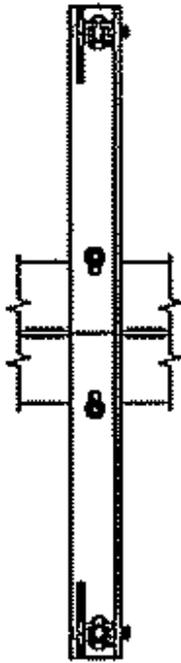
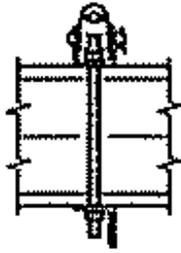
Support frame with dowel in anchor



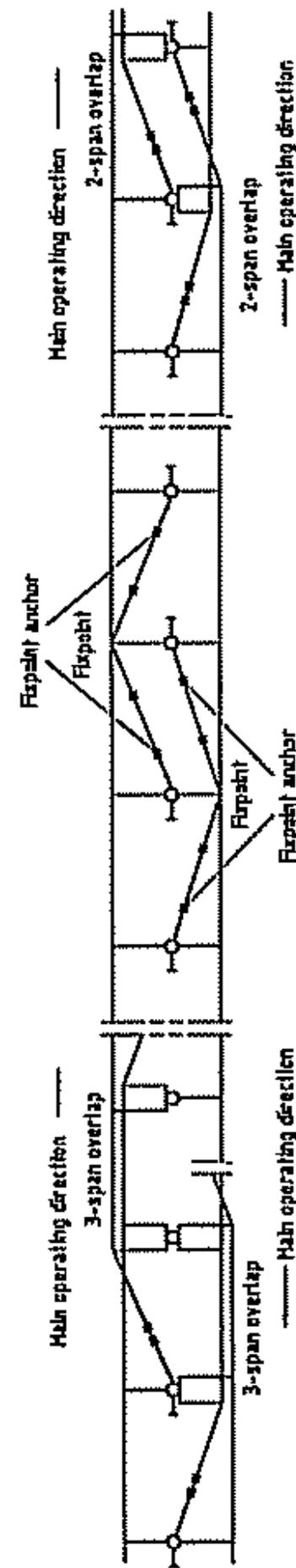
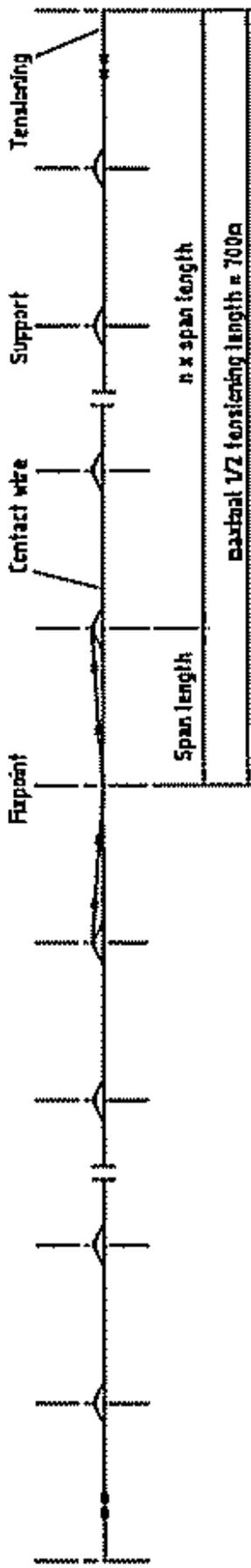
adjustable support frame at anchor beam



LRT EDINBURGH		Scale	None	Date	11
		Author		A1	
		Drawing		Building fitting arrangements	
		Check		UCS-2100-0101	
		Rev		23	
		Status		23	



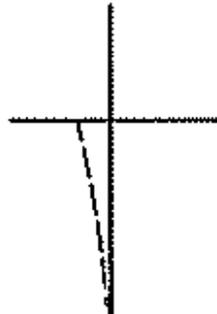
LAT CONDUIT		DATE	NO.	REV.	BY	CHK.
		Assembly Drawing for Old Plant				
		Filing accessories arrangements for contact wire poles				
		L.A. 2700-4761				
		SIEMENS				



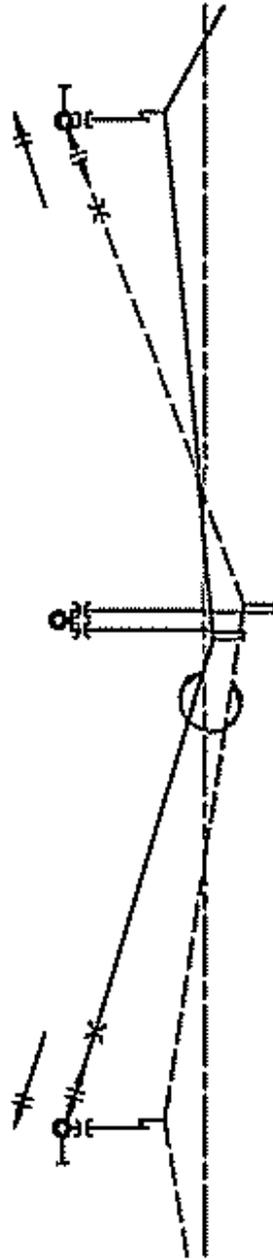
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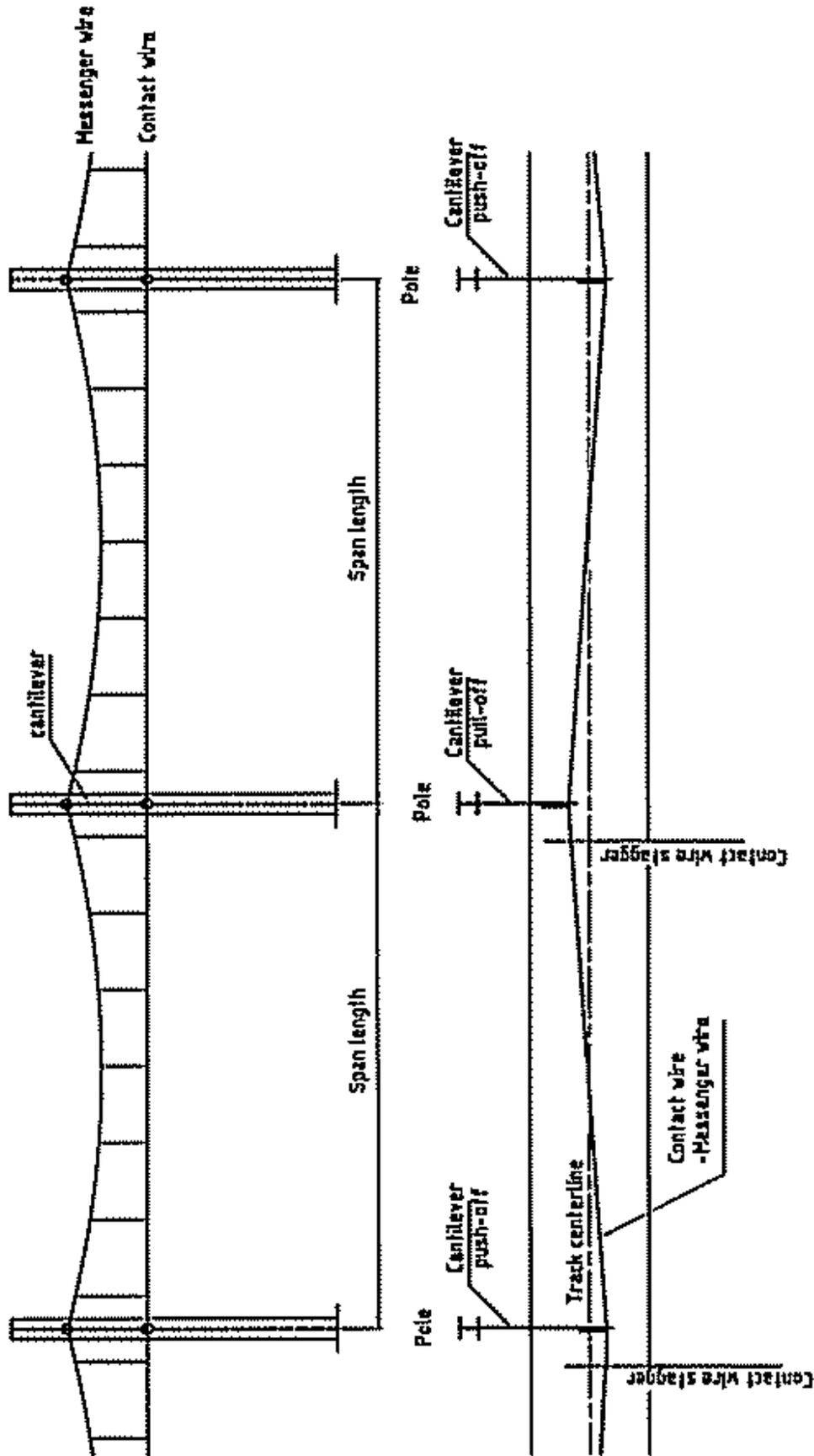
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Fixed or auto tensioned

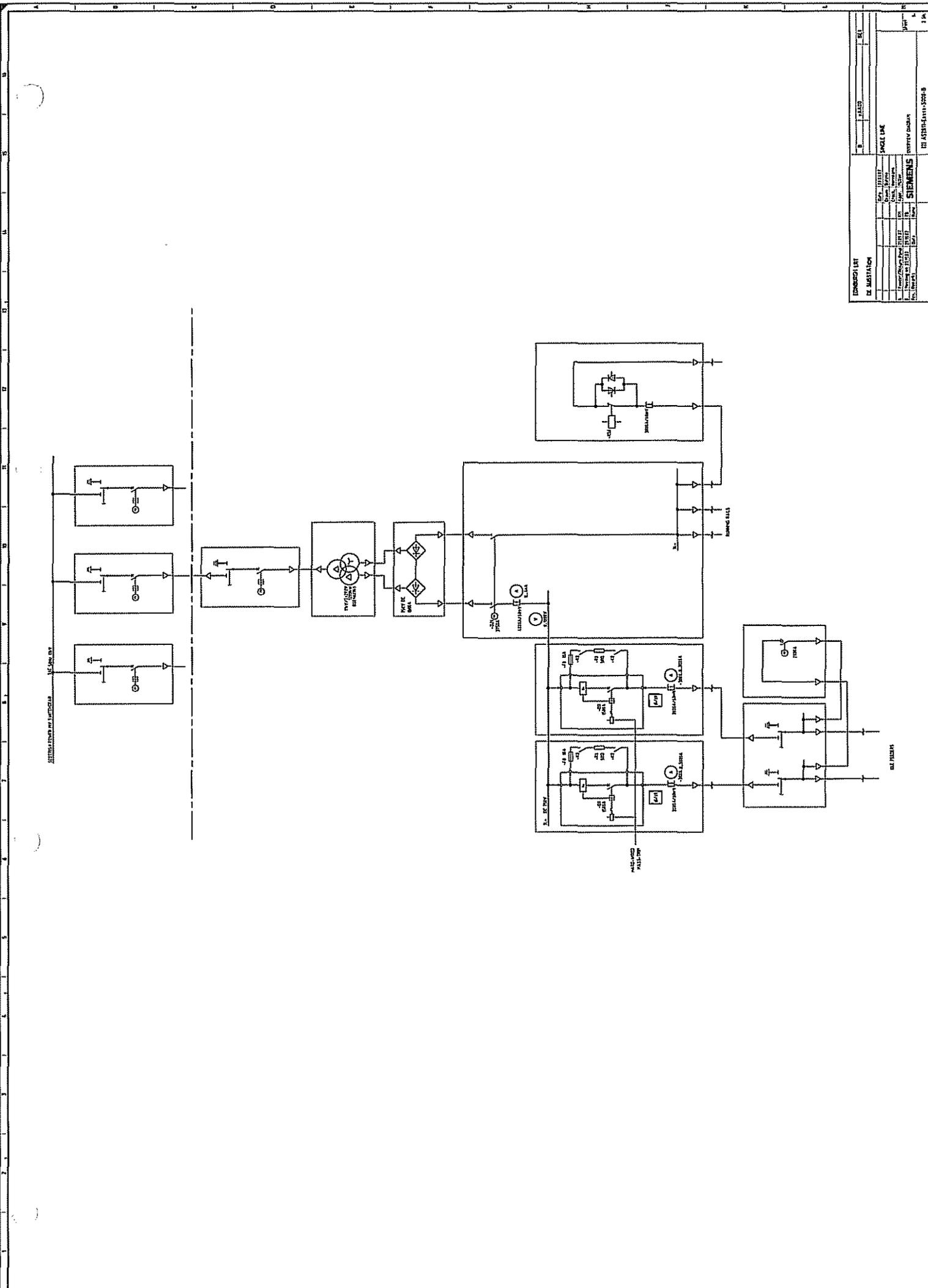


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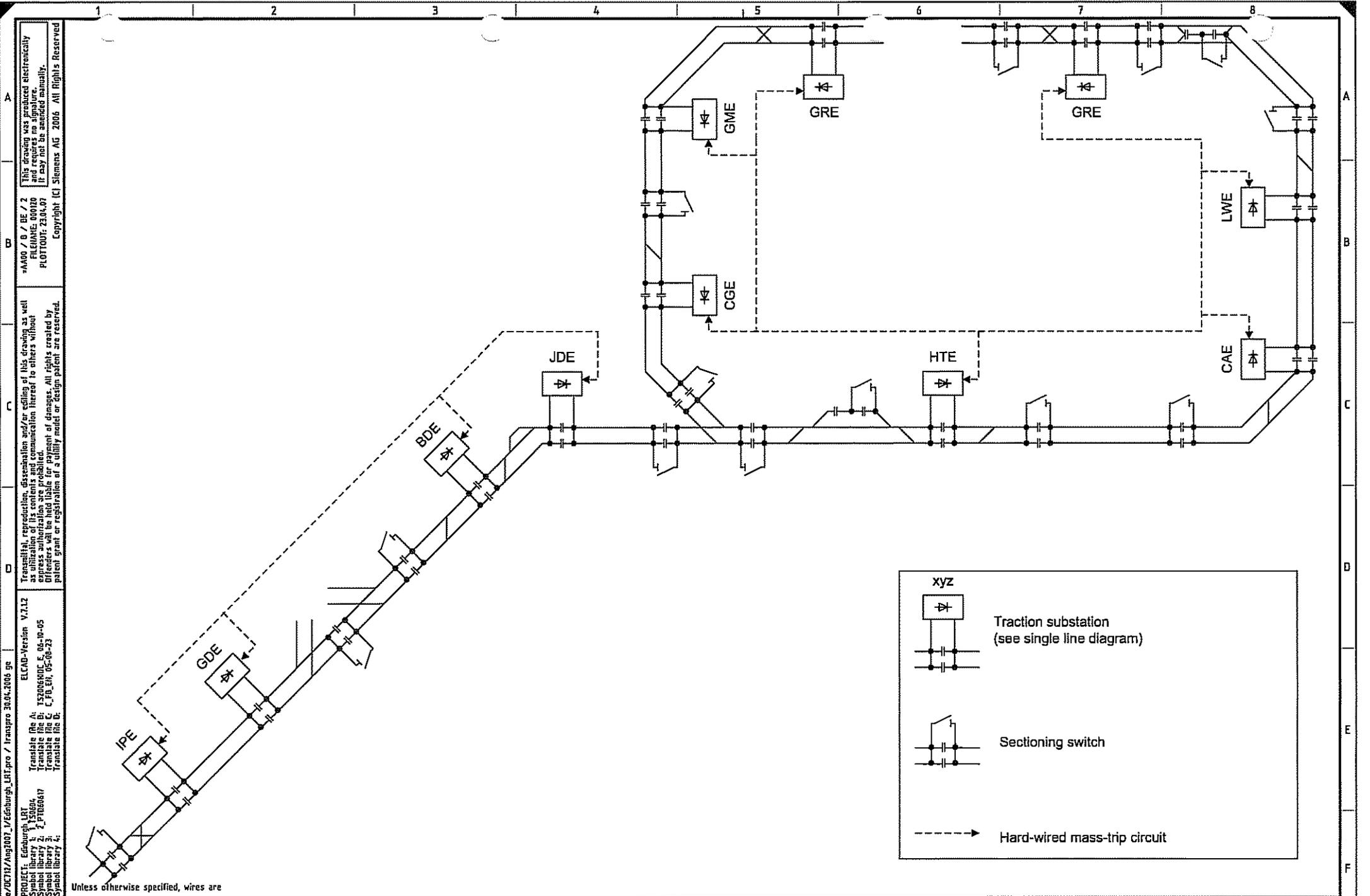


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Characteristics
 contact wire - Messenger wire tensioned



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CHECKED BY	SIEMENS	REVISION	01
APPROVED BY	SIEMENS	DATE	17/11/17
PROJECT	SIEMENS	PROJECT	01-15381-1000-000-000
DESIGN	SIEMENS	DATE	17/11/17
REVISION	SIEMENS	DATE	17/11/17
DATE	17/11/17	SCALE	1:1
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CHECKED BY	SIEMENS	REVISION	01
APPROVED BY	SIEMENS	DATE	17/11/17
PROJECT	SIEMENS	PROJECT	01-15381-1000-000-000
DESIGN	SIEMENS	DATE	17/11/17
REVISION	SIEMENS	DATE	17/11/17



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Rev.	Remarks	Date	Name/Appro.	Müller					



USB00000088 20364

per Berger – Siemens Consortium

Edinburgh Tram Network

Construction Support by SDS

Scope

- 1 Inspection and Monitoring of the Construction Works**
 - 1.1 Inspect and Monitor to satisfy SDS that Infraco are complying with the Project Quality Plan PQP
 - 1.2 Inspect and Monitor to satisfy SDS that Construction is being carried out in accordance with the Design and the Employers Requirements
 - 1.3 Certify that Construction has been carried out in accordance with the Design and the Employers Requirements (see Appendix A – Construction Certificate)
 - 1.4 Agree Inspection and Test Plan with Infraco
 - 1.5 Review Test and Inspection results where such results confirm Design assumptions.
- 2 Technical Queries (TQs)**
 - 2.1 Respond to Infraco Type 2 TQs i.e. those raised by the Construction Staff and issue of Designer's Clarifications (DCs) as appropriate
 - 2.2 Incorporate DC information in revised Drawings and other Design Information
- 3 Temporary Works and Method Statements**
 - 3.1 Review Infraco Temporary Works Design to confirm that it has no adverse effect on the Permanent Works
 - 3.2 Review Infraco Method Statements to confirm that their implementation will achieve Construction of the Permanent Works in accordance with the Design and that their requirements for Inspection and Test are incorporated therein
- 4 Sub-contractors/suppliers and Siemens Design**
 - 4.1 Check that Sub-contractors, Suppliers and Siemens Designs have no adverse affect on the Permanent Works and are co-ordinated with same
- 5 Quality Assurance**
 - 5.1 Raise Non Conformance Reports, as required by Infraco PQP
 - 5.2 Agree corrective actions in respect of 4.1
 - 5.3 Sign off completed corrective actions
- 6 H&S File**
 - 6.1 Prepare Design information for inclusion in H&S File

Resources

The exact resource requirements and durations of same to carry out the above are to be agreed with Ite, BBS and the SDS designer taking into account the design scope in the SDS Novation Agreement and the obligations of the Infraco Contract.

To be Agreed.

Personnel

To be Agreed as above

Office Space and Equipment

Office space requirements within the Main Infraco Project Office or Satellite Offices (to be agreed)

Site Vehicles

To be Agreed as above

Appendix A – Construction Certificate

USB0000088_0365

**Revised Maintenance Proposal, based on BAFO
Submission**

Edinburgh Tram Network

Folder 1– Section 3

Maintenance

Part 1 - Maintenance Proposal



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1 General

The submitted offer is based on applied maintenance procedures that are either prescribed by law in Germany (e.g. BO Strab or its guidelines), recommended in guidelines or publications of VDV (Verband deutscher Verkehrsbetriebe) or in DIN/EN standards or have been defined on the basis of corresponding experience. This offer is also based on the ROGS and relevant Railway Group Standards and law in Scotland.

Maintenance is described in DIN 31051 and comprises the sub processes of service (slowing down of the usage of existing wear reserve), inspection (determination of actual condition) as well as repair and improvement (restoration or improvement of reference condition):

This offer is based on the following documents:

- employer's requirements, chapter 40, Maintenance Version [3.1.1]; dated 3rd January 2008
- Infraco Agreement and Schedules which are currently being finalised to address the remaining maintenance issues as identified on the list (to be accomplished by Jan 10, 2008) Proposed BBS system design submitted [December 12, 2007]

This offer contains the (periodic) measures of preventative maintenance (service and inspection) as well as the measures of corrective maintenance that may become necessary.

The pricing schedules have been prepared on the basis of:

- a) no synergies of overhead with Tram Maintainer, and
- b) with assumed synergies (shared utilisation of staff)

and in all cases with no mark-up on the tram maintenance price.

2 Integrated maintenance plan

2.1 Introduction

The Infraco Maintainer will be responsible for the execution of the infrastructure maintenance in conjunction with the operation plan. The maintenance will be carried out on the basis of the maintenance documentation of the individual systems and components. Furthermore the Infraco Maintainer has taken assumptions out of experiences with other projects.

The objective of this proposal is to provide a maintenance scheme that can ensure high reliability and availability of the Edinburgh Tram Network Infrastructure.

The maintenance scheme is based on a pre-designed system, including the announced subsystems. This proposal includes 10 years of maintenance period commencing with revenue service of phase 1a of the ETN.

2.2 Maintenance plan

The Infraco Maintainer will develop a maintenance plan identifying activities, resources, timing and frequency of maintenance activities to be carried out and the circumstances in which maintenance intervention will be necessary. The maintenance plan shall also schedule the protocols, standards and records to be retained in respect of each system.

The maintenance plan will include:

- A programme of activities
- Maintenance requirements matrix
- development of the maintenance organisation and engineering support;
- safety management;
- maintenance procedures;
- strategies for dealing with reactive maintenance activities including details of response and restoration times and recovery plans;
- duties and responsibilities;
- scheduling of preventative (planned) maintenance activities;
- Corrective Maintenance Reporting
- human resources required
- recruitment, training, and competency management of maintenance resources
- quality assurance, quality control and testing;
- spare parts and consumable stores and reorder scheme (including minimum stock levels, supplier details and reorder lead times);



- tools, special tools and plant equipment
- health and safety of staff;
- data recording and trend analysis;
- design fault identification and correction activities; and
- Documentation and reporting,
- Details of required insurances.

The Maintenance Plan will be approved by the client, prior to operational service.

2.3 Maintenance Activities

The Infraco maintainer will undertake two types of maintenance, the major activity being preventative maintenance, and corrective maintenance (faulting) being the other smaller type. The mix of these types will be optimized to ensure availability of the system to the required level through the contracted duration.

2.3.1 Preventative Maintenance

Preventative maintenance (PM) is a program in which wear, tear, and change are anticipated and continuous corrective actions are taken to ensure peak efficiency and minimize deterioration. PM involves a planned and controlled program of systematic inspection, adjustment, lubrication, and replacement of components, as well as performance testing and analysis.

The result of a successful PM program extends the life of the facilities and equipment, and minimizes unscheduled downtime that causes major problems. It ensures that equipment is operating properly, and reduces unscheduled breakdowns to a minimum.

The PM program will be produced utilizing our extensive experience in other projects. This program will allow for the maintenance intervals to be variable within certain constraints to ensure that the highest possible Reliability and Availability can be maintained (see Figure 1). This will also enable the workload for our maintenance teams to be balanced to ensure a cost effective maintenance solution.

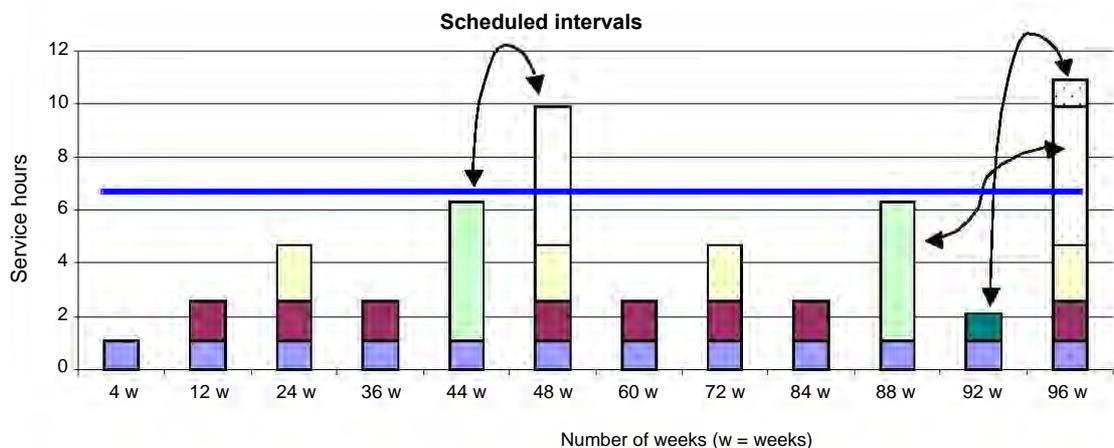


Figure 1 – Example of Maintenance Schedule

2.3.2 Corrective Maintenance

The application of an effective preventative maintenance program will not remove the need of corrective maintenance.

Corrective maintenance consists of the action(s) taken to restore a failed system to operational Service. This will usually involve replacing or repairing a component that is responsible for the failure of the overall system. The objective of corrective maintenance is to restore the system to satisfactory operation within the shortest possible time. Corrective maintenance will be carried out in three steps:

Diagnosis of the problem

The technician will locate the failed parts or otherwise satisfactorily assess the cause of the system failure.

Repair and/or replacement of faulty component(s)

Once the cause of system failure has been determined, action must be taken to address the cause, usually by replacing or repairing the components that caused the system to fail.

Verification of the repair action

Once the components in question have been repaired or replaced, the maintenance technician must verify that the system is again successfully operating.

Repeat and “No Fault Found (NFF)” incidents

The management of repeat faults will be undertaken as part of the duties of the Performance Engineer (PE). The PE will monitor the system faults through the MMS and when it becomes apparent that repeat failure (same location or equipment type), an investigation plan will be implemented to identify the cause of the repeat failure. Once the cause of the failure has been established an action plan will be prepared and implemented to eradicate the issue.

The PE will also be responsible where NFF incidents are occurring, this will be dealt with in exactly the same manner as repeat faults.

Where necessary support will be requested from OEM's to assist in the activities outlined above.

Understanding the cause of a failure is essential and will be recorded and analysed. This analysis will be used to make any changes (if required) to our preventative maintenance program or procedures.

2.4 Safety Standards

There are two important aspects of safety standards in maintenance regime:

- safety standards, which are directly related to personal safety, and
- safety procedures, which are assigned to job/tasks.

Concerning the personal safety of the workers, the European Railway Standard (UIC) combined with the Rules and Regulations that apply in UK will be adopted.

The safety procedures will be developed according to UK regulations and industry standards. These standards will be applied within the Infraco maintenance documentation.



2.5 Quality Assurance

The Infraco Maintainer will define and establish Quality Assurance and Control Procedures for the maintenance of the Infrastructure Systems which comply with EN ISO 9000 Quality Standards. The Infraco Maintainer is certified according to EN ISO 9001, which succeeded the EN ISO 9002 in 2000 (please find attached certificate). The maintenance work will be executed in compliance with the EN ISO 9001 standard.

The implementation of a QA/QC - Regime and the certification through external auditors require the designation of a SQE Manager, who will be directly responsible to the Maintenance Manager of the Infraco Maintainer. The SQE Manager will be responsible for implementing and maintaining the quality regime within the Organisation.

2.6 Communication between Operator and Infraco

Communication between the Infraco Maintainer and Operator is essential to ensure that the maintenance plans and schedules are effective and do not adversely effect Operator's ability to deliver the passenger service.

A meeting shall be held on an agreed timetable to ensure that coordination of maintenance and operational activities is achieved. This shall discuss and agree any issues or activities related to or influencing the tram system, including but not limited to the Infraco maintainer, Tramco maintainer and Operator.

3 Basis for calculation

3.1 Edinburgh Tram Network System Criteria

This proposal is based on the following configuration. Changes, modifications or extensions to this configuration will lead to changes of the price. Maintenance activities on the systems components will be performed exclusively by the Infraco Maintainer.

The Maintenance offer is based on the following system criteria:

- Maintenance period: 10 years, Start of Maintenance: January 2011
(start of revenue service for phase 1a)
- Number of vehicles: 31 Tram sets
- Length of sections A&B&C 18.455 m (Phase 1a)
- Length of sections D&E 5.980 m (Phase 1b)
- Depot at Gogar
- Tram schedules (timetables) as described in the Employer's Requirements

3.2 Working and Service Time

The Infraco maintenance works will be executed on basis of the following information:

- Service Time: Joint teams of Civil Works and E&M maintenance, covering daily maintenance period from 06:01 to 22:00, Monday to Sunday
- Response time: 06:01 to 22:00, 15 minutes response time
22:01 to 06:00, 60 minutes response time (one person being on-call)
- 3 mixed teams of 5 respectively 4 people (full time) will cover all preventative and corrective maintenance tasks for the mainline and the depot system.
- Activities that require to be undertaken in non-traffic hours will be planned to make best advantage of staff's time. The staff required to undertake these works, will be rostered from the 3 mixed teams.
- Normal working days (for additional chargeable work): Monday to Friday
- For Public Holidays and times when service levels are reduced it is intended to undertake any intrusive works that are required, these works will only be undertaken after consultation with the Operator.
- Civil defects, landscaping and specialised civil inspections will be undertaken as required by personnel sourced outside of this maintenance organisation.
- 1 caretaker will be provided for Gogar depot only.
- The preventative tasks for Infrastructure will be performed during dayshift.
- Tram Network operating hours per day: 19 h 30, starting 5:00 a.m.



- Minimum non traffic hours per night 4h 30

3.3 Maintenance project planning

The maintenance concept for the Edinburgh Tram Network will be implemented in stages according to the overall system implementation. The responsibility for the systems remains with the Infraco design and construction team until the handover to the Infraco maintenance team (start revenue services Phase 1a).

During the commissioning and trial running phase, maintenance will be undertaken in line with the maintenance plan by the Infraco Maintainer. This will allow the maintenance plans and procedures to be tested and verified that the planned maintenance meets the needs of the Edinburgh Tram Network. This will be undertaken by a day shift team only during this phase (2 shifts are planned during the last month prior to commencement date).

The maintenance activities will commence with start of Revenue Service Phase for the defined scope and will run throughout the 10 years contract period.

3.3.1 Mobilisation phase

Prior to the commissioning and up until commencement of Revenue Service the Infraco Maintainer will build up the maintenance organisation. (see section 5)

3.3.2 Maintenance phase

During the 10 years maintenance period, the Infraco Maintainer will provide maintenance to the system implemented under the responsibility of the Infraco.

This includes planning, implementation and execution of preventative and corrective maintenance managed by a professional maintenance organisation. Sufficient and qualified staff will be hired, trained and managed by experienced personnel under the full and sole responsibility of the Infraco Maintainer. The components and materials required for the execution of the maintenance shall be supplied supported by a professional procurement. Storage area as well as storage management will be organized in cooperation with the Tramco.

3.4 Standards and Regulations

The maintenance will be executed following the guidelines of the following standards and regulations such as:

- International standards (International Electrotechnical Commission - IEC)
- European standards

The most important standards for the maintenance of the system are as follow at the date of bid submission:



Table 1: Standards and Regulations

Standard	Description
EN 8402	Quality, Reliability and Safety
EN 13306	Definitions of Maintenance
EN13816	German Version of Transportation and Service
EN 50126	Reliability, Availability, Maintainability (RAM)
DIN 31051 (2003/06)	Basics of Maintenance
ISO 9004	Quality Management and Quality System Elements Guidelines
ISO 14001	Environmental
BoStrab (German Ordinance of the Construction and Operation of Rail Systems for Light-Rail Transit)	English translation of German version

It should be noted that standards will be frozen upon the award of the Infraco Agreement.

All changes of existing standards as well as mandatory standards that are issued after contract award that are required to be adhered to will be reviewed and assessed. Any impact to execution of the program as well as any financial implications will be brought to the attention of TIE. Prior to adoption of the revised standards TIE will instruct its use.

It will also be necessary for any new standards to be implemented by Infraco Maintainer to be understood by the Tramco Maintainer and Operator. This will ensure they are aware of any implications of their operations.

4 Scope and Conditions of Supplies and Services

4.1 Scope of Provisions, Supplies and Services

The following supplies and services are included and executed during the contract period by the Infracore Maintainer for the systems:

- Maintenance Management
- Maintenance Plan
- Maintenance Schedules
- Quality Assurance Plan
- Health & Safety Assurance Plan
- Performance Concept
- Procurement Plan
- Provision of maintenance staff
- Training of maintenance staff
- Inspections (function-, safety and maintenance-related)
- Corrective and preventative maintenance
- Repair of components
- Revisions, Renewals and Overhauls of components / on component level (within planned preventative maintenance for 10 years of maintenance)
- Maintenance Management System (IT-based)
- Jobs descriptions based on documentation and maintenance manuals from suppliers
- Procurement and Logistics for required spare parts and material (preventative and corrective, planned overhauls and revisions if any) in cooperation with System deliveries and in cooperation with the operator
- Lubricants
- Return management of failed parts
- Hand tools for maintenance workers

4.2 Services provided by others

As part of the contractual documentation the following parties will also provide services to ensure the operation of the Edinburgh Tram Network.

These services will be provided by:

- **Tramco/Tramco Maintainer**

- Operator
- City of Edinburgh Council (CEC)

The activities they shall undertake are detailed in *Edinburgh Tram – Infrastructure Equipment Responsibilities Allocation*

This includes but is not limited to:

- Maintenance coordination between Operator, CEC, Infraco Maintainer, Tramco Maintainer and others
- Repair of damages due to vandalism, graffiti, theft, derailments, external influences and force majeure; Repair of damages due to improper handling or operation of the systems. However, in the event that the Infraco Maintainer has caused and is responsible for a damage, as a result of action or inaction, the Infraco Maintainer will bear the costs for rectifying the defect. *
- Subsystem replacements (i.e. after end of design life)
- Cosmetic repairs *

* These services and supplies can be provided by the Infraco Maintainer on the basis of individual task orders, to be agreed upon based on this agreement. A list of menu-priced tasks will be submitted, discussed and agreed between the TIE and the Infraco prior to contract award (appendix 5).

4.3 Assumptions and Prerequisites

Supplies and Services as described in this proposal shall be delivered considering the following premises:

1. 3rd party systems and infrastructure of Edinburgh Tram Network (i.e. not provided by Infraco as part of Infraco works) have to be properly designed and installed as to the requirements stated in the tender. Failures resulting from deviations to these requirements will not be covered by the Infraco Maintainer.
2. Services which are currently excluded from the scope of the Infraco Maintainer shall be performed under responsibility of the Operator, CEC or others.
3. Maintenance activities shall be undertaken from Gogar depot, that means Gogar depot will be the organisational centre of the Infraco maintenance activities. Maintenance staff will be sent out for preventative as well as corrective maintenance from there. No outbased depots are planned
4. All facilities (depot, stores, staff rooms, offices incl. IT- and Communications infrastructure, electricity connections, water supply, sanitary rooms etc) and equipment (depot equipment and machines, workshop equipment, test equipment), service vehicles (incl. road/rail vehicles, cranes etc) required for the professional execution of the maintenance of the systems will be provided to the Infraco Maintainer **in time, in sufficient dimensions and conditions.** It is assumed that all facilities and materials as referred to above are **in best conditions** and ready for use. The Infraco Maintainer does not assume any responsibility for the provision of electricity, water supply and wastewater disposal.
5. The Maintainer will be granted full and unlimited access subject to agreed possessions if effecting the Transport Service to all facilities and equipment needed to perform the maintenance services (i.e. entire Tramway System

- including the related technical plant rooms, equipment and the workshop area as well as the initial stock). This will include access to an operational store.
6. Insurances of buildings, stores and the installed tramway-system infrastructure will not be covered by the Infraco Maintainer. The Infraco is however responsible for the deductible amount in connection with insurance claims that are Infraco's responsibility.
 7. The operation of the infrastructure systems by Operator shall only be performed by personnel that are qualified and trained for this purpose.
 8. Cost for repair of damages due to vandalism, graffiti, theft, derailments, accidents, external influences and force major, are not covered by Infraco. If support by the Infraco Maintainer is needed, this will be invoiced separately, subject to change mechanism in the Infraco Agreement. In such cases as mentioned above TIE and the Infraco Maintainer will mutually agree on temporary relief from the performance measurement regime.
 9. Changes to the Systems in terms of modifications, extensions, adaptations and down-sizing will have to be considered in a review and possible modification of the maintenance price.
 10. The Maintainer is not responsible for communication with: Fire Fighting, Emergency medical services, Police or other state or local authorities in cases of accidents, derailments or vandalism.
 11. The Maintainer is not responsible for the supply of financial reports or statistical reports for governmental organisations or local authorities (except legal obligations).
 12. All appropriate matters in relation to human resources of the Infraco Maintainer will be managed under the full and sole responsibility of the Infraco Maintainer.
 13. All matters concerning safety and security for the Tramway System beyond Infraco's obligations related to the infrastructure maintenance will be undertaken by Operator. The Infraco Maintainer will support Operator in this duty
 14. As a technical solution for the Edinburgh Tram Network has yet to be fully defined the scope of maintenance is based on the information available to date. The maintenance proposal will have to be reviewed in line with the final technical solution to ensure compliance. An example of this is our assumption that the trams will not be supplied with "real bogies" (based on the available information).
 15. We anticipate and recommend that a tower road rail vehicle is provided. This has not been calculated by the Infraco Maintainer.
 16. All items provided by TIE or Operator are assumed to be free of charge to the Infraco Maintainer
 17. The exchange of brushes for the wash plant, detergent for the wash plant, removal of swarf from the wheel lathe are excluded
 18. The contractual obligations under the maintenance part of the Infraco Agreement regarding the execution of regular preventative and corrective maintenance works shall commence with start of revenue service of the entire Edinburgh Tram Network. Required maintenance prior to start revenue service (degraded maintenance) will be executed under the responsibility of the Infraco construction team Delays not caused by Infraco will be assessed and shall be subject to the change mechanism in the Infraco Agreement if applicable.

5 Organisation

5.1 Schedule for Recruiting, Training and Qualifying

The recruiting of the maintenance employees will be performed in advance of the training schedule. The Infraco Maintainer intends to recruit the necessary key personnel from the suppliers or construction companies of Edinburgh Tram Network project. Other personnel will be chosen in accordance with the job requirements and levels of qualification.

This recruitment will be scheduled prior to the commencement of commissioning. This will be limited to key positions

5.2 Personnel organisation

Personnel requirements have been determined based on experience gained from previous projects and considering the following factors:

- Equipment usage forecasts
- Equipment quantities
- Equipment reliability's
- Diagnosis, removal and replacement times
- Response times due to geographical dispersion
- Corrective Maintenance tasks
- Preventative maintenance tasks and frequencies
- Necessary coverage period
- Overhead for weekends, vacations, holidays, continuous training, sick leave and administration

The organisation charts show (See appendix 1) the structure of the maintenance organisation. The proposed organisation covers the specified response time between 06:01 and 22:00 as well as the reduced service availability from 22:01 to 06:00.

The leader of the maintenance organisation made up by BBS will be the Project Manager. The Project Manager will be responsible for all issues related to infrastructure maintenance.

The Commercial manager will be a significant role within the maintenance organisation providing the commercial and administrative support required by modern maintenance organisations. He is the coordinator of the accompanying measures of the maintenance activities and requirements.

The E&M maintenance organisation is built around the E&M – Manager and the Team Leaders in order to optimise staffing levels and to limit associated labour costs. The E&M – Manager will be the contact for the operator during daily operation. The maintenance activities will be controlled and managed by the Team Leaders. Teams will consist of specialised electrical, mechanical and civil technicians. The E&M maintenance teams will be available as stated under para 3.2. The personnel will be prepared to carry out preventative maintenance activities according to the maintenance plan and undertake corrective maintenance when required.

A civil manager is responsible for the organisation of the civil maintenance activities. The civil maintenance activities like civil defects, landscaping and cleaning will be undertaken as required by personnel sourced outside of this maintenance organisation

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and will be controlled and managed by the civil manager, who will also be the contact for the operator during daily operation.

5.3 Job descriptions

5.3.1 Project Manager

The Project Manager shall be responsible for directing and coordinating the activities within the maintenance organisation. Having full authority to speak and act on behalf of the Maintenance Consortium. The Project Manager will schedule and attend meetings with TIE and Operator designated representatives in order to share information, assess the performance of the maintenance services, and discuss any problems, service changes, relations, security and any other issues.

The Project Manager is the contact to TIE and Operator working in close relationship towards the common goals of the organisation.

5.3.2 Commercial Manager

The Commercial Manager is the coordinator of the accompanying measures of the maintenance activities and requirements. Responsible for establishing procedures and work processes which lead to the timely and efficient provision of personnel resources, materials and information to support system maintenance. Furthermore, he will be responsible for carrying out the administrative functions.

5.3.3 E&M Manager

The E&M Manager is responsible for the operational maintenance work and will report directly to the Project Manager. He will also coordinate the infrastructure maintenance activities with the tram maintenance and the civil maintenance.

His duties and responsibilities also include:

- The management and supervision of the leaders of the 3 combined teams
- Scheduling maintenance activities in accordance to the planning defined by the MMS and the Maintenance Planner.
- Allocating appropriate resources for unscheduled interventions according to the technical needs and prioritisation of maintenance tasks
- Verify that equipment installation meets the operational needs of the organisation.
- Assist in development of standard maintenance programs, safety procedures and work rules for start-up and revenue operations.
- Cooperation with Procurement & Logistic and the Operator to assure that adequate spare parts, tools and other necessary equipment is on hand to support revenue operations.

5.3.4 SQE- / Performance Engineer

As part of the Infracore organisation we have allowed for a combined SQE- / Performance Engineer.

The role of the Safety, Quality and Environment Engineer (SQE) is the direct responsibility for the matters relating to system and workplace safety throughout the organisation including:



- Safety orientation and training
- Safety audits and inspections
- Accident/incident reporting and investigation of the equipment
- Environmental issues

Furthermore the Safety, Quality and Environment Engineer (SQE) has the responsibility for enforcing the quality assurance program establishing the following relationships:

- The quality organisation will maintain close working relationships with the project elements to enlist their commitment in achieving quality program objectives.
- Interface with his counterparts of the organisation to coordinate quality program implementation and resolve issues related to it.
- Actively participant in program status reviews, presenting the status of the quality program and major issues,

as well as the responsibility for implementing comprehensive Quality Assurance and Quality Control procedures for the maintenance of the Infrastructure Systems which go along with EN ISO 9000 Quality Standards and as well as the authority to maintain the highest quality levels throughout the project execution.

The SQE Manager will be responsible for initial and regular training programs.

The role of the Performance Engineer is the direct responsibility for ensuring that the infrastructure system performance is in line with the requirements of TIE. Additionally the performance engineer will monitor the response times in line with the performance requirements of the contract. This role will also monitor the performance of the system along with the maintenance team and identify any performance improvements through maintenance activities.

The SQE- / Performance engineer shall report to the Project Manager

5.3.5 Maintenance Planner

The Maintenance Planner is responsible for the planning and scheduling of the maintenance works. This comprises the preventative maintenance tasks for infrastructure maintenance. The tool to be used is the MMS software. The planning of the preventative tasks will be coordinated with the operator.

The Maintenance Planner shall report to the Project Manager.

5.3.6 Civil Manager

The Civil manager reports directly to the Project Manager.

The Civil manager will ensure that civil faulting and maintenance is undertaken in line with the maintenance plan.

His duties and responsibilities include:

- The management and supervision of the workers and other staff required to perform maintenance tasks.
- Administration of maintenance history for their technical responsibility (Fault Reporting and Monitoring) by updating the MMS-System.

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- Scheduling maintenance activities in accordance to the planning defined by the MMS and the Maintenance Planner.
- Allocating appropriate resources for unscheduled interventions according to the technical needs and prioritisation of maintenance tasks
- Verify that equipment installation meets the operational needs of the organisation.
- Assist in development of standard maintenance programs, safety procedures and work rules for start-up and revenue operations.
- Cooperation with Procurement & Logistic and the Operator to assure that adequate spare parts, tools and other necessary equipment is on hand to support revenue operations.

6 Maintenance of Infrastructure System

6.1 Scope of the Maintenance

The Infraco Maintainer will be responsible for the maintenance of the infrastructure systems delivered and installed under the responsibility of the Infraco. The following systems will be maintained according to the Maintenance Plan of the manufacturer:

- Depot Equipment
- Traction Power Supply
- Overhead Contact Line System
- SCADA
- Signalling System
- Telecommunication System
- Security Systems
- Track, Civil and Buildings

6.2 Maintenance Activities

6.2.1 Electrical and Mechanical

6.2.1.1 Traction Power

As a result of the maintenance analyses, a schedule for preventative maintenance will be established for the delivered traction power system (with regard to the scope of supply). This section describes the reliability-oriented inspection and maintenance work for each major component as well as the maintenance intervals and the down times for the operations. The maintenance tables also specify the required level of preventative maintenance.

The works will be carried out in fixed intervals as shown in the maintenance plans (appendix 2). The purpose of this table is to enable the customer to gain an understanding of what the Maintenance organisation intends to do regarding the maintenance of traction power systems.

The Traction-power system consists of 2 groups:

- Power supply and distribution
- Catenary system

Traction Power - Preventative Maintenance Programs

Inspections

The inspection comprises the measures to be performed to determine and evaluate the actual state of technical equipment within the scope of supply of Edinburgh Tram Network. The inspection covers the following activities:

- Function-related,
- Safety-related, and



- Maintenance-related activities.

Service technicians carry out inspections on mechanical, electrical and electronic plants in accordance with the working schedules. The results are documented and evaluated. During inspection, service technicians carry out minor maintenance work immediately. If the scope of the required work is larger they will undertake the necessary maintenance measures for keep the equipment in available state.

Preventative maintenance

The preventative maintenance covers all measures necessary for keeping the technical equipment or plant in the required state. According to specified working schedules, the periodic maintenance tasks are carried out on mechanical and electrical plant. The results are recorded and evaluated. Based on the experience gathered with a growing number of maintenance activities and documented results, it will be possible to make statements on the condition and wear behaviour of parts and systems.

During preventative maintenance tasks small parts such as mounting parts, indication / pilot lamps, etc. are replaced. Only components, which either might have a safety impact or are heavily corroded or no longer meet functional requirements due to other damage, will be replaced.

The preventative maintenance includes:

Inspection (visual checks)

Inspections are required from time to time. Usually, the work will be carried out in fixed intervals. Inspection intervals depend on the type of equipment and the possible damage. The parts have to be inspected with the following criteria:

- Damage (fracture, scorching, change of colour, etc.)
- Dirt, corrosion
- Missing equipment (earthing devices, indicator shields, etc.)

Preventative maintenance

Preventative maintenance will be performed normally from Monday to Friday either during operating hours or at non-operating time during night.

Functional tests (Checking)

- Switchboards
- Low-voltage supply with batteries
- Catenary system
 - a. Masts
 - b. Droppers
 - c. Catenary
 - d. Isolators
 - e. Expansion
 - f. Joints
- Earthing system
- Wear points (abrasion)
- Cleaning of the TEL/SCADA technical equipment



Measures that become necessary due to improper use, faulty operation, accident damages and other external effects, force majeure, vandalism, **alterations and extensions**, etc. are excluded in so far as these are not due to the actions or omissions of Infraco. Such works are handled as non-contractual performance, and therefore are separately charged and invoiced according to the change mechanism in the Infraco Agreement.

Corrective Maintenance

The corrective (unscheduled) maintenance work covers the activities for restoring the required state (not original) of technical equipment in a plant/line. Unscheduled maintenance works are carried out to remedy spontaneously occurring operating faults, which will interrupt service operation.

These tasks cannot be planned. Immediately after the maintenance staff have received a trouble message that a fault will interrupt service operation, the measures necessary to quickly restore service operation will be taken (according to our repair strategy). Effective coordination and execution of repair works as well as provision of spare parts form the basis for a quick and economical form of unscheduled maintenance.

Measures that become necessary due to improper use, faulty operation, external effects, force majeure, vandalism, are handled as non-contractual performance, and therefore they are separately charged and invoiced.

Specialized and Heavy Maintenance Equipment

The special equipment required for the execution of the maintenance tasks on the traction system will be either included in the scope of the depot equipment by the Infraco or within the scope of the Infraco Maintainer (besides the equipment mentioned under para 4.3 item 5) before the start of the maintenance service.

Special equipment for the maintenance tasks will remain in the depot for the execution of the different maintenance activities over the contract period and will be part of the Handover procedure by the Maintenance organization after the 10 years of maintenance contract has finished.

6.2.1.2 Train Control and Signals

Preventative and Corrective Maintenance analysis

As a result of the maintenance analyses, a schedule for preventative maintenance will be established for the train control and indoor/outdoor signalling-systems. This section describes the reliability-oriented inspection and maintenance work for each major component as well as the maintenance intervals and the down times for the operations. The maintenance tables also specify the required amount of preventative maintenance. Please refer to the maintenance plans (appendix 2).

Preventive Maintenance Programs

Inspections

The inspection comprises the measures to be performed to determine and evaluate the actual state of technical equipment within the scope of supply of Edinburgh Tram Network. The inspection covers:

- Function-related,
- Safety-related, and
- Maintenance-related activities.



According to working schedules coordinated and suitable intervals, service technicians carry out inspections on mechanical, electrical and electronic plants. Results are documented and evaluated. During inspection, service technicians perform the minor maintenance tasks immediately that they can do by using their tools. If the scope of necessary work is larger, they will undertake necessary maintenance measure required for keeping the equipment in an available state.

According to specified working schedules and intervals preventative maintenance work is carried out on mechanical and electrical facilities. Results are recorded and evaluated. Based on the experience gathered with a growing number of maintenance activities and documented results, it will be possible to make statements on the condition and wear behaviour of parts and systems.

During preventative maintenance activities inexpensive small parts such as mounting parts, indication / pilot lamps, etc. will be replaced. Major wear parts as well as incidentals and operating materials, such as inking ribbons, incl. printing paper, and batteries are exchanged or supplemented. Minor repair tasks are performed during maintenance.

These tasks can be scheduled for the maintenance of components at site or in the workshop. Type and scope of works as well as available spare parts are decisive criteria when determining the most economical form of maintenance becoming necessary due to natural wear.

The preventative maintenance includes:

Inspections (visual checks) are required from time to time. Usually, the work will be carried out in fixed intervals. Inspection intervals depend on the type of equipment and the possible damage. The parts have to be inspected with the following criteria:

- Damage (fracture, scorching, change of colour, etc.)
- Dirt, corrosion
- Missing equipment (earthing devices, indicator shields, etc.)

Preventative maintenance will be performed normally from Monday to Friday either during operating hours or at non-operating time during night.

Functional tests (Checking, measuring, adjusting)

- Indoor equipment (electronic interlocking including peripheries)
- Operation control
- UPS (power supply system)
- Point Machines
- Point Lock Checking Device, Point Position Checking Device
- Signals (track- and road-signals)

Cleaning of the control and signals technical equipment

Measures that become necessary due to improper use, faulty operation, external effects, force majeure, vandalism, alterations and extensions, etc. are excluded. Such works are handled as non-contractual performance, and therefore are separately charged and invoiced.

Corrective Maintenance

The corrective (unscheduled) maintenance work covers the activities for restoring the required state (not original) of technical equipment in a plant/line. Unscheduled

maintenance tasks are carried out to remedy spontaneously occurring operating faults that will interrupt service operation.

These tasks cannot be planned. Immediately after our maintenance staff has received any trouble message, appropriate measures necessary for quickly eliminating the trouble will be taken (according to maintenance strategies previously fixed). Good coordination and execution of repair works as well as provision of spare parts form the basis for a quick and economical form of unscheduled maintenance are essential.

Measures that become necessary due to improper use, faulty operation, external effects, force majeure, vandalism, are handled as non-contractual performance, and therefore they are separately charged and invoiced.

Specialized and Heavy Maintenance Equipment

Necessary special equipment for the execution of the maintenance tasks on the train control and signals will be delivered as scope of the depot equipment or with start of the maintenance service.

Special equipment for the maintenance tasks will remain at the depot for the execution of the different maintenance activities over the contract period.

6.2.1.3 Communications Systems

The installations under this heading do not only comprise the means for verbal communications such as telephones or radio, but also different alarm systems, operational monitoring systems PIS- and CCTV-system, etc.

Preventative and Corrective Maintenance analysis

As a result of the maintenance analyses, a schedule for preventative maintenance will be established for the communications systems. This section describes the reliability-oriented inspection and maintenance work for each major component as well as the maintenance intervals and the down times for the operations. The maintenance tables also specify the required amount of preventative maintenance. Please refer to the maintenance plans (appendix 2).

Maintenance and repair work will partially be executed in places where the equipment is installed and partially be executed in the electronics workshop. The detailed maintenance planning will include detailed instructions for the maintenance of the communication subsystems. However, the imposed maintenance concept requires a permanent observation of the telecommunications system in order to prevent casual/accidental faults of components as far as possible.

Preventive Maintenance Programs

Inspections

The inspection comprises the measures to be performed to determine and evaluate the actual state of technical equipment within the scope of supply of Edinburgh Tram Network. The inspection covers:

- Function-related,
- Safety-related, and
- Maintenance-related activities.

The large variety of the equipment involved makes it difficult to establish fixed periods for maintenance purposes and inspections. The recommendations of the manufacturers and the usage of the different systems are the basis on which maintenance programs will be developed and later adjusted in accordance to operational experience.



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According to working schedules coordinated and suitable intervals, service technicians carry out inspections on mechanical, electrical and electronic plants. Results are documented and evaluated. During inspection, service technicians perform the minor maintenance tasks immediately that they can do by using their tools. If the scope of necessary work is larger, they will undertake necessary maintenance measure required for keeping the equipment in an available state.

Preventative Maintenance

According to specified working schedules and intervals preventative maintenance work is carried out on mechanical and electrical facilities. Results are recorded and evaluated. Based on the experience gathered with a growing number of maintenance activities and documented results, it will be possible to make statements on the condition and wear behaviour of parts and systems.

During preventative maintenance activities inexpensive small parts such as mounting parts, indication / pilot lamps, etc. will be replaced. Major wear parts as well as incidentals and operating materials, such as inking ribbons, incl. printing paper, and batteries are exchanged or supplemented. Minor repair tasks are performed during maintenance.

These tasks can be scheduled for the maintenance of components at site or in the workshop. Type and scope of works as well as available spare parts are decisive criteria when determining the most economical form of maintenance becoming necessary due to natural wear.

The preventative maintenance includes:

Inspection (visual checks) required from time to time. Inspection intervals depend on the type of equipment and the possible damage. The parts have to be inspected with the following criteria:

- Damage (fracture, scorching, change of colour, etc.)
- Dirt, corrosion
- Missing equipment (earthing devices, indicator shields, etc.)

Preventative maintenance Preventative maintenance will be performed normally from Monday to Friday during operating hours.

Functional tests (Checking, measuring, adjusting)

- CCTV
- Public address
- OTN
- Telephone

Cleaning of the communications systems equipment

Measures that become necessary due to improper use, faulty operation, external effects, force majeure, vandalism, alterations and extensions, etc. are excluded. Such works are handled as non-contractual performance, and therefore are separately charged and invoiced.

Corrective Maintenance

The reliability of telecommunications is a precondition to the working of the initial system according to the agreed quality standards. A high degree of availability will be achieved through adequate provision of telecommunications. The repair philosophy is based on faulty units being replaced. The telecommunications equipment is mainly



designed in a modular way. Repair will normally be performed by replacement of individual units. Faulty equipment is returned to the electronics workshop for investigation and possible repair. Selected faulty equipment shall be returned to the supplier for repair on request.

The corrective (unscheduled) maintenance work covers the activities for restoring the required state (not original) of technical equipment in a plant/line. Unscheduled maintenance tasks are carried out to remedy spontaneously occurring operating faults that will interrupt service operation.

These tasks cannot be planned. Immediately after our maintenance staff has received any trouble message, appropriate measures necessary for quickly eliminating the trouble will be taken (according to maintenance strategies previously fixed). Good coordination and execution of repair works as well as provision of spare parts form the basis for a quick and economical form of unscheduled maintenance are essential.

The equipment for CCTV and Public Address System needs a permanent control but generally only minor corrective maintenance tasks (mainly in case of vandalism or sabotage). Measures that become necessary due to improper use, faulty operation, external effects, force majeure, vandalism, are handled as non-contractual performance, and therefore they are separately charged and invoiced.

6.2.1.4 Track Works

Preventative and Corrective Maintenance analysis

As a result of the maintenance analyses, a schedule for preventative maintenance will be established for the delivered track system incl. Roadbed and track, fencings (in regard with the scope of supply). All scheduled activities will be planned in regard to the requirements of a high available system. This section describes the reliability-oriented inspection and maintenance work for each major component as well as the maintenance intervals and the down times for the operations. The maintenance tables also specify the required level of preventative maintenance.

Preventative Maintenance Programs

Inspections

The inspection comprises the measures to be performed to determine and evaluate the actual state of technical equipment within the scope of supply of Edinburgh Tram Network. The inspection covers:

- Function-related,
- Safety-related, and
- Maintenance-related activities.

According to working schedules coordinated and suitable intervals, service technicians carry out inspections on track as necessary. Results are documented and evaluated. During inspection, service technicians perform the minor maintenance tasks immediately that they can do by using their tools. If the scope of necessary work is larger, they will undertake necessary maintenance measure required for keeping the equipment in an available state.

Preventative Maintenance

Preventative maintenance on track covers all measures necessary for keeping the technical equipment of the track in the required and secure state. According to specified working schedules and intervals maintenance works are carried out on mechanical facilities. Results are recorded and evaluated. Based on the growing



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number of maintenance works and the results gained from that the ability to make statements on the condition and wear behaviour is increasing.

During preventative maintenance work, inexpensive small parts such as screws will be replaced.. Repair tasks are carried out during maintenance.

The preventative maintenance includes:

Inspection (visual checks) required regularly. The parts have to be inspected with the following criteria:

- Damage (fracture, scorching, change of colour, etc.)
- Dirt, corrosion
- Missing equipment

Preventative maintenance work for all track facilities and the rail bed

- Grinding or alignment of rail joints
- Gauging, shimming and alignment of track and switches
- Surfacing of rails in short track sections and turnouts by grinding, welding, etc.
- Checking of rail welding, exchange of defective welds or defective sections of rails
- Measures and preventative maintenance for rail flaw, abrasion and rail profile
- Preventative activities for drainage-system
- Checking and adjustment

Preventative maintenance will be performed normally from Monday to Friday either during operating hours or at non-operating time during night.

Functional tests (Checking, measuring, adjusting)

Cleaning of the track equipment

Measures that become necessary due to improper use, faulty operation, external effects, force majeure, vandalism, alterations and extensions, etc. are excluded. Such works are handled as non-contractual performance, and therefore are separately charged and invoiced.

Corrective Maintenance

The corrective (unscheduled) maintenance work covers the activities for restoring the required state (not original) of technical equipment in a plant/line. Unscheduled maintenance tasks are carried out to remedy spontaneously occurring operating faults that will interrupt service operation.

These tasks cannot be planned. Immediately after our maintenance staff has received any trouble message, appropriate measures necessary for quickly eliminating the trouble will be taken (according to maintenance strategies previously fixed). Good coordination and execution of repair works as well as provision of spare parts form the basis for a quick and economical form of unscheduled maintenance are essential.

Measures that become necessary due to improper use, faulty operation, external effects, force majeure, vandalism, are handled as non-contractual performance, and therefore they are separately charged and invoiced.

Specialized and Heavy Maintenance Equipment

Special equipment required for the execution of the maintenance tasks on the track work will be delivered as part of the depot equipment and will remain at the depot for the execution of the different maintenance activities during the 10 years maintenance period.

In addition, as we are of the opinion that the vehicles which are within the depot scope of supply are not sufficient to reach the availability criteria requested, the Infraco Maintainer will include in his scope

- Emergency vehicle including emergency generator, welding equipment, manual grinding equipment, crane and high-pressure cleaning equipment.

6.2.2 Civil

A Defects Correction team comprising four operatives, equipped with a van/pickup, a compressor, an excavator with driver and access scaffold will execute the maintenance activities. The operatives will be skilled in various building/construction disciplines thus giving the capability to handle the vast majority of works that may arise.

The van/pickup will be fully equipped with the necessary tools and supplies to prepare and repair the vast majority of agreed defects.

This team will operate for approximately 12 weeks per year for the first three years and approximately four weeks per year for the next seven years. This will be at the operational requirements of the Infraco Maintainer

A Caretaker will be located at the Gogar Depot. He will be equipped with the necessary tools and supplies for the maintenance of the fabric of the Gogar Depot, for which the Infraco is responsible.

Three full time operatives are integrated into the 3 joint maintenance teams for maintaining the constructed fabric of the Edinburgh Tram System, for which the Infraco is responsible. They will be fully equipped with the necessary tools and supplies to carry out the majority of maintenance requirements.

A maintenance gang for maintaining the landscaping element of the Edinburgh Tram System, for which the Infraco is responsible, will be employed on a seasonal basis.

The gang will comprise three operatives (of whom one will be a landscaping specialist), a van/pickup, and landscape maintenance equipment.

This seasonal gang will operate for a total of two months per annum.

Specialists will be called up as required.

6.3 Maintenance Escalation

In the event that the Edinburgh Infraco teams are unable to clear an issue or incident, arrangements have been made for the escalation of the issue in the first instance to the technical support teams based in the UK, these are provided by the individual organisations or suppliers. Should further support be required, support from the product houses of the suppliers in their home countries has been arranged. This escalation will be managed in the first instance by the E&M Manager, however if further support is required this will be managed by the Project Manager. Any escalation will be recorded on the MMS system and will be monitored to ensure any pre agreed response times.

As part of the Infraco Maintenance process and procedures a detailed procedure will be provided to ensure maintenance and incident escalation is clearly defined.



7 Maintenance of the Rolling Stock

The maintenance of the rolling stock is not included in the proposal and the price of the Infraco Maintainer.

However, the proposal is based on the assumption that Infraco and Tramco will form a consortium to jointly provide the maintenance services to tie.



8 Performance Management

The Infrastructure Maintenance Performance shall be measured against the Performance Targets. The results of the evaluation of fulfilment of those targets can be used for the calculation of performance /reductions and bonuses, if applicable.

The detailed concept for respective application of performance/reductions and bonuses is defined in the ["Schedules to the Infrastructure Agreement" dated 01. Nov 2006 (incl. our comments)].

Prior to contract award the above mentioned concept needs to be agreed between tie and Infraco.

9 Maintenance Management System (MMS)

9.1 MMS - modular components

The MMS is a tool for ensuring efficiency, consistent high quality Maintenance activities. The MMS is a comprehensive modular tool developed to meet the requirements of maintaining rail infrastructure systems.

The MMS consists of the following modular components with related functionalities:

- Vehicle and Asset Information Management and Serial Tracking,
- Maintenance Planning (scheduling) Operations and Incident Management,
- Work Order Management: Distribution, tracking and control of Preventative and corrective maintenance activities,
- Tracking statistics on the performance of repairs and other maintenance actions,
- Fault and Incidents reports and analysis,
- Maintenance history and archive
- Materials and spare parts management,
- Cost Control of the maintenance activities,
- Allows set up of parent-and-child component hierarchies.

Appendix 3 – MMS presentation

9.2 Application of the MMS

The MMS allows the preventative maintenance activities to be planned and work orders generated, distributed and tracked. This is made possible by access to a comprehensive product structures, analysis and history of systems in service. As more data is captured asset relationships can be monitored, controlled and analysed.

Any work orders for unplanned works (corrective maintenance), following fault notification can be dispatched and tracked.

As the MMS allows the monitoring of equipment on a modular basis it is possible for the life of a product to be monitored, capturing the history and type of events that occur during a products life and the effort expended upon its preventative and corrective maintenance. This information will allow the maintenance regime for products to be changed to ensure the optimum performance of individual types of products through there lifecycles.

Reports can be raised from a standard menu or new reports can be created to meet the user's requirements. A quarterly report will be generated by the system. This report will provide details of all the preventative and corrective maintenance activities carried out.

The MMS supports management of personal and their skill (competence profile). Furthermore the maintenance plan is managed with the instructions and their required competence profile (skill). All maintenance tasks can be planned, distributed and controlled regarding their required competence profiles.

The MMS is a key part of the stores management process providing a traceable and auditable history of all materials. This will ensure that a minimum stock holding is always held.

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This is not limited to materials and will also be applied to specialist tools and equipment used to maintain the Edinburgh Tram Network.

The MMS will also assist in the purchasing of equipment and consumables, ensuring that when stocks are replenished that orders are tracked.

The purpose of utilising an integrated maintenance management system is to ensure that the maintenance of the system is provided on time to the correct quality using the correct materials.

10 Training

10.1 Overview

The proposed courses provide maintenance personnel the level training required to perform their activities. The preliminary training plan describes the initial training for Infrastructure maintenance staff for the Edinburgh Tram Network

The main aims of this training program are:

- enable the maintenance staff to maintain a safe and reliable system
- to ensure continuous learning and development

The training will be supported by a continuous professional development (CPD) programme.

10.1.1 Training Plan description

The objectives of the training process are to enable the maintenance staff dedicated to the Edinburgh Tram Network to benefit from the Maintainer experiences from former projects.

The proposal is based on the 'train the trainers' model: A qualified trainer trains key instructors, which will train the personnel of the maintenance staff from the Maintainer

- Step 1 of the training courses: The Maintainer will provide training for the key instructors. They will participate in theoretical courses and on the job activities during the implementation of the project.
- Step 2 of the training courses: at the end of step 1, the instructors will train newly engaged staff.

The 'train the trainers' process provides advantages for the organisation of the maintenance team:

- high educated maintenance staff for the life time of contract
- the instructors acquire technical expertise enabling them to better understand the complexity of the system
- high efficiency in preparing the training courses

The instructors are qualified for the future training of new personnel. In the following chapters, only the maintenance issues will be addressed.



Course Module	Duration in days	Number of trainings
Onsite Classroom Training		
MAT CR ON1 Management In this module management will be trained in running infrastructure maintenance skills.		
Duration in days	5	
Number of trainings		1
Subtotal	5	
MAT CR ON2 Supervisors (Infrastructure) In this module supervisors will be trained in handling infrastructure equipmentthe		
Duration in days	10	
Number of trainings		1
Subtotal	10	
MAT CR ON3 Maintenance staff (Infrastructure) This training is subdivided into a couple of modules, which depend on the detailed training plan. The maintenance staff will be trained for executive maintenance works.		
Duration in days	10	
Number of trainings		1
Subtotal	10	
MAT CR ON4 Heavy Duty (Infrastructure) This training is subdivided into a couple of modules, which depend on the detailed training plan. The heavy duty driver staff will be trained for emergency works.		
Duration in days	5	
Number of trainings		1
Subtotal	5	
Total duration of training	30	

10.2 Initial training for instructors

10.2.1 General organisation

The instructors will receive an initial theoretical and practical training according to their future responsibilities. After this initial training, they will improve their skills by carrying out on-the-job training during the implementation of the project.

This training will be organised by the Maintainer. The Maintainer coordinates the training courses with the construction team and the trainers of the different sub-systems.

10.2.2 Training plan

The detailed training plan will describe at least:

- the goal of each course
- the breakdown of each course into units
- the contents of the program of each unit and its duration
- the profile of participants and the prerequisites
- the equipment required and the course material corresponding to each unit
- the overall schedule of training

The maintenance core training courses are focussed on:

- Overview of the Tramway infrastructure system
- Telecommunication systems
- Power supply
- Track-work
- Depot and workshop equipment

The training courses will also focus on maintenance of specific equipment such as access management system, fire fighting, smoke detection etc. These courses will be performed by the suppliers. The modules will be specified in the training plan at a later stage.

10.3 Initial training for maintenance team

Before the start of the revenue service, trainers of the maintenance staff will train the technicians and workers. This initial training will be organised under the overall training plan and managed by a responsible Trainer of the project team for Infracore. The Trainer is responsible for the organisation, the compatibility of the courses with the project schedule.

The training part for management and organisation level has a scope of 2 weeks. The category of participants should have maintenance manager level. The training part for maintenance personal for infrastructure has a scope of 5 weeks. The category of participants should have engineers, electricians and mechanics.

The maximal number of participants for each course is 10 trainees. Each course will be performed max. twice. At the end of each training course, multiple choice type tests will

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be used to assess the ability of the candidates to carry out their tasks and to transfer their skills to other employees.

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11 Appendices

11.1 Appendix 1 : Organisational Structure



11.2 Appendix 2: Maintenance Plans

The maintenance plans are a preview of the work to be expected for scheduled maintenance from the manufacturer's perspective. As a rule, however, the design of the maintenance intervals and contents must focus on the actual performance of the wear parts and consumables in the respective operating environment of the systems. This means that the maintenance plans that are defined at the beginning of the revenue service is only of a preliminary nature. They will be adapted by the Infraco maintainer upon approval by the client to the specific service requirements and general conditions in the course of running and maintaining the system. Possible adjustments should be discussed on a regular basis between the client and the Infraco maintainer.

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11.3 Appendix 3 : MMS



11.4 Appendix 4 : Vandalism Repair Items

Notwithstanding that we have excluded physical vandal damage as part of the scope of any maintenance contract. We are aware that vandal damage is a problem that will need to be addressed on the entire Edinburgh Tram Network.

We also recognise that the nature of the maintenance contract puts the maintainer in the ideal position to identify and carry out these repairs.

Consequently we list below a selection of items that might be the subject of vandal damage.

	Unit	indicative Prices
1. Replace pane in tram-stop shelter	no	975,00 £
2. Replace litter bin	no	818,00 £
3. Replace platform lighting column	no	2.250,00 £
4. Replace pedestrian guardrail	no	217,00 £
5. Replace street lighting column	no	2.625,00 £
6. Replace Metal Benching	no	2.163,00 £
7. Replace Security Fencing	no	113,00 £
8. Replace Complete tram-stop Shelter (8 meters)	no	22.635,00 £
9. Replace CCTV Camera	no	2.611,00 £
10. Replace PIS Indicator Panel	no	4.264,00 £
11. Replace Loudspeaker	no	417,00 £
12. Replace Electrical Cabinet	no	22.074,00 £
13. Replace Signal	no	2.609,00 £
14. Replace Point Indicator	no	2.314,00 £
15. Replace Points Heating	no	10.293,00 £
16. Replace Point Machine	no	19.260,00 £
17. Replace Passenger Help Points	no	1.971,00 £
18. Replace Advertising Panel		

The above list is not exhaustive and is provided for indicative reasons. We would welcome the opportunity to discuss this matter with you.

PROJECT	SECTION	FOLDER	DWG NO	STR ID	REV NO	DRAWING NAME	STATUS	COMMENTS
ULE-90130	1	ACC	1		1	Newhaven Road To Haymarket(Sub-Section 1A)	Issued for External Approval	Works are under Provisional Sum
ULE-90130	1	ACC	2		1	Newhaven Road To Haymarket(Sub-Section 1A)	Issued for External Approval	Works are under Provisional Sum
ULE-90130	1	ACC	3		1	Newhaven Road To Haymarket(Sub-Section 1A)	Issued for External Approval	Works are under Provisional Sum
ULE-90130	1	ACC	6		1	Newhaven Road to Haymarket,Section 1A	Issued for External Approval	Works are under Provisional Sum
ULE-90130	1	ACC	7		1	Newhaven Road to Haymarket,Section 1A	Issued for External Approval	Works are under Provisional Sum
ULE-90130	1	ACC	10		1	Newhaven Road to Haymarket Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	1	ACC	11		1	Newhaven Road to Haymarket Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	1	ACC	12		1	Newhaven Road to Haymarket Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	1	ACC	13		1	Newhaven Road to Haymarket Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	1	ACC	14		1	Newhaven Road to Haymarket Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	1	ACC	15		1	Newhaven Road to Haymarket Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	1	ACC	16		1	Newhaven Road to Haymarket Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	1	ACC	18		1	Newhaven Road to Haymarket Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	1	ACC	24		1	Newhaven Road to Haymarket Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	2	ACC	1		1	Haymarket to Roseburn Junction	Issued for External Approval	Works are under Provisional Sum
ULE-90130	2	ACC	2		1	Haymarket to Roseburn Junction	Issued for External Approval	Works are under Provisional Sum
ULE-90130	2	ACC	3		1	Haymarket to Roseburn Junction	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	1		1	Murrayfield Rugby Stadium - Location Plan	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	2		1	Murrayfield Rugby Stadium - Site Plan	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	3		1	Murrayfield Stadium - Floor Plan	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	4		1	Murrayfield Stadium - Elevation B & Sec A-A	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	5		1	Murrayfield Stadium Site Plan	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	6		1	Murrayfield Stadium Ground & First Floor	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	7		1	Murrayfield Stadium Elevators & Sec A-A	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	8		1	Murrayfield Stadium Turnstile Area	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	9		1	Murrayfield Stadium New Access & Car Park	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	10		1	Roseburn Junction to Gogarburn Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	11		1	Roseburn Junction to Gogarburn Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	12		1	Roseburn Junction to Gogarburn Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	13		1	Roseburn Junction to Gogarburn Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	14		1	Roseburn Junction to Gogarburn Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	15		1	Roseburn Junction to Gogarburn Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	16		1	Roseburn Junction to Gogarburn Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	17		1	Roseburn Junction to Gogarburn Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	18		1	Roseburn Junction to Gogarburn Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	19		1	Roseburn Junction to Gogarburn Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	20		1	Roseburn Junction to Gogarburn Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	21		1	Roseburn Junction to Gogarburn Drainage Pipe	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	22		1	Roseburn Junction to Gogarburn Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	23		1	Roseburn Junction to Gogarburn Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	24		1	Roseburn Junction to Gogarburn Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	25		1	Roseburn Junction to Gogarburn Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	26		1	Roseburn Junction to Gogarburn Boundary	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	32		2	Murrayfield Stadium Accommodation Works Clubhouse Proposed Ground & First Floor Plans	Issued for External Approval	Works are under Provisional Sum
ULE-90130	5	ACC	33		2	Murrayfield Stadium Accommodation Works Clubhouse Proposed Elevations & Section A-A	Issued for External Approval	Works are under Provisional Sum
ULE-90130	6	ACC	1		*	Gogar Depot Boundary and Accommodation Works Sheet 1 of 2	Issued for External Approval	Works are under Provisional Sum
ULE-90130	6	ACC	2		*	Gogar Depot Boundary and Accommodation Works Sheet 2 of 2	Issued for External Approval	Works are under Provisional Sum
ULE-90130	7	ACC	1		1	Gogarburn to Edinburgh Airport,SubSection7A	Issued for External Approval	Works are under Provisional Sum
ULE-90130	7	ACC	2		1	Gogarburn to Edinburgh Airport,SubSection7A	Issued for External Approval	Works are under Provisional Sum
ULE-90130	7	ACC	3		1	Gogarburn to Edinburgh Airport,SubSection7A	Issued for External Approval	Works are under Provisional Sum
ULE-90130	7	ACC	4		1	Gogarburn to Edinburgh Airport,SubSection7A	Issued for External Approval	Works are under Provisional Sum
ULE-90130	7	ACC	5		1	Gogarburn to Edinburgh Airport,SubSection7A	Issued for External Approval	Works are under Provisional Sum
ULE-90130	7	ACC	6		1	Gogarburn to Edinburgh Airport,SubSection7A	Issued for External Approval	Works are under Provisional Sum
ULE-90130	7	ACC	7		1	Gogarburn to Edinburgh Airport,SubSection7A	Issued for External Approval	Works are under Provisional Sum
ULE-90130	7	ACC	8		2	Gogarburn to Edinburgh Airport,SubSection7A	Issued for External Approval	Works are under Provisional Sum
ULE-90130	7	ACC	9		1	Gogarburn to Edinburgh Airport,SubSection7A	Issued for External Approval	Works are under Provisional Sum
ULE-90130	1	BRG	1	S16	D	Victoria Dock	For Tender Purposes Only	
ULE-90130	1	BRG	2	S16	A	Victoria Dock	For Tender Purposes Only	
ULE-90130	1	BRG	62	S17	D	Tower Place Bridge	For Tender Purposes Only	
ULE-90130	1	BRG	64	S17	A	Tower Place Bridge	For Tender Purposes Only	
ULE-90130	1	BRG	65	S17	A	Tower Place Bridge	For Tender Purposes Only	
ULE-90130	1	BRG	121	S18	C	Leith Walk Railway	For Tender Purposes Only	
ULE-90130	1	BRG	122	S18	A	Leith Walk Railway	Preliminary Design	
ULE-90130	2	BRG	3	S19	3	Haymarket Station Viaduct	Issued for External Approval	
ULE-90130	2	BRG	4	S19	4	Haymarket Station Viaduct	Issued for External Approval	

PROJECT	SECTION	FOLDER	DWG NO	STR ID	REV NO	DRAWING NAME	STATUS
ULE-90130	7	BRG	42	S29	1A	Gogarburn to Edinburgh Airport Gogarburn Bridge	Issued for External Approval
ULE-90130	7	BRG	43	S29	1	Gogarburn to Edinburgh Airport Reinforced Earth Details	
ULE-90130	7	BRG	64	S30,31,34	1	S30, S31 & S34 Culverts	Issued for External Approval
ULE-90130	7	BRG	65	S30,31,34		Gogarburn Culverts General Arrangements	Issued for External Approval
ULE-90130	7	BRG	66	S30,31,34		Gogarburn Culverts General Arrangements	Issued for External Approval
ULE-90130	7	BRG	67	S30,31,34		Gogarburn Culverts General Arrangements	Issued for External Approval
ULE-90130	7	BRG	68	S30,31,34		Gogarburn Culverts General Arrangements	Issued for External Approval
ULE-90130	7	BRG	69	S30,31,34		Gogarburn Culverts Culvert No. 1 Concrete Outlines	Issued for External Approval
ULE-90130	7	BRG	70	S30,31,34		Gogarburn Culverts Culvert No. 1 Concrete Outlines	Issued for External Approval
ULE-90130	7	BRG	71	S30,31,34	2	Gogarburn Culverts Culvert No. 3 Concrete Outlines	Issued for External Approval
ULE-90130	7	BRG	72	S30,31,34	1	Gogarburn Culverts Culvert No. 1 RC Details - Box Culvert Sections Sheet 1	Issued for External Approval
ULE-90130	7	BRG	73	S30,31,34	1	Gogarburn Culverts Culvert No. 1 RC Details - Box Culvert Sections Sheet 2	Issued for External Approval
ULE-90130	7	BRG	74	S30,31,34	1	Gogarburn Culverts Culvert No. 2 RC Details - Box Culvert Sections Sheet 1	Issued for External Approval
ULE-90130	7	BRG	75	S30,31,34	1	Gogarburn Culverts Culvert No. 2 RC Details - Box Culvert Sections Sheet 2	Issued for External Approval
ULE-90130	7	BRG	76	S30,31,34	1	Gogarburn Culverts Culvert No. 3 RC Details - Box Culvert Sections Sheet 1	Issued for External Approval
ULE-90130	7	BRG	77	S30,31,34	1	Gogarburn Culverts Culvert No. 3 RC Details - Box Culvert Sections Sheet 2	Issued for External Approval
ULE-90130	7	BRG	78	S30,31,34	1	Gogarburn Culverts Culvert No. 1 Headwalls RC Details	Issued for External Approval
ULE-90130	7	BRG	79	S30,31,34	1	Gogarburn Culverts Culvert No. 2 Headwalls RC Details	Missing Drawing
ULE-90130	7	BRG	80	S30,31,34	1	Gogarburn Culverts Culverts No.3 Headwalls RC Details	Issued for External Approval
ULE-90130	SW	CND	2		6	Kerbing Details	Issued for External Approval
ULE-90130	SW	CND	3		2	Signal Head Types	Issued for External Approval
ULE-90130	SW	CND	4		2	Kerbing Details	Issued for External Approval
ULE-90130	SW	CND	5		1	Step Details	External Approval
ULE-90130	SW	CND	7		1	Timber Kick Detail	Issued for External Approval
ULE-90130	SW	CND	8		1	Peestrian Handrail Details	Issued for External Approval
ULE-90130	SW	CND	9		1	Pedestrian Handrail Details, Section 3A	Issued for External Approval
ULE-90130	SW	CND	16			Construction Detail Typical Substation Access Details	Issued for Internal Review
ULE-90130	6	DEP	1		7	Gogar Depot Proposed Maintenance & Stabling Layout Site Plan	For External Approval
ULE-90130	6	DEP	2		7	Gogar Depot Proposed Maintenance & Stabling Layout Site Plan	For External Approval
ULE-90130	6	DEP	3		7	Gogar Depot Proposed Maintenance & Stabling Layout Site Plan	For External Approval
ULE-90130	6	DEP	4		7	Gogar Depot Proposed Maintenance & Stabling Layout Site Plan	For External Approval
ULE-90130	6	DEP	5		7	Gogar - First Floor Layout	For External Approval
ULE-90130	6	DEP	6		6	Gogar Depot Proposed Maintenance & Stabling Layout Site Plan	For External Approval
ULE-90130	6	DEP	7		6	Gogar Depot Proposed Maintenance & Stabling Layout Site Plan	For External Approval
ULE-90130	6	DEP	8		6	Gogar Depot Proposed Maintenance & Stabling Layout Site Plan	For External Approval
ULE-90130	6	DEP	9		7	Gogar Depot Proposed Maintenance & Stabling Layout Site Plan	For External Approval
ULE-90130	6	DEP	10		7	Gogar Depot Proposed Maintenance & Stabling Layout Site Plan	For External Approval
ULE-90130	6	DEP	12		7	Gogar Depot Proposed Maintenance & Stabling Layout Site Plan	For External Approval
ULE-90130	6	DEP	13		00	Standard Electrical Services Details	For Internal Review
ULE-90130	6	DEP	14		7	Gogar Depot Proposed Maintenance & Stabling Layout Site Plan	For External Approval
ULE-90130	6	DEP	17		6	Gogar Depot Depot & Office Building Roof Plan Layout	For External Approval
ULE-90130	6	DEP	18		1	Gogar Depot Depot & Office Building Ground Floor Layout Plan Ceiling Layout	For External Approval
ULE-90130	6	DEP	19		1	Gogar Depot Depot & Office Building First Floor Layout Plan Ceiling Layout	For External Approval
ULE-90130	6	DEP	21		1	Gogar Depot Depot & Office Building Wall & Column Casing Plan Details	For External Approval
ULE-90130	6	DEP	23		1	Gogar Depot Depot & Office Building Wall Elevation & Sections Internal & External Details	For External Approval
ULE-90130	6	DEP	27		1	Gogar Depot Office Building Male WC, Showers & Locker Room Ground Floor Details	For External Approval
ULE-90130	6	DEP	28		1	Gogar Depot Office Building Female & Accessible Toilet First Floor Details	For External Approval
ULE-90130	6	DEP	30		1	Gogar Depot Office Building Public & Staff Entrance Canopy Details	For External Approval
ULE-90130	6	DEP	32		1	Gogar Depot Depot & Office Building Ground Floor Fire Strategy Plan	For External Approval
ULE-90130	6	DEP	33		1	Gogar Depot Depot & Office Building First Floor Fire Strategy Plan	For External Approval
ULE-90130	6	DEP	34		1	Gogar Depot Depot & Office Building General Arrangement Layout Fire Strategy Plan	For External Approval
ULE-90130	6	DEP	35		1	Gogar Depot Depot & Office Building Ground Floor Layout Plan Schedule of Finishes	For External Approval
ULE-90130	6	DEP	36		1	Gogar Depot Depot & Office Building First Floor Layout Plan Schedule of Finishes	For External Approval
ULE-90130	6	DEP	37		1	Gogar Depot Office Building Ground Floor Plan Door & Window Layout	For External Approval
ULE-90130	6	DEP	38		1	Gogar Depot Office Building First Floor Plan Door & Window Layout	For External Approval
ULE-90130	6	DEP	39		1	Gogar Depot Depot Building Workshop Area Floor Plan Door Layout	For External Approval
ULE-90130	6	DEP	40		1	Gogar Depot Depot & Office Building Door Schedule Ground Floor	For External Approval
ULE-90130	6	DEP	41		1	Gogar Depot Office Building Door Schedule First Floor	For External Approval
ULE-90130	6	DEP	60		1	Gogar Depot Depot & Office Building Power Energy Centre Building Ground Floor Layout Plan	For External Approval
ULE-90130	6	DEP	61		1	Gogar Depot Depot & Office Building Power Energy Centre Building Reflected Ceiling & Roof Layout Plans	For External Approval
ULE-90130	6	DEP	62		1	Gogar Depot Depot & Office Building Power Energy Centre Elevations	For External Approval

COMMENTS

sent TQ for revisions and clarifications.....

No drawing status stamped

PROJECT	SECTION	FOLDER	DWG NO	STR ID	REV NO	DRAWING NAME	STATUS
ULE-90130	6	DEP	63		1	Gogar Depot Depot & Office Building Power Energy Centre Building Section A-A & Details	For External Approval
ULE-90130	6	DEP	67		1	Gogar Depot Depot & Office Building Sub-Station Building Ground Floor Layout Plans	For External Approval
ULE-90130	6	DEP	68		1	Gogar Depot Depot & Office Building Sub-Station Building Reflected Ceiling & Roof Layout Plans	For External Approval
ULE-90130	6	DEP	70		1	Gogar Depot Depot & Office Building Sub-Station Building Section A-A & Details	For External Approval
ULE-90130	6	DEP	75		2	Gogar Depot Depot Equipment & Communications Room Arrangement Ground Floor Layout Plan	For External Approval
ULE-90130	6	DEP	80		2	Gogar Depot Control Room Arrangement First Floor Layout Plan	For External Approval
ULE-90130	6	DEP	101		4	Section 6 Depot Foundation Layout Sheet 1 of 2	For External Approval
ULE-90130	6	DEP	102		4	Section 6 Depot Foundation Layout Sheet 2 of 2	For External Approval
ULE-90130	6	DEP	103		4	Section 6 Depot Ground Floor Slab Layout Sheet 1 of 2	For External Approval
ULE-90130	6	DEP	104		4	Section 6 Depot Ground Floor Slab Layout Sheet 2 of 2	For External Approval
ULE-90130	6	DEP	106		4	Gogar - Ground Floor Steel Layout	For Tender Purposes Only
ULE-90130	6	DEP	107		4	Section 6 Depot First Floor Steel Layout Sheet 1 of 2	For External Approval
ULE-90130	6	DEP	108		4	Gogar - First Floor Steel Layout	For External Approval
ULE-90130	6	DEP	110		4	Section 6 Depot Roof Level Steel Layout Sheet 1 of 2	For External Approval
ULE-90130	6	DEP	111		4	Section 6 Depot Roof Level Steel Layout Sheet 2 of 2	For External Approval
ULE-90130	6	DEP	115		2	Section 6 Depot Steel Frame Sections Sheet 1	For External Approval
ULE-90130	6	DEP	116		1	Section 6 Depot Steel Frame Sections Sheet 2	For External Approval
ULE-90130	6	DEP	122		1	Depot & Office Building Base Plate Details	For External Approval
ULE-90130	6	DEP	160		1	Gogar Depot Depot & Office Building Power Energy Centre Foundation Layout	For External Approval
ULE-90130	6	DEP	161		1	Gogar Depot Depot & Office Building Power Energy Centre Lower Roof Layout	For External Approval
ULE-90130	6	DEP	162		1	Gogar Depot Depot & Office Building Power Energy Centre Upper Roof Layout	For External Approval
ULE-90130	6	DEP	165		1	Gogar Depot Depot & Office Building Power Energy Centre Upper Roof Layout	For External Approval
ULE-90130	6	DEP	170		1	Gogar Depot Depot & Office Building Power Energy Centre Sections	For External Approval
ULE-90130	6	DEP	171		1	Gogar Depot Depot & Office Building Sub-Station Building Foundation Layout	For External Approval
ULE-90130	6	DEP	175		1	Gogar Depot Depot & Office Building Sub-Station Sections	For External Approval
ULE-90130	6	DEP	201		4	Gogar - Electrical Symbols	For External Approval
ULE-90130	6	DEP	202		4	Gogar -External Lighting	For External Approval
ULE-90130	6	DEP	203		4	Gogar -External Lighting	For External Approval
ULE-90130	6	DEP	204		4	Gogar - Electrical Lighting Layout	For External Approval
ULE-90130	6	DEP	205		4	Gogar - Electrical Small Power	For External Approval
ULE-90130	6	DEP	206		4	Gogar - Electrical Small Power	For External Approval
ULE-90130	6	DEP	207		4	Gogar - Fire Alarm & Security	For External Approval
ULE-90130	6	DEP	208		4	Gogar - Fire Alarm & Security	For External Approval
ULE-90130	6	DEP	209		4	Gogar - Electrical Containment	For External Approval
ULE-90130	6	DEP	210		4	Gogar - Electrical Containment	For External Approval
ULE-90130	6	DEP	231		4	Gogar - Electrical LV Power	For External Approval
ULE-90130	6	DEP	232		4	Gogar -Electrical Fire Alarm	For External Approval
ULE-90130	6	DEP	233		4	Gogar - Electrical Earthing System	For External Approval
ULE-90130	6	DEP	234		1	Gogar Depot Lighting Protection System	For External Approval
ULE-90130	6	DEP	239		1	Gogar Depot External Electrical Services Layout Sheet 1 of 2	For External Approval
ULE-90130	6	DEP	240		-	Gogar Depot External Electrical Services Layout Sheet 2 of 2	For External Approval
ULE-90130	6	DEP	242		1	Gogar Depot Depot & Office Building Ground Floor Level Lighting Layout Sheet 1 of 2	For External Approval
ULE-90130	6	DEP	243		1	Gogar Depot Depot & Office Building Ground Floor Level Lighting Layout Sheet 2 of 2	For External Approval
ULE-90130	6	DEP	244		1	Gogar Depot Depot & Office Building First Floor Level Lighting Layout	For External Approval
ULE-90130	6	DEP	245		1	Gogar Depot Depot & Office Building Ground Floor Level Small Power & Date Layout Sheet 1 of 2	For External Approval
ULE-90130	6	DEP	246		1	Gogar Depot Depot & Office Building Ground Floor Level Small Power & Date Layout Sheet 2 of 2	For External Approval
ULE-90130	6	DEP	247		1	Gogar Depot Depot & Office Building Sub-Station Sections	For External Approval
ULE-90130	6	DEP	248		1	Gogar Depot Depot & Office Building Ground Floor Fire Alarm & Security Layout Sheet 1 of 2	For External Approval
ULE-90130	6	DEP	249		1	Gogar Depot Depot & Office Building Ground Floor Fire Alarm & Security Layout Sheet 2 of 2	For External Approval
ULE-90130	6	DEP	250		1	Gogar Depot Depot & Office Building First Floor Fire Alarm & Security Layout	For External Approval
ULE-90130	6	DEP	251		1	Gogar Depot Depot & Office Building First Floor Level Containment Layout	For External Approval
ULE-90130	6	DEP	252		1	Gogar Depot Depot & Office Building Ground Floor Level Containment Layout Sheet 1 of 2	For External Approval
ULE-90130	6	DEP	253		1	Gogar Depot Depot & Office Building Ground Floor Level Containment Layout Sheet 2 of 2	For External Approval
ULE-90130	6	DEP	254		1	Gogar Depot Depot Substation Building Electrical Services Layout	For External Approval
ULE-90130	6	DEP	255		1	Gogar Depot Power Energy Centre Building Electrical Services Layout	For External Approval
ULE-90130	6	DEP	256		1	Gogar Depot Depot Equipment & Communications Room Arrangement Electrical Services Layout	For External Approval
ULE-90130	6	DEP	257		1	Gogar Depot Supervisory Control Centre First Floor Electrical Services Layout	For External Approval
ULE-90130	6	DEP	258		1	Gogar Depot Workshop Electrical Services & Sections Layout	For External Approval
ULE-90130	6	DEP	260		1	Gogar Depot External Lighting Electrical & Services Layout Sheet 1 of 2	For External Approval
ULE-90130	6	DEP	261		1	Gogar Depot External Lighting Electrical & Services Layout Sheet 2 of 2	For External Approval
ULE-90130	6	DEP	301		4	Gogar Depot Depot & Office Building Ventilation & Air Cooling Ground Floor	For External Approval

COMMENTS

PROJECT	SECTION	FOLDER	DWG NO	STR ID	REV NO	DRAWING NAME	STATUS
ULE-90130	6	DEP	302		4	Gogar Depot Depot & Office Building Ventilation & Air Cooling First Floor	For External Approval
ULE-90130	6	DEP	303		4	Gogar Depot Depot & Office Building LPHW Radiator & Radiant Heating Layout Ground Floor	For External Approval
ULE-90130	6	DEP	304		4	Gogar Depot Depot & Office Building LPHW Radiator Heating First Floor	For External Approval
ULE-90130	6	DEP	305		4	Gogar	For Tender Purposes Only
ULE-90130	6	DEP	306		3	Gogar	For Tender Purposes Only
ULE-90130	6	DEP	307		1	Gogar Depot Depot & Office Building Power Energy Centre	For External Approval
ULE-90130	6	DEP	330		3	Gogar	For Tender Purposes Only
ULE-90130	6	DEP	331		3	Gogar	For Tender Purposes Only
ULE-90130	6	DEP	332		3	Gogar	For Tender Purposes Only
ULE-90130	6	DEP	401		4	Gogar Depot Depot & Office Building	For External Approval
ULE-90130	6	DEP	402		4	Gogar Depot Depot & Office Building	For External Approval
ULE-90130	6	DEP	403		4	Gogar Depot Depot & Office Building	For External Approval
ULE-90130	6	DEP	430		4	Gogar Depot Depot & Office Building	For External Approval
ULE-90130	6	DEP	450		4	Gogar Depot Depot & Office Building	For External Approval
ULE90130	1	DNE	10		2	Newhaven to Haymarket Drainage Plan-Section 1B	Issued for External Review
ULE90130	1	DNE	11		2	Newhaven to Haymarket Drainage Plan-Section 1B	Issued for External Review
ULE90130	1	DNE	12		2	Newhaven to Haymarket Drainage Plan-Section 1B	Issued for External Review
ULE90130	1	DNE	13		2	Newhaven to Haymarket Drainage Plan-Section 1B	Issued for External Review
ULE90130	1	DNE	21		1	Newhaven to Haymarket,Section 1D	Issued for External Review
ULE90130	1	DNE	22		1	Newhaven to Haymarket,Section 1D	Issued for External Review
ULE90130	1	DNE	23		1	Newhaven Road to Haymarket	Issued for External Review
ULE90130	1	DNE	24		1	Newhaven Road to Haymarket	Issued for External Review
ULE90130	1	DNE	26		1	Newhaven to Haymarket,Section 1D	For External Approval
ULE90130	2	DNE	1		2	Haymarket to Roseburn Junction	Issued for External Review
ULE90130	2	DNE	2		3	Haymarket to Roseburn Junction	Issued for External Review
ULE90130	2	DNE	3		3	Haymarket to Roseburn Junction	Issued for External Review
ULE90130	5	DNE	1		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5A	Issued for External Review
ULE90130	5	DNE	2		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5A	Issued for External Review
ULE90130	5	DNE	3		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5A	Issued for External Review
ULE90130	5	DNE	4		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5A	Issued for External Review
ULE90130	5	DNE	5		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5A	Issued for External Review
ULE90130	5	DNE	6		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5B	Issued for External Review
ULE90130	5	DNE	7		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5B	Issued for External Review
ULE90130	5	DNE	8		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5B	Issued for External Review
ULE90130	5	DNE	9		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5B	Issued for External Review
ULE90130	5	DNE	10		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5B	Issued for External Review
ULE90130	5	DNE	11		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5B	Issued for External Review
ULE90130	5	DNE	12		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5B	Issued for External Review
ULE90130	5	DNE	13		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5B	Issued for External Review
ULE90130	5	DNE	14		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5B	Issued for External Review
ULE90130	5	DNE	15		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5B	Issued for External Review
ULE-90130	5	DNE	16		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5B	Issued for External Review
ULE90130	5	DNE	17		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5B	Issued for External Review
ULE90130	5	DNE	18		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5B	Issued for External Review
ULE90130	5	DNE	19		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5B	Issued for External Review
ULE90130	5	DNE	20		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5B	Issued for External Review
ULE90130	5	DNE	21		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5C	Issued for External Review
ULE90130	5	DNE	22		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5C	Issued for External Review
ULE90130	5	DNE	23		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5C	Issued for External Review
ULE90130	5	DNE	24		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5C	Issued for External Review
ULE90130	5	DNE	25		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5C	Issued for External Review
ULE90130	5	DNE	26		2	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 5C	Issued for External Review
ULE-90130	6	DNE	1		1	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 6	Issued for External Review
ULE-90130	6	DNE	2		1	Roseburn Junction to Gogarburn Drainage Plan - Sub-section 6	Issued for External Review
ULE-90130	7	DNE	1		2	Gogarburn to Edinburgh Airport Drainage Plan - Sub-section 7A	Issued for External Review
ULE-90130	7	DNE	2		*	Gogarburn to Edinburgh Airport Drainage Plan - Sub-section 7A	NO STATUS
ULE-90130	7	DNE	3		*	Gogarburn to Edinburgh Airport Drainage Plan - Sub-section 7A	NO STATUS
ULE-90130	7	DNE	4		*	Gogarburn to Edinburgh Airport Drainage Plan - Sub-section 7A	NO STATUS
ULE-90130	7	DNE	5		*	Gogarburn to Edinburgh Airport Drainage Plan - Sub-section 7A	NO STATUS
ULE-90130	7	DNE	6		*	Gogarburn to Edinburgh Airport Drainage Plan - Sub-section 7A	NO STATUS
ULE-90130	7	DNE	7		*	Gogarburn to Edinburgh Airport Drainage Plan - Sub-section 7A	NO STATUS

COMMENTS

PROJECT	SECTION	FOLDER	DWG NO	STR ID	REV NO	DRAWING NAME	STATUS
ULE-90130	7	DNE	8		*	Gogarburn to Edinburgh Airport Drainage Plan - Sub-section 7A	NO STATUS
ULE-90130	7	DNE	9		*	Gogarburn to Edinburgh Airport Drainage Plan - Sub-section 7A	NO STATUS
ULE-90130	7	DNE	10		A	Gogarburn to Edinburgh Airport Drainage Plan and Long Section Sheet 1 of 9 Minimum drainage inverts	For Information Only
ULE-90130	7	DNE	11		A	Gogarburn to Edinburgh Airport Drainage Plan and Long Section Sheet 2 of 9 Minimum drainage inverts	For Information Only
ULE-90130	7	DNE	12		A	Gogarburn to Edinburgh Airport Drainage Plan and Long Section Sheet 3 of 9 Minimum drainage inverts	For Information Only
ULE-90130	7	DNE	13		A	Gogarburn to Edinburgh Airport Drainage Plan and Long Section Sheet 4 of 9 Minimum drainage inverts	For Information Only
ULE-90130	7	DNE	14		A	Gogarburn to Edinburgh Airport Drainage Plan and Long Section Sheet 5 of 9 Minimum drainage inverts	For Information Only
ULE-90130	7	DNE	15		A	Gogarburn to Edinburgh Airport Drainage Plan and Long Section Sheet 6 of 9 Minimum drainage inverts	For Information Only
ULE-90130	7	DNE	16		A	Gogarburn to Edinburgh Airport Drainage Plan and Long Section Sheet 7 of 9 Minimum drainage inverts	For Information Only
ULE-90130	7	DNE	17		A	Gogarburn to Edinburgh Airport Drainage Plan and Long Section Sheet 8 of 9 Minimum drainage inverts	For Information Only
ULE-90130	7	DNE	18		A	Gogarburn to Edinburgh Airport Drainage Plan and Long Section Sheet 9 of 9 Minimum drainage inverts	For Information Only
ULE-90130	SW	DNE	53		2	Brick and Precast Concrete Catchpits Sheet 1 of 3	Issued for External Review
ULE-90130	SW	DNE	54		2	Brick and Precast Concrete Manholes Sheet 2 of 3	Issued for External Review
ULE-90130	SW	DNE	55		2	Manhole and Catchpit standard Details Sheet 3 of 3	Issued for External Review
ULE-90130	SW	DNE	56		2	Concrete Headwalls	Issued for External Review
ULE-90130	SW	DNE	57		2	Rodding Eye & Street Gully Standard Details	Issued for External Review
ULE-90130	SW	DNE	58		2	Typical Hydro-Brake chamber with integral weir wall	Issued for External Review
ULE-90130	SW	DNE	59		2	Typical pipe and french drain construction details	Issued for External Review
ULE-90130	1	DRG	9		1	Newhaven Road to Haymarket, Leith Walk	For Information Only
ULE-90130	1	DRG	10		1	Newhaven Road to Haymarket, Leith Walk	For Information Only
ULE-90130	1	DRG	11		1	Newhaven Road to Haymarket, Leith Walk	For Information Only
ULE-90130	1	DRG	12		1	Newhaven Road to Haymarket, Leith Walk	For Information Only
ULE-90130	1	DRG	13		1	Newhaven Road to Haymarket, Leith Walk	For Information Only
ULE-90130	1	DRG	14		1	Newhaven Road to Haymarket, Leith Walk	For Information Only
ULE-90130	1	DRG	43		1	Newhaven Road to Haymarket,	For Information Only
ULE-90130	1	DRG	179		1	Newhaven to Haymarket,Subsection 1A/lb	Issued for External Approval
ULE-90130	1	DRG	180		1	Newhaven to Haymarket,Subsection 1A/lb	Issued for External Approval
ULE-90130	1	DRG	184		1	Newhaven to Haymarket,subsection 1C/1D	Issued for External Approval
ULE-90130	1	DRG	185		1	Newhaven to Haymarket,Subsection 1A/lb	Issued for External Approval
ULE-90130	1	DRG	186		1	Newhaven to Haymarket,Subsection 1A/lb	Issued for External Approval
ULE-90130	1	DRG	216		1	Due Diligence Update	Draft - Design in Progress
ULE-90130	1	DRG	217		1	Due Diligence Update	Draft - Design in Progress
ULE-90130	1	DRG	219		1	Roads Design Status,Section 1C	For Information Only
ULE-90130	1	DRG	220		1	Roads Design Status,Section 1C	For Information Only
ULE-90130	1	DRG	221		1	Roads Design Status,Section 1C	For Information Only
ULE-90130	2	DRG	5		1	Haymarket to Roseburn Junction Integrated Cross Sections Sub-Section 2A Sheet 1 of 2	Issued for External Approval
ULE-90130	2	DRG	6		1	Haymarket to Roseburn Junction Integrated Cross Sections Sub-Section 2A Sheet 2 of 2	Issued for External Approval
ULE-90130	5	DRG	197		2	Roseburn Junction to Gogarburn	Issued for External Review
ULE-90130	5	DRG	198		2	Roseburn Junction to Gogarburn	Issued for External Review
ULE-90130	5	DRG	199		2	Roseburn Junction to Gogarburn	Issued for External Review
ULE-90130	5	DRG	200		2	Roseburn Junction to Gogarburn	Issued for External Review
ULE-90130	5	DRG	201		2	Roseburn Junction to Gogarburn	Issued for External Review
ULE-90130	5	DRG	202		2	Roseburn Junction to Gogarburn	Issued for External Review
ULE-90130	5	DRG	203		2	Roseburn Junction to Gogarburn	Issued for External Review
ULE-90130	5	DRG	204		2	Roseburn Junction to Gogarburn	Issued for External Review
ULE-90130	5	DRG	205		2	Roseburn Junction to Gogarburn	Issued for External Review
ULE-90130	5	DRG	206		2	Roseburn Junction to Gogarburn	Issued for External Review
ULE-90130	5	DRG	207			Roseburn Junction to Gogarburn	Issued for External Review
ULE-90130	5	DRG	214		1	Roseburn Junction to Gogarburn	For Information Only
ULE-90130	5	DRG	217		1	Roseburn Junction to Gogarburn	For Information Only
ULE-90130	5	DRG	218		1	Roseburn Junction to Gogarburn	For Information Only
ULE-90130	5	DRG	224		1	Roseburn to Gogarburn Murrayfield Training Pitches	For Information Only
ULE-90130	5	DRG	227		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5C Sheet 1 of 5	Issued for External Approval
ULE-90130	5	DRG	228		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5C	Issued for External Approval
ULE-90130	5	DRG	545		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5C (Sheet 3 of 5)	Issued for External Approval
ULE-90130	5	DRG	546		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5C (Sheet 4 of 5)	Issued for External Approval
ULE-90130	5	DRG	547		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5C (Sheet 5 of 5)	Issued for External Approval
ULE-90130	5	DRG	548		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5B Sheet 1 of 8	Issued for External Approval
ULE-90130	5	DRG	549		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5B Sheet 2 of 8	Issued for External Approval
ULE-90130	5	DRG	550		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5B Sheet 3 of 8	Issued for External Approval
ULE-90130	5	DRG	551		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5B Sheet 4 of 8	Issued for External Approval

COMMENTS

PROJECT	SECTION	FOLDER	DWG NO	STR ID	REV NO	DRAWING NAME	STATUS
ULE-90130	5	DRG	552		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5B	Issued for External Approval
ULE-90130	5	DRG	553		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5B	Issued for External Approval
ULE-90130	5	DRG	554		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5B	Issued for External Approval
ULE-90130	5	DRG	555		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5B	Issued for External Approval
ULE-90130	5	DRG	556		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5A	Issued for External Approval
ULE-90130	5	DRG	557		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5A	Issued for External Approval
ULE-90130	5	DRG	558		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5A	Issued for External Approval
ULE-90130	5	DRG	559		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5A	Issued for External Approval
ULE-90130	5	DRG	560		1	Roseburn Junction to Gogarburn Integrated Cross Sections Sub-Section 5A	Issued for External Approval
ULE-90130	6	DRG	1		1	Gogar Depot	For Information Only
ULE-90130	7	DRG	68		1	Gogarburn to Edinburgh Airport	Issued for External Review
ULE-90130	7	DRG	70		2	Gogarburn to Edinburgh Airport -Future Provision for NIL Stop Location	For Information Only
ULE-90130	7	DRG	102		1	Gogarburn to Edinburgh Airport Integrated Cross Section Sub-Section 7A Sheet 1 of 5	Issued for External Approval
ULE-90130	7	DRG	103		1	Gogarburn to Edinburgh Airport Integrated Cross Section Sub-Section 7A Sheet 2 of 5	Issued for External Approval
ULE-90130	7	DRG	104		1	Gogarburn to Edinburgh Airport Integrated Cross Section Sub-Section 7A Sheet 3 of 5	Issued for External Approval
ULE-90130	SW	DRG	31		7	Typical Tramway Cross Sections	Issued for External Approval
ULE-90130	SW	DRG	32		7	Typical Tramway Cross Sections	Issued for External Approval
ULE-90130	SW	DRG	33		7	Typical Tramway Cross Sections	Issued for External Approval
ULE-90130	SW	DRG	34		7	Typical Tramway Cross Sections	Issued for External Approval
ULE-90130	SW	DRG	56		3	System Wide Structure Gauge	Issued for External Approval
ULE-90130	SW	DRG	57		2	Structure Gauge	Issued for External Approval
ULE-90130	SW	DRG	59		3	Typical Tramway Cross Sections	Issued for External Approval
ULE-90130	SW	DRG	69		3	Surface finishes	Issued for External Approval
ULE-90130	SW	DRG	70		3	Surface finishes	Issued for External Approval
ULE-90130	SW	DRG	71		3	Surface finishes	Issued for External Approval
ULE-90130	SW	DRG	72		3	Typical Tramway Cross Sections	Issued for External Approval
ULE-90130	SW	DRG	73		3	Typical Tramway Cross Sections	Issued for External Approval
ULE-90130	SW	DRG	74		3	Typical Tramway Cross Sections	Issued for External Approval
ULE-90130	SW	DRG	76		4	Section 5 & 7 Route Plan	Issued for External Approval
ULE-90130	SW	DRG	77		1	System Wide Standard Turnout Geometry	For Information Only
ULE-90130	SW	DRG	454		13	System Wide Line 1 Project Status	For Information Only
ULE-90130	SW	DRG	455		13	System Wide Line 1 Project Status	For Information Only
ULE-90130	SW	DRG	461		3	System Wide Guard Rail Installation of Ballasted Track	Issued for External Approval
ULE-90130	SW	DRG	475		1	South Gyle Tram Stop	Issued for External Review
ULE-90130	SW	DRG	548		1	Line 1 Integrated Cross Section Location Overview	Issued for External Approval
ULE-90130	SW	DRG	549		1	Line 2 Integrated Cross Section Location Overview	Issued for External Approval
ULE-90130	SW	DRG	572		1	System Wide S & C Layout Plans (Drawing 1 of 4)	Issued for External Approval
ULE-90130	SW	DRG	573		1	System Wide S & C Layout Plans (Drawing 2 of 4)	Issued for External Approval
ULE-90130	SW	DRG	574		1	System Wide S & C Layout Plans (Drawing 3 of 4)	Issued for External Approval
ULE-90130	SW	DRG	575		1	System Wide S & C Layout Plans (Drawing 4 of 4)	Issued for External Approval
ULE-90130	SW	DRG	580		1	Trackform Reference Design Grass Track In-Situ Concrete In-Situ Rail Beam	Issued for External Approval
ULE-90130	SW-SW	TRK-DRG	23		5	Route Plan: Proposed Tramway	Issued for External Approval
ULE-90130	SW-SW	TRK-DRG	27		5	System Wide Section/Sub-Section Overview (Sheet 1 of 2)	For Information Only
ULE-90130	SW-SW	TRK-DRG	28		6	System Wide Section/Sub-Section Overview (Sheet 2 of 2)	For Information Only
ULE-90130	1	HRL	1		B	Section 1A	Issued for External Approval
ULE-90130	1	HRL	2		B	Section 1A	Issued for External Approval
ULE-90130	1	HRL	3		B	Section 1A	Issued for External Approval
ULE-90130	1	HRL	4		B	Section 1A	Issued for External Approval
ULE-90130	1	HRL	5		B	Roads Design Section 1A Sheet 5 of 24	Issued for External Approval
ULE-90130	1	HRL	6		B	Roads Design Section 1A Sheet 6 of 24	Issued for External Approval
ULE-90130	1	HRL	7		B	Roads Design Section 1A Sheet 7 of 24	Issued for External Approval
ULE-90130	1	HRL	8		B	Roads Design Section 1A Sheet 8 of 24	Issued for External Approval
ULE-90130	1	HRL	9		3	Roads Design Section 1A Sheet 9 of 24	Issued for External Approval
ULE-90130	1	HRL	10		4	Section 1B	Issued for External Approval
ULE-90130	1	HRL	11		4	Section 1B	Issued for External Approval
ULE-90130	1	HRL	12		4	Section 1B	Issued for External Approval
ULE-90130	1	HRL	13		4	Roads Design Section 1B	Issued for External Approval
ULE-90130	1	HRL	14		4	Newhaven Road to Haymarket Section 1B	Issued for External Approval
ULE-90130	1	HRL	15		3	Section 1C	Issued for External Approval
ULE-90130	1	HRL	16		3	Section 1C	Issued for External Approval
ULE-90130	1	HRL	17		3	Section 1C	Issued for External Approval

COMMENTS

PROJECT	SECTION	FOLDER	DWG NO	STR ID	REV NO	DRAWING NAME	STATUS	COMMENTS
ULE-90130	1	HRL	18		3	Section 1C	Issued for External Approval	
ULE-90130	1	HRL	19		3	Section 1C	Issued for External Approval	
ULE-90130	1	HRL	20		3	Roads Design Section 1C	Issued for External Approval	
ULE-90130	1	HRL	21		4	Newhaven to Haymarket,Section 1D	Issued for External Approval	
ULE-90130	1	HRL	22		4	Roads Design Section 1D	Issued for External Approval	
ULE-90130	1	HRL	23		4	Roads Design Section 1D	Issued for External Approval	
ULE-90130	1	HRL	24		4	Roads Design Section 1D	Issued for External Approval	
ULE-90130	1	HRL	74		1	Parking Layby Section 1B	For Approval	
ULE-90130	1	HRL	75		1	Parking Layby and Cycle Lane	For Approval	
ULE-90130	1	HRL	76		1	Typical Cross Section ,Section 1B	For Approval	
ULE-90130	1	HRL	77		1	Foot of the Walk Section 1B	For Approval	
ULE-90130	1	HRL	78		1	Typical Cross Section,Section1D	For Approval	
ULE-90130	1	HRL	79		1	Typical Cross Section,Section1D	For Approval	
ULE-90130	1	HRL	79		1	Typical Cross Section,Section 1D	For Approval	
ULE-90130	1	HRL	80		1	Newhaven Road to Haymarket Lighting Layout Plans Sheet 10 of 24	For Approval	
ULE-90130	1	HRL	81		1	Newhaven Road to Haymarket Lighting Layout Plans Sheet 10 of 24	For External Approval	
ULE-90130	1	HRL	82		1	Newhaven Road to Haymarket Lighting Layout Plans Sheet 10 of 24	For External Approval	
ULE-90130	1	HRL	83		1	Newhaven Road to Haymarket Lighting Layout Plans Sheet 10 of 24	For External Approval	
ULE-90130	1	HRL	151		6	St Andrew Square Road Design	For External Approval	
ULE-90130	1	HRL	152		1	St Andrew Square Road Design	For Information Only	
ULE-90130	1	HRL	153		1	St Andrew Square Road Design	For Information Only	
ULE-90130	1	HRL	154		1	St Andrew Square Road Design	For Information Only	
ULE-90130	1	HRL	155		1	St Andrew Square Road Design	For Information Only	
ULE-90130	1	HRL	210		1	New Haven Road to Haymarket	Issued for External Approval	
ULE-90130	1	HRL	211		1	Newhaven Road to Haymarket Section 1B	Issued for External Approval	
ULE-90130	1	HRL	212		1	Newhaven Road to Haymarket Section 1B	Issued for External Approval	
ULE-90130	1	HRL	213		1	Newhaven Road to Haymarket Section 1B	Issued for External Approval	
ULE-90130	1	HRL	214		1	Newhaven Road to Haymarket Site Clearance Section 1B Sheet 14 of 24	Issued for External Approval	
ULE-90130	1	HRL	221		1	Newhaven to Haymarket,Section 1D	Issued for External Approval	
ULE-90130	1	HRL	222		1	Newhaven to Haymarket,Section 1D	Issued for External Approval	
ULE-90130	1	HRL	223		1	Newhaven to Haymarket,Section 1D	Issued for External Approval	
ULE-90130	1	HRL	224		1	Newhaven to Haymarket,Section 1D	Issued for External Approval	
ULE-90130	1	HRL	225		1	Road Design & Site Clearance,St Andrew Sq	Issued for External Approval	
ULE-90130	1	HRL	410		1	New Haven Road to Haymarket,Section 1B	Issued for External Approval	
ULE-90130	1	HRL	411		1	New Haven Road to Haymarket,Section 1B	Issued for External Approval	
ULE-90130	1	HRL	412		1	New Haven Road to Haymarket,Section 1B	Issued for External Approval	
ULE-90130	1	HRL	413		1	New Haven Road to Haymarket,Section 1B	Issued for External Approval	
ULE-90130	1	HRL	414		1	New Haven Road to Haymarket,Section 1B	Issued for External Approval	
ULE-90130	1	HRL	421		1	Newhaven to Haymarket,Section 1D	Issued for External Approval	
ULE-90130	1	HRL	422		1	Newhaven to Haymarket,Section 1D	Issued for External Approval	
ULE-90130	1	HRL	423		1	Newhaven to Haymarket,Section 1D	Issued for External Approval	
ULE-90130	1	HRL	424		1	Newhaven to Haymarket,Section 1D	Issued for External Approval	
ULE-90130	1	HRL	544		2	St Andrews Sqaure	For Information Only	*Infraco Proposals are based on the 21 No Drawings highlighted below
ULE-90130	1	HRL	545		*	St Andrews Square Road Design Traffic Signals Ducting Dwg St. David's St Sheet 17 & 18 of 24*	Sketch	Marked Up Drawing Received on 24.07.2007 as dwg ULE90130-01-HRL-000148, PB Internal Version no. -
ULE-90130	1	HRL	701		*	Newhaven to Haymarket Pavement Design Dwgs Sec 1A Sheet 1 of 24*	For Public Meeting	Marked Up Drawing Received on 24.07.2007, PB Internal Version no. 4A
ULE-90130	1	HRL	702		*	Newhaven to Haymarket Pavement Design Dwgs Sec 1A Sheet 2 of 24*	For Public Meeting	Marked Up Drawing Received on 24.07.2007, PB Internal Version no. 3
ULE-90130	1	HRL	705		*	Newhaven to Haymarket Pavement Design Dwgs Sec 1A Sheet 5 of 24*	For Public Meeting	Marked Up Drawing Received on 24.07.2007, PB Internal Version no. 3
ULE-90130	1	HRL	706		*	Newhaven to Haymarket Pavement Design Dwgs Sec 1A Sheet 6 of 24*	For Public Meeting	Marked Up Drawing Received on 24.07.2007, PB Internal Version no. 3
ULE-90130	1	HRL	707		*	Newhaven to Haymarket Pavement Design Dwgs Sec 1A Sheet 7 of 24*	For Public Meeting	Marked Up Drawing Received on 24.07.2007, PB Internal Version no. 3
ULE-90130	1	HRL	708		*	Newhaven to Haymarket Pavement Design Dwgs Sec 1A Sheet 8 of 24*	For Public Meeting	Marked Up Drawing Received on 24.07.2007, PB Internal Version no. -
ULE-90130	1	HRL	709		*	Newhaven to Haymarket Pavement Design Dwgs Sec 1A Sheet 9 of 24*	For Public Meeting	Marked Up Drawing Received on 24.07.2007, PB Internal Version no. 6
ULE-90130	1	HRL	710		*	Newhaven to Haymarket Pavement Design Dwgs Sec 1B Sheet 10 of 24*	For Public Meeting	Marked Up Drawing Received on 24.07.2007, PB Internal Version no. -
ULE-90130	1	HRL	711		*	Newhaven to Haymarket Pavement Design Dwgs Sec 1B Sheet 11 of 24*	For Public Meeting	Marked Up Drawing Received on 24.07.2007, PB Internal Version no. -
ULE-90130	1	HRL	712		*	Newhaven to Haymarket Pavement Design Dwgs Sec 1B Sheet 12 of 24*	Issued for External Approval	Marked Up Drawing Received on 24.07.2007 as dwg ULE90130-01-TAL-00012, PB Internal Version no. 4
ULE-90130	1	HRL	713		4	Newhaven to Haymarket Pavement Design Dwgs Sec 1B Sheet 13 of 24*	For Public Meeting	Marked Up Drawing Received on 24.07.2007, PB Internal Version no. 3
ULE-90130	1	HRL	714		2	Newhaven to Haymarket Pavement Design Dwgs Sec 1C Sheet 14 of 24*	For Tender Purposes Only	Marked Up Drawing Received on 24.07.2007 as dwg ULE90130-01-HRL-00014, PB Internal Version no. -
ULE-90130	1	HRL	715		*	Newhaven to Haymarket Pavement Design Dwgs Sec 1C Sheet 15 of 24*	For Public Meeting	Marked Up Drawing Received on 24.07.2007, PB Internal Version no. 4
ULE-90130	1	HRL	716		*	Newhaven to Haymarket Pavement Design Dwgs Sec 1C Sheet 16 of 24*	For Public Meeting	Marked Up Drawing Received on 24.07.2007, PB Internal Version no. 4
ULE-90130	1	HRL	719		2	Newhaven to Haymarket Pavement Design Dwgs Sec 1C Sheet 19 of 24*	For Tender Purposes Only	Marked Up Drawing Received on 24.07.2007 as dwg ULE90130-01-HRL-00019, PB Internal Version no. -
ULE-90130	1	HRL	720		2	Newhaven to Haymarket Pavement Design Dwgs Sec 1C Sheet 20 of 24*	For Tender Purposes Only	Marked Up Drawing Received on 24.07.2007 as dwg ULE90130-01-HRL-00020, PB Internal Version no. -
ULE-90130	1	HRL	721		2	Newhaven to Haymarket Pavement Design Dwgs Sec 1D Sheet 21 of 24*	For Tender Purposes Only	Marked Up Drawing Received on 24.07.2007 as dwg ULE90130-01-HRL-00021, PB Internal Version no. -

PROJECT	SECTION	FOLDER	DWG NO	STR ID	REV NO	DRAWING NAME	STATUS	COMMENTS
ULE-90130	1	HRL	722		2	Newhaven to Haymarket Pavement Design Dwgs Sec 1D Sheet 22 of 24*	For Tender Purposes Only	Marked Up Drawing Received on 24.07.2007 as dwg ULE90130-01-HRL-00022, PB Internal Version no. -
ULE-90130	1	HRL	723		*	Newhaven to Haymarket Pavement Design Dwgs Sec 1D Sheet 23 of 24*	For Public Meeting	Marked Up Drawing Received on 24.07.2007, PB Internal Version no. 1
ULE-90130	1	HRL	724		*	Newhaven to Haymarket Pavement Design Dwgs Sec 1D Sheet 24 of 24*	For Public Meeting	Marked Up Drawing Received on 24.07.2007, PB Internal Version no. 1
ULE-90130	1	HRL	725		2	Road Design,Kerbs,Footways and Paved Areas,Section 1D	For External Approval	
ULE-90130	1	HRL	1110		1	Road Design,Footways and Paved Areas	External Approval	
ULE-90130	1	HRL	1111		1	Road Design,Footways and Paved Areas	External Approval	
ULE-90130	1	HRL	1112		1	Road Design,Footways and Paved Areas	External Approval	
ULE-90130	1	HRL	1113		1	Road Design,Footways and Paved Areas	External Approval	
ULE-90130	1	HRL	1114		1	Road Design,Footways and Paved Areas,Section 1B	External Approval	
ULE-90130	1	HRL	1121		1	Road Design,Kerbs,Footways and Paved Areas,Section 1D	External Approval	
ULE-90130	1	HRL	1122		1	Road Design,Kerbs,Footways and Paved Areas,Section 1D	External Approval	
ULE-90130	1	HRL	1123		1	Road Design,Kerbs,Footways and Paved Areas,Section 1D	External Approval	
ULE-90130	1	HRL	1125		1	Road Design,Kerbs,Footways and Paved Areas,Section 1D	For External Approval	
ULE-90130	1	HRL	1130		1	Road Design,Kerbs,Footways and Paved Areas,Section 1D	External Approval	
ULE-90130	1	HRL	1131		3	Road Design,Kerbs,Footways and Paved Areas,Section 1D	External Approval	
ULE-90130	1	HRL	1132		1	Road Design Raised Table Construction Standard Details	External Approval	
ULE-90130	1	HRL	1133		1	Road Design Raised Table Construction Standard Details	External Approval	
ULE-90130	1	HRL	1210		1	Newhaven Road to Haymarket Section 1B	Issued for External Approval	
ULE-90130	1	HRL	1211		1	Newhaven Road to Haymarket Section 1B	Issued for External Approval	
ULE-90130	1	HRL	1212		1	Newhaven Road to Haymarket Section 1B	Issued for External Approval	
ULE-90130	1	HRL	1213		1	Newhaven Road to Haymarket Section 1B	Issued for External Approval	
ULE-90130	1	HRL	1214		1	Newhaven Road to Haymarket Section 1B	Issued for External Approval	
ULE-90130	1	HRL	1221		1	Newhaven to Haymarket,Section 1D	Issued for External Approval	
ULE-90130	1	HRL	1222		1	Newhaven to Haymarket,Section 1D	Issued for External Approval	
ULE-90130	1	HRL	1223		1	Newhaven to Haymarket,Section 1D	Issued for External Approval	
ULE-90130	1	HRL	1224		1	Newhaven to Haymarket,Section 1D	Issued for External Approval	
ULE-90130	1	HRL	1225		4	St Andrew Square Road Design	For External Approval	
ULE-90130	1	HRL	1250		6	St Andrew Square Road Design	For External Approval	
ULE-90130	1	HRL	1250		6	St Andrews Square Road Design Road Marking	For Information Only	
ULE-90130	1	HRL	1251		1	St Andrew Square Road Design Road Markings St David Street	For Information Only	
ULE-90130	1	HRL	1252		1	St Andrew Square Road Design Traffic Signs St David Street	For Information Only	
ULE-90130	1	HRL	1270		1	Newhaven Road to Haymarket Section 1B	Issued for External Approval	
ULE-90130	1	HRL	1271		1	Newhaven Road to Haymarket Section 1B	Issued for External Approval	
ULE-90130	1	HRL	1272		1	Newhaven Road to Haymarket Section 1B	Issued for External Approval	
ULE-90130	1	HRL	1273		1	Newhaven Road to Haymarket Section 1B	Issued for External Approval	
ULE-90130	1	HRL	1274		1	Newhaven Road To Haymarket Pavement Surface Colour 1B Sheet 14 of 24	Issued for External Approval	
ULE-90130	1	HRL	1281		1	Pavement Surface Colour,Section 1D	Issued for External Approval	
ULE-90130	1	HRL	1282		1	Pavement Surface Colour,Section 1D	Issued for External Approval	
ULE-90130	1	HRL	1283		1	Newhaven Road to Haymarket	Issued for External Approval	
ULE-90130	1	HRL	1284		1	Newhaven Road to Haymarket,Section 1D	Issued for External Approval	
ULE-90130	1	HRL	1285		1	Newhaven Road to Haymarket Pavement Surface Colour St. Andrew Square	For External Approval	
ULE-90130	2	HRL	1		0	Roseburn Junction to Granton Square - Section 3A	Draft	
ULE-90130	2	HRL	2			Haymarket to Roseburn Junction - Section 2A	Draft	
ULE-90130	2	HRL	3		4	Haymarket to Roseburn Junction - Section 2A	Issued for External Approval	
ULE-90130	2	HRL	100		2	Haymarket to Roseburn Junction - Section 2A	Issued for External Approval	
ULE-90130	2	HRL	101		3	Haymarket to Roseburn Junction - Section 2A	Issued for External Approval	
ULE-90130	2	HRL	200		3	Typical Cross Section Subsection 2A	Issued for External Approval	
ULE-90130	2	HRL	501		2	Haymarket to Roseburn Junction - Section 2A	Issued for External Approval	
ULE-90130	2	HRL	502		2	Haymarket to Roseburn Junction - Section 2A	Issued for External Approval	
ULE-90130	2	HRL	503		2	Haymarket to Roseburn Junction Traffic Signs and Road Marking Section 2A	Issued for External Approval	
ULE-90130	2	HRL	800		1	Haymarket to Roseburn Junction - Section 2A	Issued for External Approval	
ULE-90130	2	HRL	801		1	Haymarket to Roseburn Junction - Section 2A	Issued for External Approval	
ULE-90130	2	HRL	901		1	Haymarket to Roseburn Junction - Section 2A	Issued for External Approval	
ULE-90130	2	HRL	902		1	Haymarket to Roseburn Junction - Section 2A	Issued for External Approval	
ULE-90130	2	HRL	903		3	Haymarket to Roseburn Junction - Section 2A	Issued for External Approval	
ULE-90130	2	HRL	1001		1	Construction Details Kerbing Details	Issued for External Approval	
ULE-90130	2	HRL	1002		1	Construction Details Signal Head Types	Issued for External Approval	
ULE-90130	5	HRL	1		3	Roseburn Junction to Gogaburn Road Scheme Layout Plans Section 5A	Issued for External Approval	
ULE-90130	5	HRL	2		2	Roseburn Junction to Gogaburn - Section 5A	Issued for External Approval	
ULE-90130	5	HRL	3		2	Roseburn Junction to Gogaburn - Section 5A	Issued for External Approval	
ULE-90130	5	HRL	4		2	Roseburn Junction to Gogaburn Road Scheme Layout Plans Section 5A	Issued for External Approval	

PROJECT	SECTION	FOLDER	DWG NO	STR ID	REV NO	DRAWING NAME	STATUS
ULE-90130	5	HRL	5		3	Roseburn Junction to Gogaburn - Section 5A	Issued for External Approval
ULE-90130	5	HRL	6		3	Roseburn Junction to Gogaburn - Section 5B	Issued for External Approval
ULE-90130	5	HRL	7		2	Roseburn Junction to Gogaburn - Section 5B	Issued for External Approval
ULE-90130	5	HRL	8		2	Roseburn Junction to Gogaburn - Section 5B	Issued for External Approval
ULE-90130	5	HRL	9		3	Roseburn Junction to Gogaburn - Section 5B	Issued for External Approval
ULE-90130	5	HRL	10		2	Roseburn Junction to Gogaburn Road Scheme Layout Plans Section 5B	Issued for External Approval
ULE-90130	5	HRL	11		1	Roseburn Junction to Gogaburn Road Scheme Layout Plans Section 5B	Issued for External Approval
ULE-90130	5	HRL	12		1	Roseburn Junction to Gogaburn Road Scheme Layout Plans Section 5B	Issued for External Approval
ULE-90130	5	HRL	13		1	Roseburn Junction to Gogaburn Road Scheme Layout Plans Section 5B	Issued for External Approval
ULE-90130	5	HRL	14		2	Roseburn Junction to Gogaburn Road Scheme Layout Plans Section 5B	Issued for External Approval
ULE-90130	5	HRL	15		2	Roseburn Junction to Gogaburn Road Scheme Layout Plans Section 5B	Issued for External Approval
ULE-90130	5	HRL	16		1	Roseburn Junction to Gogaburn Road Scheme Layout Plans Section 5B	Issued for External Approval
ULE-90130	5	HRL	17		2	Roseburn Junction to Gogaburn Road Scheme Layout Plans Section 5B	Issued for External Approval
ULE-90130	5	HRL	18		4	Roseburn Junction to Gogaburn Road Scheme Layout Plans Section 5B	Issued for External Approval
ULE-90130	5	HRL	19		1	Roseburn Junction to Gogaburn Road Scheme Layout Plans Section 5B	Issued for External Approval
ULE-90130	5	HRL	20		1	Roseburn Junction to Gogaburn Road Scheme Layout Plans Section 5B	Issued for External Approval
ULE-90130	5	HRL	21		2	Roseburn Junction to Gogaburn - Section 5C	Issued for External Approval
ULE-90130	5	HRL	22		2	Roseburn Junction to Gogaburn - Section 5C	Issued for External Approval
ULE-90130	5	HRL	23		2	Roseburn Junction to Gogaburn - Section 5C	Issued for External Approval
ULE-90130	5	HRL	24		2	Roseburn Junction to Gogaburn - Section 5C	Issued for External Approval
ULE-90130	5	HRL	25		2	Roseburn Junction to Gogaburn - Section 5C	Issued for External Approval
ULE-90130	5	HRL	26		3	Roseburn Junction to Gogaburn - Section 5C	Issued for External Approval
ULE-90130	5	HRL	100		2	Roseburn Junction to Gogaburn Road Junction and Crossing Layouts Section 5A	Issued for External Approval
ULE-90130	5	HRL	102		2	Roseburn Junction to Gogaburn Road Junction and Crossing Layouts Section 5A	Issued for External Approval
ULE-90130	5	HRL	160		2	Roseburn Junction to Gogaburn - Section 5C	Issued for External Approval
ULE-90130	5	HRL	161		2	Roseburn Junction to Gogaburn - Section 5C	Issued for External Approval
ULE-90130	5	HRL	201		2	Roseburn Junction to Gogaburn Road Junction and Crossing Layouts Section 5A	Issued for External Approval
ULE-90130	5	HRL	203		2	Roseburn Junction to Gogaburn Road Junction and Crossing Layouts Section 5A	Issued for External Approval
ULE-90130	5	HRL	230		1	Typical Cross Section Subsection 5B	Issued for External Approval
ULE-90130	5	HRL	260		2	Typical Cross Section Subsection 5C	Issued for External Approval
ULE-90130	5	HRL	261		2	Typical Cross Section Subsection 5C	Issued for External Approval
ULE-90130	5	HRL	262		2	Typical Cross Section Subsection 5C	Issued for External Approval
ULE-90130	5	HRL	263		2	Typical Cross Section Subsection 5C	Issued for External Approval
ULE-90130	5	HRL	264		2	Typical Cross Section Subsection 5C	Issued for External Approval
ULE-90130	5	HRL	501		2	Roseburn Junction to Gogaburn Traffic Signs and Road Markings Section 5A	Issued for External Approval
ULE-90130	5	HRL	502		2	Roseburn Junction to Gogaburn Traffic Signs and Road Markings Section 5A	Issued for External Approval
ULE-90130	5	HRL	561		2	Roseburn Junction to Gogaburn	Issued for External Approval
ULE-90130	5	HRL	562		2	Roseburn Junction to Gogaburn - Section 5C	Issued for External Approval
ULE-90130	5	HRL	563		2	Roseburn Junction to Gogaburn - Section 5C	Issued for External Approval
ULE-90130	5	HRL	566		2	Roseburn Junction to Gogaburn - Section 5C	Issued for External Approval
ULE-90130	5	HRL	800		2	Roseburn Junction to Gogaburn Traffic Signal Ducting Section 5A	Issued for External Approval
ULE-90130	5	HRL	802		2	Roseburn Junction to Gogaburn Traffic Signal Ducting Section 5A	Issued for External Approval
ULE-90130	5	HRL	860		2	Roseburn Junction to Gogaburn Traffic Signal Ducting Section 5C	Issued for External Approval
ULE-90130	5	HRL	861		2	Roseburn Junction to Gogaburn - Section 5C	Issued for External Approval
ULE-90130	5	HRL	901		2	Roseburn Junction to Gogaburn Kerbs, Footways and Paved Areas Section 5A	Issued for External Approval
ULE-90130	5	HRL	902		2	Roseburn Junction to Gogaburn Kerbs, Footways and Paved Areas Section 5A	Issued for External Approval
ULE-90130	5	HRL	961		2	Roseburn Junction to Gogaburn - Section 5C	Issued for External Approval
ULE-90130	5	HRL	962		2	Roseburn Junction to Gogaburn - Section 5C	Issued for External Approval
ULE-90130	5	HRL	963		2	Roseburn Junction to Gogaburn - Section 5C	Issued for External Approval
ULE-90130	5	HRL	966		2	Roseburn Junction to Gogaburn - Section 5C	Issued for External Approval
ULE-90130	6	HRL	1		3	Gogar Depot Road Scheme Layout Plans Section 6	Issued for External Approval
ULE-90130	6	HRL	2		3	Gogar Depot Road Scheme Layout Plans Section 6	Issued for External Approval
ULE-90130	6	HRL	100		2	Gogar Depot Road Junction & Crossing layout	Issued for External Approval
ULE-90130	6	HRL	201		2	Typical Cross Section	Issued for External Approval
ULE-90130	6	HRL	202		2	Typical Cross Section 6 Gogar Depot	Issued for External Approval
ULE-90130	6	HRL	501		2	Gogar Depot Traffic Signs and Road Markings Section 6	Issued for External Approval
ULE-90130	6	HRL	502		2	Gogar Depot Traffic Signs and Road Markings Section 6	Issued for External Approval
ULE-90130	6	HRL	503		1	Gogar Depot Traffic Signs and Road Markings Section 6	Issued for External Approval
ULE-90130	6	HRL	601		1	Road Long Section Section 6 Depot Access Road	Issued for External Approval
ULE-90130	6	HRL	800		2	Gogar Depot Traffic Signal Ducting Section 6 Junction 208	Issued for External Approval
ULE-90130	6	HRL	901		2	Gogar Depot Kerbs, Footways and paved areas Section 6	Issued for External Approval

COMMENTS

PROJECT	SECTION	FOLDER	DWG NO	STR ID	REV NO	DRAWING NAME	STATUS
ULE-90130	6	HRL	902		2	Gogar Depot Kerbs, Footways and paved areas Section 6	Issued for External Approval
ULE-90130	7	HRL	1		2	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	HRL	2		2	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	HRL	3		3	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	HRL	4		2	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	HRL	5		2	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	HRL	6		2	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	HRL	7		2	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	HRL	8		3	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	HRL	9		2	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	HRL	201		2	Typical Cross Section - Section 7A	Issued for External Approval
ULE-90130	7	HRL	503		2	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	HRL	507		2	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	HRL	508		2	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	HRL	800		1	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	HRL	903		2	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	HRL	907		2	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	2	LDS	1		2	Section 2A	Issued for External Approval
ULE-90130	2	LDS	2		1	Section 2A	Issued for External Approval
ULE-90130	2	LDS	3		2	Section 2A	Issued for External Approval
ULE-90130	5	LDS	6		2	Soft Landscape Plan Section 5B	Issued for External Approval
ULE-90130	5	LDS	7		2	Soft Landscape Plan Section 5B	Issued for External Approval
ULE-90130	5	LDS	8		2	Soft Landscape Plan Section 5B	Issued for External Approval
ULE-90130	5	LDS	9		2	Soft Landscape Plan Section 5B	Issued for External Approval
ULE-90130	5	LDS	10		2	Soft Landscape Plan Section 5B	Issued for External Approval
ULE-90130	5	LDS	11		2	Soft Landscape Plan Section 5B	Issued for External Approval
ULE-90130	5	LDS	12		2	Soft Landscape Plan Section 5B	Issued for External Approval
ULE-90130	5	LDS	13		2	Soft Landscape Plan Section 5B	Issued for External Approval
ULE-90130	5	LDS	14		2	Soft Landscape Plan Section 5B	Issued for External Approval
ULE-90130	5	LDS	15		2	Soft Landscape Plan Section 5B	Issued for External Approval
ULE-90130	5	LDS	16		2	Soft Landscape Plan Section 5B	Issued for External Approval
ULE-90130	5	LDS	17		1	Soft Landscape Plan Section 5B	Issued for External Approval
ULE-90130	5	LDS	18		2	Soft Landscape Plan Section 5B	Issued for External Approval
ULE-90130	5	LDS	19		2	Soft Landscape Plan Section 5B	Issued for External Approval
ULE-90130	5	LDS	20		2	Soft Landscape Plan Section 5B	Issued for External Approval
ULE-90130	5	LDS	21		4	Soft Landscape Plan Section 5B	Draft
ULE-90130	5	LDS	22		3	Soft Landscape Plan Section 5B	Draft
ULE-90130	5	LDS	23		3	Soft Landscape Plan Section 5B	Draft
ULE-90130	5	LDS	24		2	Soft Landscape Plan Section 5B	Draft
ULE-90130	5	LDS	25		2	Soft Landscape Plan Section 5B	Draft
ULE-90130	5	LDS	26		2	Soft Landscape Plan Section 5B	Draft
ULE-90130	1	LTG	10		2	Newhaven Road to Haymarket Lighting Layout Plans Sheet 10 of 24	Issued for External Approval
ULE-90130	1	LTG	11		2	Newhaven Road to Haymarket Lighting Layout Plans Sheet 10 of 24	Issued for External Approval
ULE-90130	1	LTG	12		2	Newhaven Road to Haymarket Lighting Layout Plans Sheet 10 of 24	Issued for External Approval
ULE-90130	1	LTG	13		2	Newhaven Road to Haymarket Lighting Layout Plans Sheet 10 of 24	Issued for External Approval
ULE-90130	1	LTG	17		1	Newhaven road to Haymarket,Lighting Layout Plans	Issued for Internal Review
ULE-90130	1	LTG	18		1	Newhaven road to Haymarket,Lighting Layout Plans	Issued for Internal Review
ULE-90130	1	LTG	21		2	Newhaven Road to Haymarket Lighting Layout Plans Sheet 21 of 24	Issued for External Approval
ULE-90130	1	LTG	22		2	Newhaven Road to Haymarket Lighting Layout Plans Sheet 22 of 24	Issued for External Approval
ULE-90130	1	LTG	23		2	Newhaven Road to Haymarket Lighting Layout Plans Sheet 23 of 24	Issued for External Approval
ULE-90130	1	LTG	24		2	Newhaven Road to Haymarket Lighting Layout Plans Sheet 24 of 24	Issued for External Approval
ULE-90130	2	LTG	1		2	Haymarket to Roseburn Junction	Issued for External Approval
ULE-90130	2	LTG	2		2	Haymarket to Roseburn Junction	Issued for External Approval
ULE-90130	2	LTG	3		2	Haymarket to Roseburn Junction	Issued for External Approval
ULE-90130	5	LTG	1		2	Roseburn Junction to Gogarburn - Section 5A	Issued for External Approval
ULE-90130	5	LTG	2		2	Roseburn Junction to Gogarburn - Section 5A	Issued for External Approval
ULE-90130	5	LTG	3		2	Roseburn Junction to Gogarburn - Section 5A	Issued for External Approval
ULE-90130	5	LTG	4		2	Roseburn Junction to Gogarburn - Section 5A	Issued for External Approval
ULE-90130	5	LTG	5		2	Roseburn Junction to Gogarburn - Section 5A	Issued for External Approval
ULE-90130	5	LTG	6		2	Roseburn Junction to Gogarburn Lighting Layout plans	Issued for External Approval
ULE-90130	5	LTG	7		2	Roseburn Junction to Gogarburn Lighting Layout plans	Issued for External Approval

COMMENTS

PROJECT	SECTION	FOLDER	DWG NO	STR ID	REV NO	DRAWING NAME	STATUS
ULE-90130	5	LTG	8		2	Roseburn Junction to Gogarburn Lighting Layout plans	Issued for External Approval
ULE-90130	5	LTG	9		2	Roseburn Junction to Gogarburn	Issued for External Approval
ULE-90130	5	LTG	10		2	Roseburn Junction to Gogarburn	Issued for External Approval
ULE-90130	5	LTG	11		2	Roseburn Junction to Gogarburn Lighting Layout plans	Issued for External Approval
ULE-90130	5	LTG	12		2	Roseburn Junction to Gogarburn Lighting Layout plans	Issued for External Approval
ULE-90130	5	LTG	13		2	Roseburn Junction to Gogarburn Lighting Layout plans	Issued for External Approval
ULE-90130	5	LTG	14		2	Roseburn Junction to Gogarburn Lighting Layout plans	Issued for External Approval
ULE-90130	5	LTG	15		2	Roseburn Junction to Gogarburn Lighting Layout plans	Issued for External Approval
ULE-90130	5	LTG	16		2	Roseburn Junction to Gogarburn Lighting Layout plans	Issued for External Approval
ULE-90130	5	LTG	17		2	Roseburn Junction to Gogarburn Lighting Layout plans	Issued for External Approval
ULE-90130	5	LTG	18		2	Roseburn Junction to Gogarburn Lighting Layout plans	Issued for External Approval
ULE-90130	5	LTG	19		2	Roseburn Junction to Gogarburn Lighting Layout plans	Issued for External Approval
ULE-90130	5	LTG	20		2	Roseburn Junction to Gogarburn Lighting Layout plans	Issued for External Approval
ULE-90130	5	LTG	21		2	Roseburn Junction to Gogarburn	External Approval
ULE-90130	5	LTG	22		2	Roseburn Junction to Gogarburn	External Approval
ULE-90130	5	LTG	23		2	Roseburn Junction to Gogarburn	External Approval
ULE-90130	5	LTG	24		2	Roseburn Junction to Gogarburn	External Approval
ULE-90130	5	LTG	25		2	Roseburn Junction to Gogarburn	External Approval
ULE-90130	5	LTG	26		2	Roseburn Junction to Gogarburn	External Approval
ULE-90130	6	LTG	1		2	Gogar Depot Lighting Layout Plans Section 6A Sheet 1 of 2	Issued for External Approval
ULE-90130	6	LTG	2		2	Gogar Depot Lighting Layout Plans Section 6A Sheet 2 of 2	Issued for External Approval
ULE-90130	7	LTG	7		1	Gogarburn to Edinburgh Airport Lighting Layout Plans Section 7A	Issued for External Approval
ULE-90130	7	LTG	8		1	Gogarburn to Edinburgh Airport Lighting Layout Plans Section 7A	Issued for External Approval
ULE-90130	7	LTG	9		1	Roseburn Junction to Gogarburn Lighting Layout plans	Issued for External Approval
ULE-90130	1	OLE	5		3	Haymarket to Newhaven Outline OLE Layout Plan Chainage 102450 to 10300 Sheet 5 of 13	Issued for External Approval
ULE-90130	1	OLE	6		3	Haymarket to Newhaven Outline OLE Layout Plan Chainage 110300 to 110950 Sheet 6 of 13	Issued for External Approval
ULE-90130	1	OLE	7		3	Haymarket to Newhaven Outline OLE Layout Plan Chainage 110950 to 120300 Sheet 7 of 13	Issued for External Approval
ULE-90130	1	OLE	8		3	Haymarket to Newhaven Outline OLE Layout Plan Chainage 120300 to 120900 Sheet 8 of 13	Issued for External Approval
ULE-90130	1	OLE	9		3	Haymarket to Newhaven Outline OLE Layout Plan Chainage 120900 to 121200 Sheet 9 of 13	Issued for External Approval
ULE-90130	1	OLE	10		3	Haymarket to Newhaven Outline OLE Layout Plan Chainage 121200 to 121500 Sheet 10 of 13	Issued for External Approval
ULE-90130	1	OLE	11		3	Haymarket to Newhaven Outline OLE Layout Plan Chainage 121500 to 130000 Sheet 11 of 13	Issued for External Approval
ULE-90130	1	OLE	12		2	Haymarket to Newhaven Outline OLE Layout Plan Chainage 130000 to 130630 Sheet 12 of 13	For Tender Purposes Only
ULE-90130	1	OLE	13		3	Haymarket to Newhaven Outline OLE Layout Plan Chainage 130630 to 200000 Sheet 13 of 13	Issued for External Approval
ULE-90130	2	OLE	1		3	Haymarket to Roseburn Junction Outline OLE	Issued for External Approval
ULE-90130	2	OLE	2		3	Haymarket to Roseburn Junction Outline OLE	Issued for External Approval
ULE-90130	5	OLE	1		4	Roseburn Junction to Gogarburn Outline OLE Layout Plan Change	Issued for External Approval
ULE-90130	5	OLE	2		4	Roseburn Junction to Gogarburn Outline OLE Layout Plan Change	Issued for External Approval
ULE-90130	5	OLE	3		4	Roseburn Junction to Gogarburn Outline OLE Layout Plan Change	Issued for External Approval
ULE-90130	5	OLE	4		4	Roseburn Junction to Gogarburn Outline OLE Layout Plan Change	Issued for External Approval
ULE-90130	5	OLE	5		4	Roseburn Junction to Gogarburn Outline OLE Layout Plan Change	Issued for External Approval
ULE-90130	5	OLE	6		4	Roseburn Junction to Gogarburn Outline OLE Layout Plan Change	Issued for External Approval
ULE-90130	5	OLE	7		4	Roseburn Junction to Gogarburn Outline OLE Layout Plan Change	Issued for External Approval
ULE-90130	5	OLE	8		4	Roseburn Junction to Gogarburn Outline OLE Layout Plan Change	Issued for External Approval
ULE-90130	5	OLE	9		4	Roseburn Junction to Gogarburn Outline OLE Layout Plan Change	Issued for External Approval
ULE-90130	5	OLE	10		4	Roseburn Junction to Gogarburn Outline OLE Layout Plan Change	Issued for External Approval
ULE-90130	5	OLE	11		4	Roseburn Junction to Gogarburn Outline OLE Layout Plan Change	Issued for External Approval
ULE-90130	5	OLE	12		4	Roseburn Junction to Gogarburn Outline OLE Layout Plan Change	Issued for External Approval
ULE-90130	5	OLE	13		4	Roseburn Junction to Gogarburn Outline OLE Layout Plan Change	Issued for External Approval
ULE-90130	6	OLE	1		4	Gogar Depot Outline OLE Layout Plan Sheet 1 of 3	Issued for External Approval
ULE-90130	6	OLE	2		2	Gogar Depot Outline OLE Layout Plan Sheet 2 of 3	Issued for External Approval
ULE-90130	6	OLE	3		2	Gogar Depot Outline OLE Layout Plan Sheet 3 of 3	Issued for External Approval
ULE-90130	7	OLE	1		4	Roseburn to Edinburgh Airport Outline	Issued for External Approval
ULE-90130	7	OLE	2		4	Roseburn to Edinburgh Airport Outline	Issued for External Approval
ULE-90130	7	OLE	3		4	Roseburn to Edinburgh Airport Outline	Issued for External Approval
ULE-90130	7	OLE	4		4	Roseburn to Edinburgh Airport Outline	Issued for External Approval
ULE-90130	7	OLE	5		4	Roseburn to Edinburgh Airport Outline	Issued for External Approval
ULE-90130	SW	OLE	7		6	System Wide - Section 1, 2 and 3	Issued for External Approval
ULE-90130	SW	OLE	8		6	System Wide - Sections 5 and 7	Issued for External Approval
ULE-90130	SW	OLE	9		6	Gogar Depot - Section 6	Issued for External Approval
ULE-90130	1	RTW	1	W1	A	Lindsay Road	For Tender Purposes Only
ULE-90130	1	RTW	2	W1	A	Lindsay Road	For Tender Purposes Only

COMMENTS

PROJECT	SECTION	FOLDER	DWG NO	STR ID	REV NO	DRAWING NAME	STATUS
ULE-90130	5	RTW	1	W3&W4	*	W3 & 4 Russell Road	Preliminary Design
ULE-90130	5	RTW	2	W3&W4	*	W3 & 4 Russell Road	Preliminary Design
ULE-90130	5	RTW	3	W3&W4	B	W3 & 4 Russell Road	For Tender Purposes Only
ULE-90130	5	RTW	4	W3&W4	C	W3 & 4 Russell Road	For Tender Purposes Only
ULE-90130	5	RTW	5	W3&W4	*	W3 & 4 Russell Road	For Tender Purposes Only
ULE-90130	5	RTW	11	W3&W4	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	12	W3&W4	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	13	W3&W4	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	14	W3	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	15	W3	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	16	W3A	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	17	W3A	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	18	W3	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	19	W3B	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	20	W3B	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	21	W3B	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	22	W3B	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	23	W3B	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	24	W3B	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	25	W3C	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	26	W3C	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	27	W3C	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	28	W3	1	Russell Road Retaining Wall One	Issued for External Approval
ULE-90130	5	RTW	29	W4A	1	Russell Road Retaining Wall Two Structure W4 Drawing Schedule	Issued for External Approval
ULE-90130	5	RTW	30	W4A	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	31	W4A	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	32	W4A	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	33	W4A	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	34	W4A	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	35	W4A	1	Russell Road Retaining Wall Two Structure W4A Setting Out Details	Issued for External Approval
ULE-90130	5	RTW	36	W4A	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	37	W4A	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	38	W4A	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	39	W4A	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	40	W4B	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	41	W4B	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	42	W4B	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	43	W4B	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	45	W4C	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	46	W4C	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	47	W4C	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	48	W4C	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	49	W4C	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	50	W4D	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	51	W4D	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	52	W4D	1	Russell Road Retaining Wall Two Structure W4D Concrete Outlines and Setting out Sheet 2 of 3	Issued for External Approval
ULE-90130	5	RTW	53	W4D	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	54	W4D	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	55	W4D	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	56	W3&W4	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	57	W3	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	58	W4	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	59	W4	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	60	W3&W4	1	Russell Road Retaining Wall Two	Issued for External Approval
ULE-90130	5	RTW	161	W3&W4	1	Russell Road Retaining Wall Two	Draft
ULE-90130	5	RTW	201	W8	1	W8 (Balgreen to Water of Leith) / Baird Drive	Issued for Tender Purposes Only
ULE-90130	5	RTW	202	W8	1	W8 (Balgreen to Water of Leith) / Baird Drive	For Tender Purposes Only
ULE-90130	5	RTW	241	W9	*	W9 Balgreen Road (West of Balgreen Rd)	Draft
ULE-90130	5	RTW	242	W9	*	W9 Balgreen Road (West of Balgreen Rd)	Draft
ULE-90130	5	RTW	321	W11	1	Roseburn Junction to Gogarburn	Issued for Tender Purposes Only
ULE-90130	5	RTW	322	W11	2	Roseburn Junction to Gogarburn	Issued for Tender Purposes Only

COMMENTS

Drawing taken from Disc 2. Not found in Network.

PROJECT	SECTION	FOLDER	DWG NO	STR ID	REV NO	DRAWING NAME	STATUS
ULE-90130	5	RTW	362	W19	1	GA 1 of 3	For Tender Purposes Only
ULE-90130	5	RTW	363	W19	1	2 of 3	For Tender Purposes Only
ULE-90130	5	RTW	364	W19	1	3 of 3	For Tender Purposes Only
ULE-90130	5	RTW	399	W19	1	Roseburn Junction to Gogarburn	Draft
ULE-90130	5	RTW	400	W19		Gyle Tram Stop	For Tender Purposes Only
ULE-90130	5	RTW	445	S21B	*	Roseburn Junction to Gogarburn Structure S21B Murrayfield Stadium Retaining Wall Murrayfield Stadium Underpass GA	For Tender Purposes Only
ULE-90130	5	RTW	446	S21B	*	Roseburn Junction to Gogarburn Structure S21B Murrayfield Stadium Retaining Wall	For Tender Purposes Only
ULE-90130	5	RTW	447	S21B	*	Roseburn Junction to Gogarburn Structure S21B Cross Section Sheet 2 of 2	For Tender Purposes Only
ULE-90130	5	RTW	448	S21B	*	Roseburn Junction to Gogarburn	Draft
ULE-90130	5	RTW	449	S21B	*	Roseburn Junction to Gogarburn Structure S21B Murrayfield Stadium Retaining Wall Reinforced Earthwork Details	Issued for External Approval
ULE-90130	5	RTW	481	S21D	3	S21D Murrayfield Training Pitches	For Tender Purposes Only
ULE-90130	5	RTW	521	W16	2	W16 A8 Retaining Wall	Issued for External Approval
ULE-90130	5	RTW	522	W16	2	W16 A8 Retaining Wall	Issued for External Approval
ULE-90130	5	RTW	561	W18	*	W18 Murrayfield Tramstop	For Tender Purposes Only
ULE-90130	5	RTW	562	W18	2	W18 Murrayfield Tramstop	Issued for External Approval
ULE-90130	5	RTW	563	W18		Roseburn Junction to Gogarburn Murrayfield Tramstop Retaining Wall Sheet ?? of 40	Draft
ULE-90130	5	RTW	564	W18		Roseburn Junction to Gogarburn Murrayfield Tramstop Retaining Wall Sheet 03 of 40	Draft
ULE-90130	5	RTW	565	W18		Roseburn Junction to Gogarburn Murrayfield Tramstop Retaining Wall Bank Seat General Arrangement 1 of 2	Draft
ULE-90130	5	RTW	566	W18		Roseburn Junction to Gogarburn Murrayfield Tramstop Retaining Wall Bank Seat General Arrangement 2 of 2	Draft
ULE-90130	5	RTW	567	W18		Roseburn Junction to Gogarburn Murrayfield Tramstop Retaining Wall South West Access Steps Wall	Draft
ULE-90130	5	RTW	568	W18		Roseburn Junction to Gogarburn Murrayfield Tramstop Retaining Wall South Main Stairs Wall	Draft
ULE-90130	5	RTW	569	W18		Roseburn Junction to Gogarburn Murrayfield Tramstop Retaining Wall North Main Stairs Wall	Draft
ULE-90130	7	RTW	1	S14	3	Gogarburn Retaining Walls	For Tender Purposes Only
ULE-90130	7	RTW	2	S14	3	Gogarburn Retaining Walls	For Tender Purposes Only
ULE-90130	7	RTW	3	W14	3	W14 Gogarburn	For Tender Purposes Only
ULE-90130	7	RTW	4	W14	3	W14 Gogarburn	For Tender Purposes Only
ULE-90130	7	RTW	5	W14	B	W14 Gogarburn	For Tender Purposes Only
ULE-90130	7	RTW	6	W14	2	W14 Gogarburn	For Tender Purposes Only
ULE-90130	7	RTW	7	W14	2	W14 Gogarburn	For Tender Purposes Only
ULE-90130	7	RTW	8	W14	2	W14 Gogarburn	For Tender Purposes Only
ULE-90130	7	RTW	9	W14	2	W14 Gogarburn	For Tender Purposes Only
ULE-90130	5	RTW	11	W3	1	Russell Road Retaining Wall One Structure W3 Drawing Schedule	Issued for External Approval
ULE-90130	5	SCH	8		2	Drainage Schedule Section 5A	Issue for External Approval
ULE-90130	5	SCH	9		2	Drainage Schedule Section 5B	Issue for External Approval
ULE-90130	5	SCH	10		2	Drainage Schedule Section 5C	Issue for External Approval
ULE-90130	2	SCL	1		1	Haymarket to Roseburn Junction -Section 2A	Issued for External Approval
ULE-90130	2	SCL	2		1	Haymarket to Roseburn Junction -Section 2A	Issued for External Approval
ULE-90130	2	SCL	3		1	Haymarket to Roseburn Junction -Section 2A	Issued for External Approval
ULE-90130	5	SCL	1		1	Roseburn Junction to Gogarburn -Section 5A	Issued for External Approval
ULE-90130	5	SCL	2		1	Roseburn Junction to Gogarburn -Section 5A	Issued for External Approval
ULE-90130	5	SCL	3		1	Roseburn Junction to Gogarburn -Section 5A	Issued for External Approval
ULE-90130	5	SCL	4		1	Roseburn Junction to Gogarburn -Section 5A	Issued for External Approval
ULE-90130	5	SCL	5		1	Roseburn Junction to Gogarburn -Section 5A	Issued for External Approval
ULE-90130	5	SCL	21		1	Roseburn Junction to Gogarburn -Section 5C	Issued for External Approval
ULE-90130	5	SCL	22		1	Roseburn Junction to Gogarburn -Section 5C	Issued for External Review
ULE-90130	5	SCL	23		1	Roseburn Junction to Gogarburn -Section 5C	Issued for External Approval
ULE-90130	5	SCL	24		1	Roseburn Junction to Gogarburn -Section 5C	Issued for External Approval
ULE-90130	5	SCL	25		1	Roseburn Junction to Gogarburn -Section 5C	Issued for External Approval
ULE-90130	5	SCL	26		1	Roseburn Junction to Gogarburn -Section 5C	Issued for External Approval
ULE-90130	7	SCL	1		1	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	SCL	2		1	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	SCL	3		1	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	SCL	4		1	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	SCL	5		1	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	SCL	6		1	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	SCL	7		1	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	SCL	8		1	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	7	SCL	9		1	Gogarburn to Edinburgh Airport - Section 7A	Issued for External Approval
ULE-90130	1	STP	2		4	Newhaven Road to Haymarket - Newhaven	For Tender Purposes Only
ULE-90130	1	STP	12		2	Newhaven Road to Haymarket - Ocean Terminal	For Tender Purposes Only
ULE-90130	1	STP	22		2	Newhaven Road to Haymarket - Ocean Drive	For Tender Purposes Only

COMMENTS

Drawings received but not in Drawing List

Drawings received but not in Drawing List

Drawings received but not in Drawing List

PROJECT	SECTION	FOLDER	DWG NO	STR ID	REV NO	DRAWING NAME	STATUS
ULE-90130	1	STP	32		2	Newhaven Road to Haymarket - Constitution Street	For Tender Purposes Only
ULE-90130	1	STP	33		2	Newhaven Road to Haymarket - Constitution Street	For Tender Purposes Only
ULE-90130	1	STP	42		4	Newhaven Road to Haymarket - Foot of the Walk	Issued for External Approval
ULE-90130	1	STP	52		4	Newhaven Road to Haymarket - Balfour Street	Issued for External Approval
ULE-90130	1	STP	53		1	Newhaven Road to Haymarket Balfour Street Location Plan	Issued for External Approval
ULE-90130	1	STP	62		4	Newhaven Road to Haymarket - Macdonald Road	Issued for External Approval
ULE-90130	1	STP	63		1	Newhaven Road to Haymarket, McDonald Rd Tramstop	Issued for External Approval
ULE-90130	1	STP	72		3	Newhaven Road to Haymarket - Picardy Place	Issued for External Approval
ULE-90130	1	STP	82		2	Newhaven Road to Haymarket - St Andrews Square	For Tender Purposes Only
ULE-90130	1	STP	92		3	Newhaven Road to Haymarket - St Andrews Square	Issued for External Approval
ULE-90130	1	STP	93		1	Newhaven Road to Haymarket - St Andrews Square	Issued for Tender Purposes Only
ULE-90130	1	STP	102		3	Newhaven Road to Haymarket - Princes Street	Issued for External Approval
ULE-90130	1	STP	112		3	Newhaven Road to Haymarket - Shandwick Place	Issued for External Approval
ULE-90130	1	STP	124		1	Newhaven Road to Haymarket - Haymarket	Issued for External Approval
ULE-90130	1	STP	125		1	Newhaven Road to Haymarket - Haymarket	Issued for External Approval
ULE-90130	1	STP	126		1	Newhaven Road to Haymarket - Exemplar Tram Stop	Issued for External Approval
ULE-90130	1	STP	127		1	Newhaven Road to Haymarket - Haymarket	Issued for External Approval
ULE-90130	1	STP	128		1	Newhaven Road to Haymarket - Haymarket	Issued for External Approval
ULE-90130	1	STP	129		1	Newhaven Road to Haymarket - Haymarket	Issued for External Approval
ULE-90130	5	STP	2		1	Roseburn Junction to Gogarburn - Murrayfield	Issued for External Approval
ULE-90130	5	STP	3		1	Roseburn Junction to Gogarburn - Murrayfield	Issued for External Approval
ULE-90130	5	STP	4		1	Roseburn Junction to Gogarburn - Murrayfield	Issued for External Approval
ULE-90130	5	STP	5		1	Roseburn Junction to Gogarburn - Murrayfield	Issued for External Approval
ULE-90130	5	STP	6		1	Roseburn Junction to Gogarburn - Exemplar Tram Stop	Issued for External Approval
ULE-90130	5	STP	7		1	Roseburn Junction to Gogarburn - Murrayfield	Issued for External Approval
ULE-90130	5	STP	27		1	Roseburn Junction to Gogarburn, Section 03	Issued for External Approval
ULE-90130	5	STP	30		1	Roseburn Junction to Gogarburn,	Issued for External Approval
ULE-90130	5	STP	31		2	South Gyle	Issued for External Approval
ULE-90130	5	STP	38		1	Roseburn Junction to Gogarburn, Section 03	Issued for External Approval
ULE-90130	5	STP	39		1	Roseburn Junction to Gogarburn, Section 03	Issued for External Approval
ULE-90130	5	STP	48		1	Roseburn Junction to Gogarburn,	Issued for External Approval
ULE-90130	5	STP	49		1	Roseburn Junction to Gogarburn,	Issued for External Approval
ULE-90130	5	STP	50		1	Roseburn Junction to Gogarburn,	Issued for External Approval
ULE-90130	5	STP	54		1	Roseburn Junction to Gogarburn Edinburgh Park Tramstop	Draft
ULE-90130	5	STP	56		2	Roseburn Junction to Gogarburn Edinburgh Park Tramstop	Issued for External Approval
ULE-90130	5	STP	58		1	Roseburn Junction to Gogarburn,	Issued for External Approval
ULE-90130	5	STP	59		1	Roseburn Junction to Gogarburn,	Issued for External Approval
ULE-90130	5	STP	62		1	Roseburn Junction to Gogarburn - Gyle	Issued for External Approval
ULE-90130	5	STP	63		1	Roseburn Junction to Gogarburn - Gyle	Issued for External Approval
ULE-90130	5	STP	64		1	Roseburn Junction to Gogarburn - Gyle	Issued for External Approval
ULE-90130	5	STP	65		1	Roseburn Junction to Gogarburn - Gyle	Issued for External Approval
ULE-90130	5	STP	72		1	Roseburn Junction to Gogarburn,	Issued for External Approval
ULE-90130	5	STP	73		1	Roseburn Junction to Gogarburn,	Issued for External Approval
ULE-90130	5	STP	74		1	Roseburn Junction to Gogarburn Murrayfield Tramstop Engineering Detailed Design Inbound Platform Wall	Issued for External Approval
ULE-90130	5	STP	75		1	Roseburn Junction to Gogarburn,	Issued for External Approval
ULE-90130	5	STP	76		1	Roseburn Junction to Gogarburn Murrayfield Tramstop Engineering Detailed Design South West Access Steps	Issued for External Approval
ULE-90130	5	STP	77		1	Roseburn Junction to Gogarburn,	Issued for External Approval
ULE-90130	5	STP	78		1	Roseburn Junction to Gogarburn,	Issued for External Approval
ULE-90130	5	STP	79		1	Roseburn Junction to Gogarburn,	Issued for External Approval
ULE-90130	5	STP	80		1	Roseburn Junction to Gogarburn,	Issued for External Approval
ULE-90130	5	STP	81		1	Roseburn Junction to Gogarburn Murrayfield Tramstop Engineering Detailed Design Lift Roof Section and Canopy Plans	Issued for External Approval
ULE-90130	5	STP	83		1	Roseburn Junction to Gogarburn,	Issued for External Approval
ULE-90130	5	STP	85		1	Roseburn Junction to Gogarburn,	Issued for External Approval
ULE-90130	7	STP	1		2	Gogarburn	For Tender Purposes Only
ULE-90130	7	STP	7		1	Gogarburn to Edinburgh Airport	Issued for External Approval
ULE-90130	7	STP	8		1	Gogarburn to Edinburgh Airport	Issued for External Approval
ULE-90130	7	STP	9		1	Roseburn Junction to Gogarburn,	Issued for External Approval
ULE-90130	7	STP	11		2	Ingliston	For Tender Purposes Only
ULE-90130	7	STP	21		2	Edinburgh Airport	For Tender Purposes Only
ULE-90130	SW	STP	1		5	Exemplar Stop - Central Platform Arrangement	For Information Only
ULE-90130	SW	STP	2		6	Exemplar Stop - Side Platform Arrangement	Issued for External Approval

COMMENTS

Drawings received but not in Drawing List

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Drawings received but not in Drawing List

PROJECT	SECTION	FOLDER	DWG NO	STR ID	REV NO	DRAWING NAME	STATUS
ULE-90130	SW	STP	8		1	System Wide Exemplar Tram Stop	Issued for External Approval
ULE-90130	SW	STP	9		1	System Wide Exemplar Tram Stop	Issued for External Approval
ULE-90130	SW	STP	10		1	System Wide Exemplar Tram Stop	Issued for External Approval
ULE-90130	SW	STP	11		1	System Wide Exemplar Tram Stop	Issued for External Approval
ULE-90130	SW	STP	13		1	System Wide Exemplar Tram Stop	Issued for External Approval
ULE-90130	SW	STP	14		1	System Wide Exemplar Tram Stop	Issued for External Approval
ULE-90130	SW	STP	15		1	System Wide Exemplar Tram Stop	Issued for External Approval
ULE-90130	SW	STP	16		1	System Wide Exemplar Tram Stop	Issued for External Approval
ULE-90130	SW	STP	17		1	System Wide Exemplar Tram Stop	Issued for External Approval
ULE-90130	SW	STP	18		1	System Wide Exemplar Tram Stop	Issued for External Approval
ULE-90130	SW	STP	19		1	System Wide Exemplar Tram Stop	Issued for External Approval
ULE-90130	SW	STP	20		1	System Wide Exemplar Tram Stop	Issued for External Approval
ULE-90130	1	SUB	1		3	Newhaven Road to Haymarket -Leith Sands	For Tender Purposes Only
ULE-90130	1	SUB	2		4	Newhaven Road to Haymarket -Leith Sands	For Tender Purposes Only
ULE-90130	1	SUB	4		1	Newhaven Road to Haymarket Tram North Leith Sands (NLE) Substation General Arrangement	Issued for External Review
ULE-90130	1	SUB	5		1	Newhaven Road to Haymarket Tram North Leith Sands (NLE) Substation Elevations and Sections	Issued for External Review
ULE-90130	1	SUB	16		4	Newhaven Road to Haymarket - Leith Walk	For Tender Purposes Only
ULE-90130	1	SUB	17		4	Newhaven Road to Haymarket - Leith Walk	For Tender Purposes Only
ULE-90130	1	SUB	31		3	Newhaven Road to Haymarket - Cathedral	For Tender Purposes Only
ULE-90130	1	SUB	32		3	Newhaven Road to Haymarket - Cathedral	For Tender Purposes Only
ULE-90130	2	SUB	1		5	Haymarket to Roseburn Junction - Haymarket	For Tender Purposes Only
ULE-90130	2	SUB	2		4	Haymarket to Roseburn Junction - Haymarket	For Tender Purposes Only
ULE-90130	2	SUB	3		4	Haymarket to Roseburn Junction - Haymarket	For Tender Purposes Only
ULE-90130	2	SUB	4		*	Haymarket to Roseburn Junction - Russell Road	Issued for External Approval
ULE-90130	2	SUB	5		*	Haymarket to Roseburn Junction - Russell Road	Issued for External Approval
ULE-90130	2	SUB	16		4	Haymarket to Roseburn Junction - Russell Road	For Tender Purposes Only
ULE-90130	2	SUB	17		4	Haymarket to Roseburn Junction - Roseburn Delta	For Tender Purposes Only
ULE-90130	2	SUB	18		*	Haymarket to Roseburn Junction	Issued for External Approval
ULE-90130	2	SUB	19		*	Haymarket to Roseburn Junction	Issued for External Approval
ULE-90130	2	SUB	20		*	Haymarket to Roseburn Junction	Issued for External Approval
ULE-90130	2	SUB	21		*	Haymarket to Roseburn Junction	Issued for External Approval
ULE-90130	5	SUB	3		4	Roseburn Junction to Gogarburn - Jenners Depository	For Tender Purposes Only
ULE-90130	5	SUB	4		4	Roseburn Junction to Gogarburn - Jenners Depository	For Tender Purposes Only
ULE-90130	5	SUB	18		4	Roseburn Junction to Gogarburn - Bankhead Drive	For Tender Purposes Only
ULE-90130	5	SUB	19		4	Roseburn Junction to Gogarburn - Bankhead Drive	For Tender Purposes Only
ULE-90130	7	SUB	1		4	Ingliston P & R	For Tender Purposes Only
ULE-90130	7	SUB	2		4	Ingliston P & R	For Tender Purposes Only
ULE-90130	1	TAL	1		4	Newhaven Road to Haymarket Subsection 1A	Issued for External Approval
ULE-90130	1	TAL	2		3	Newhaven Road to Haymarket Subsection 1A	Issued for External Approval
ULE-90130	1	TAL	3		3	Newhaven Road to Haymarket Subsection 1A	Issued for External Approval
ULE-90130	1	TAL	4		3	Newhaven Road to Haymarket Subsection 1A	Issued for External Approval
ULE-90130	1	TAL	5		4	Newhaven Road to Haymarket Subsection 1A	Issued for External Approval
ULE-90130	1	TAL	6		4	Newhaven Road to Haymarket Subsection 1A	Issued for External Approval
ULE-90130	1	TAL	7		4	Newhaven Road to Haymarket Subsection 1A	Issued for External Approval
ULE-90130	1	TAL	8		4	Newhaven Road to Haymarket Subsection 1A	Issued for External Approval
ULE-90130	1	TAL	9		6	Newhaven Road to Haymarket Subsection 1A	Issued for External Approval
ULE-90130	1	TAL	10		5	Newhaven Road to Haymarket Subsection 1B	Issued for External Approval
ULE-90130	1	TAL	11		5	Newhaven Road to Haymarket Subsection 1B	Issued for External Approval
ULE-90130	1	TAL	12		5	Newhaven Road to Haymarket Subsection 1B	Issued for External Approval
ULE-90130	1	TAL	13		4	Newhaven Road to Haymarket Subsection 1B	Issued for External Approval
ULE-90130	1	TAL	14		5	Newhaven Road to Haymarket Subsection 1C	Issued for External Approval
ULE-90130	1	TAL	15		5	Newhaven Road to Haymarket Subsection 1C	Issued for External Approval
ULE-90130	1	TAL	16		5	Newhaven Road to Haymarket Subsection 1C	Issued for External Approval
ULE-90130	1	TAL	17		5	Newhaven Road to Haymarket Subsection 1C	Issued for External Approval
ULE-90130	1	TAL	18		5	Newhaven Road to Haymarket Subsection 1C	Issued for External Approval
ULE-90130	1	TAL	19		5	Newhaven Road to Haymarket Subsection 1C	Issued for External Approval
ULE-90130	1	TAL	20		5	Newhaven Road to Haymarket Subsection 1C	Issued for External Approval
ULE-90130	1	TAL	21		5	Newhaven Road to Haymarket Subsection 1D	Issued for External Approval
ULE-90130	1	TAL	22		3	Newhaven Road to Haymarket Subsection 1D	Issued for External Approval
ULE-90130	1	TAL	23		5	Newhaven Road to Haymarket Subsection 1D	Issued for External Approval
ULE-90130	1	TAL	24		5	Newhaven Road to Haymarket Subsection 1D	Issued for External Approval

Drawings received but not in Drawing List

COMMENTS

PROJECT	SECTION	FOLDER	DWG NO	STR ID	REV NO	DRAWING NAME	STATUS
ULE-90130	2	TAL	1		3	Haymarket to Roseburn Junction Subsection 2A	Issued for External Approval
ULE-90130	2	TAL	2		3	Haymarket to Roseburn Junction Subsection 2A	Issued for External Approval
ULE-90130	2	TAL	3		3	Haymarket to Roseburn Junction Subsection 2A	Issued for External Approval
ULE-90130	5	TAL	1		3	Roseburn Junction to Gogarburn Subsection 5A	Issued for External Approval
ULE-90130	5	TAL	2		3	Roseburn Junction to Gogarburn Subsection 5A	Issued for External Approval
ULE-90130	5	TAL	3		3	Roseburn Junction to Gogarburn Subsection 5A	Issued for External Approval
ULE-90130	5	TAL	4		3	Roseburn Junction to Gogarburn Subsection 5A	Issued for External Approval
ULE-90130	5	TAL	5		3	Roseburn Junction to Gogarburn Subsection 5A	Issued for External Approval
ULE-90130	5	TAL	6		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TAL	7		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TAL	8		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TAL	9		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TAL	10		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TAL	11		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TAL	12		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TAL	13		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TAL	14		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TAL	15		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TAL	16		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TAL	17		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TAL	18		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TAL	19		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TAL	20		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TAL	21		3	Roseburn Junction to Gogarburn Subsection 5C	Issued for External Approval
ULE-90130	5	TAL	22		3	Roseburn Junction to Gogarburn Subsection 5C	Issued for External Approval
ULE-90130	5	TAL	23		3	Roseburn Junction to Gogarburn Subsection 5C	Issued for External Approval
ULE-90130	5	TAL	24		3	Roseburn Junction to Gogarburn Subsection 5C	Issued for External Approval
ULE-90130	5	TAL	25		3	Roseburn Junction to Gogarburn Subsection 5C	Issued for External Approval
ULE-90130	5	TAL	26		3	Roseburn Junction to Gogarburn Subsection 5C	Issued for External Approval
ULE-90130	6	TAL	1		3	Gogar Depot	Issued for External Approval
ULE-90130	6	TAL	2		2	Gogar Depot	Issued for External Approval
ULE-90130	7	TAL	1		3	Gogarburn to Edinburgh Airport Subsection 7A	Issued for External Approval
ULE-90130	7	TAL	2		3	Gogarburn to Edinburgh Airport Subsection 7A	Issued for External Approval
ULE-90130	7	TAL	3		3	Gogarburn to Edinburgh Airport Subsection 7A	Issued for External Approval
ULE-90130	7	TAL	4		3	Gogarburn to Edinburgh Airport Subsection 7A	Issued for External Approval
ULE-90130	7	TAL	5		3	Gogarburn to Edinburgh Airport Subsection 7A	Issued for External Approval
ULE-90130	7	TAL	6		3	Gogarburn to Edinburgh Airport Subsection 7A	Issued for External Approval
ULE-90130	7	TAL	7		3	Gogarburn to Edinburgh Airport Subsection 7A	Issued for External Approval
ULE-90130	7	TAL	8		3	Gogarburn to Edinburgh Airport Subsection 7A	Issued for External Approval
ULE-90130	7	TAL	9		3	Gogarburn to Edinburgh Airport Subsection 7A	Issued for External Approval
ULE-90130	1	TMG	27		1	Leith Walk/Great Junction Street	Issued for External Approval
ULE-90130	1	TMG	28		1	Leith Walk/Manderston Street,Section 1B	Issued for External Approval
ULE-90130	1	TMG	29		1	Leith Walk/Springfield Street	Issued for External Approval
ULE-90130	1	TMG	30		1	Leith Walk/Balfour Stop North Junction,Section 1B	Issued for External Approval
ULE-90130	1	TMG	31		1	Leith Walk/Dalmeny Street,Section 1B	Issued for External Approval
ULE-90130	1	TMG	32		1	Leith Walk/Pilrig Street Junction and Crossing Section 1B Junction 20	Issued for External Approval
ULE-90130	1	TMG	33		1	Leith Walk/Macdonald Road Junction and Crossing Section 1B Junction 21	Issued for External Approval
ULE-90130	1	TMG	34		1	Leith Walk/Macdonald Road Junction and Crossing Section 1B Junction 21	Issued for External Approval
ULE-90130	1	TMG	35		1	Leith Walk/Macdonald Stop South Junction and Crossing Section 1B Junction 22	Issued for External Approval
ULE-90130	1	TMG	36		1	Leith Walk/Manderston Street Traffic Signal Ducting Section 1B Junction 16	Issued for External Approval
ULE-90130	1	TMG	37		1	Leith Walk/Springfield Street Traffic Signal Ducting Section 1B Junction 17	Issued for External Approval
ULE-90130	1	TMG	38		1	Leith Walk/Balfour Stop North Traffic Signal Ducting Section 1B Junction 18	Issued for External Approval
ULE-90130	1	TMG	39		1	Leith Walk/Dalmeny Street Traffic Signal Ducting,Section 1B	Issued for External Approval
ULE-90130	1	TMG	40		1	Leith Walk/Pilrig Street,Traffic Signal Ducting,Section 1B	Issued for External Approval
ULE-90130	1	TMG	41		1	Leith Walk/MacDonald Road Traffic Signal Ducting	Issued for External Approval
ULE-90130	1	TMG	42		1	Leith Walk/MacDonald Stop South,Section 1B	Issued for External Approval
ULE-90130	1	TMG	43		1	Shandwick Place Tram Stops	Issued for External Approval
ULE-90130	1	TMG	44		1	manor Place/Shandwick Place Junction and Crossing Section 1D Junction 45	Issued for External Approval
ULE-90130	1	TMG	45		1	Palmerston Place/Torphichen Street Junction and Crossing Section 1D Junction 46	Issued for External Approval
ULE-90130	1	TMG	46		1	Morrison Street/Torphichen Place Junction and Crossing Section 1D Junction 47	Issued for External Approval
ULE-90130	1	TMG	47		1	Haymarket Junction Junction and Crossing Section 1D Junction 48	Issued for External Approval

COMMENTS

PROJECT	SECTION	FOLDER	DWG NO	STR ID	REV NO	DRAWING NAME	STATUS
ULE-90130	1	TMG	50		1	North St Andrew St/St Andrew Square Traffic Signal Ducting Section 1C Junction 29	Issued for External Approval
ULE-90130	1	TMG	51		1	South St Andrew St/St Andrew Square Traffic Signal Ducting Section 1C Junction 30	Issued for External Approval
ULE-90130	1	TMG	52		1	South St Andrew St/Princes St Traffic Signal Ducting Section 1C Junction 31	Issued for External Approval
ULE-90130	1	TMG	53		1	South St David St/Princes Street Traffic Signal Ducting Section 1C Junction 32	Issued for External Approval
ULE-90130	1	TMG	54		1	South St David St/St Andrew Square Traffic Signal Ducting Section 1C Junction 33	Issued for External Approval
ULE-90130	1	TMG	55		1	St David St/George St Traffic Signal Ducting Section 1C Junction 34	Issued for External Approval
ULE-90130	1	TMG	56		1	North St David St/St Andrew Square Traffic Signal Ducting Section 1C Junction 35	Issued for External Approval
ULE-90130	1	TMG	57		1	North St David St/Queen St Traffic Signal Ducting Section 1C Junction 36	Issued for External Approval
ULE-90130	1	TMG	60		1	Lothian Road/Princes Street Traffic Signal Ducting Section 1D Junction 41	Issued for External Approval
ULE-90130	1	TMG	61		1	Queensferry Street/Princes Street Section 1D	Issued for External Approval
ULE-90130	1	TMG	62		1	Shandwick Place Puffin Crossing Section 1D	Issued for External Approval
ULE-90130	1	TMG	63		1	Shandwick Place Traffic Tramstop	Issued for External Approval
ULE-90130	1	TMG	64		1	Manor Place/Shandwick Place	Issued for External Approval
ULE-90130	1	TMG	65		1	Palmerston Place/Torphichen Street Section 1D	Issued for External Approval
ULE-90130	1	TMG	66		1	Morrison Street/Torphichen Place Section 1D	Issued for External Approval
ULE-90130	1	TMG	67		1	Haymarket Junction Traffic Signal Ducting Section 1D	Issued for External Approval
ULE-90130	1	TVA	1		4	Newhaven Road to Haymarket Subsection 1A	Issued for External Approval
ULE-90130	1	TVA	2		3	Newhaven Road to Haymarket Subsection 1A	Issued for External Approval
ULE-90130	1	TVA	3		3	Newhaven Road to Haymarket Subsection 1A	Issued for External Approval
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ULE-90130	1	TVA	6		4	Newhaven Road to Haymarket Subsection 1A	Issued for External Approval
ULE-90130	1	TVA	7		4	Track Vertical Alignment Sheet 7 of 24	Issued for External Approval
ULE-90130	1	TVA	8		4	Track Vertical Alignment Sheet 8 of 24	Issued for External Approval
ULE-90130	1	TVA	9		6	Track Vertical Alignment Sheet 9 of 24	Issued for External Approval
ULE-90130	1	TVA	10		5	Newhaven Road to Haymarket Subsection 1B	Issued for External Approval
ULE-90130	1	TVA	11		5	Newhaven Road to Haymarket Subsection 1B	Issued for External Approval
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ULE-90130	5	TVA	2		3	Roseburn Junction to Gogarburn Subsection 5A	Issued for External Approval
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ULE-90130	5	TVA	9		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
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ULE-90130	5	TVA	14		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TVA	15		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
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COMMENTS

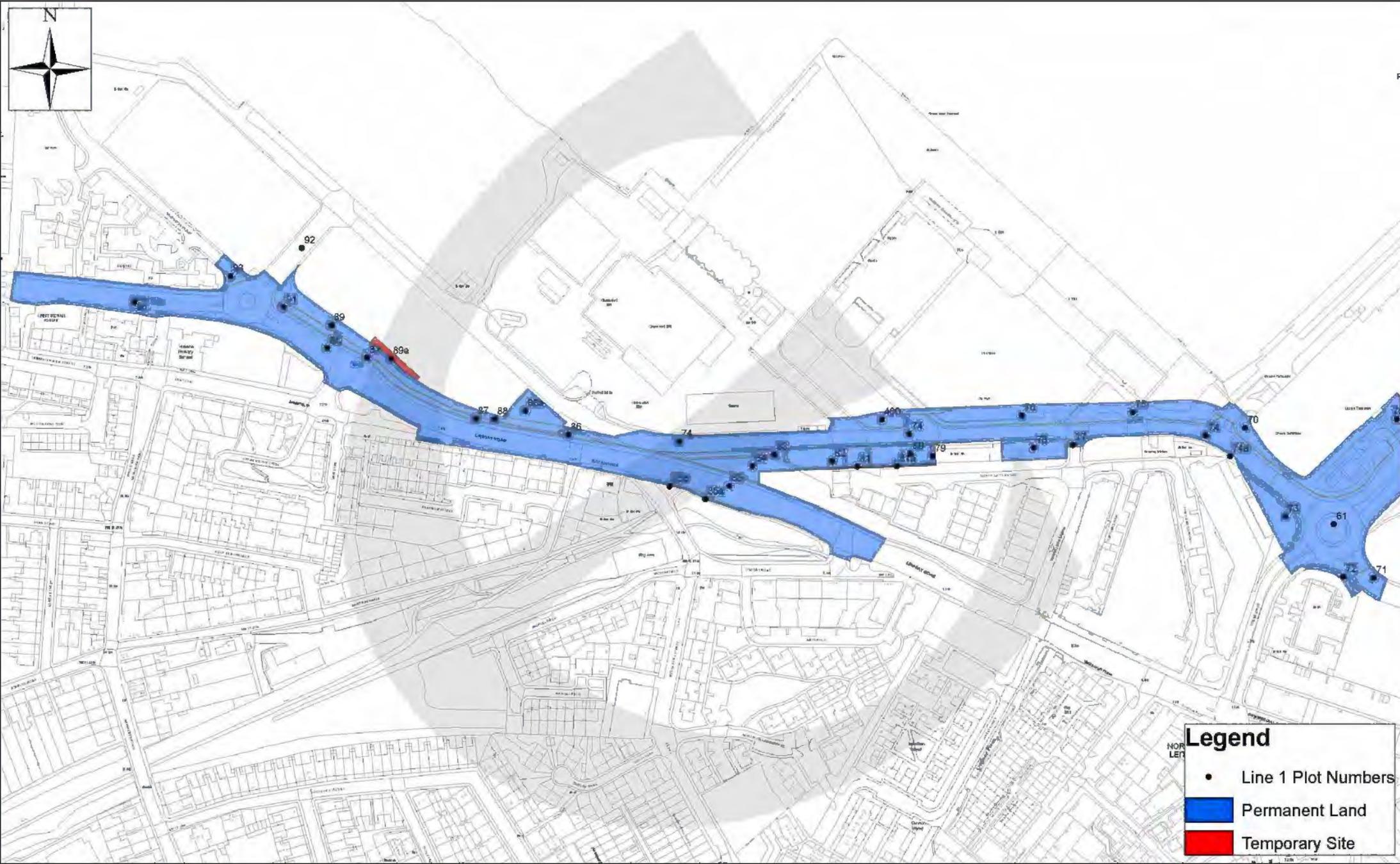
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ULE-90130	5	TVA	18		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TVA	19		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TVA	20		3	Roseburn Junction to Gogarburn Subsection 5B	Issued for External Approval
ULE-90130	5	TVA	21		3	Roseburn Junction to Gogarburn Subsection 5C	Issued for External Approval
ULE-90130	5	TVA	22		3	Roseburn Junction to Gogarburn Subsection 5C	Issued for External Approval
ULE-90130	5	TVA	23		3	Roseburn Junction to Gogarburn Subsection 5C	Issued for External Approval
ULE-90130	5	TVA	24		3	Roseburn Junction to Gogarburn Subsection 5C	Issued for External Approval
ULE-90130	5	TVA	25		3	Roseburn Junction to Gogarburn Subsection 5C	Issued for External Approval
ULE-90130	5	TVA	26		3	Roseburn Junction to Gogarburn Subsection 5C	Issued for External Approval
ULE-90130	6	TVA	1		3	Gogar Depot Track Vertical Alignment Sheet 1 of 4 (Section 6)	Issued for External Approval
ULE-90130	6	TVA	2		3	Gogar Depot Track Vertical Alignment Sheet 2 of 4 (Section 6)	Issued for External Approval
ULE-90130	6	TVA	3		1	Gogar Depot Track Vertical Alignment Sheet 3 of 4 (Section 6)	Issued for External Approval
ULE-90130	6	TVA	4		1	Gogar Depot Track Vertical Alignment Sheet 4 of 4 (Section 6)	Issued for External Approval
ULE-90130	7	TVA	1		3	Gogarburn to Edinburgh Airport Subsection 7A	Issued for External Approval
ULE-90130	7	TVA	2		3	Gogarburn to Edinburgh Airport Subsection 7A	Issued for External Approval
ULE-90130	7	TVA	3		3	Gogarburn to Edinburgh Airport Subsection 7A	Issued for External Approval
ULE-90130	7	TVA	4		3	Gogarburn to Edinburgh Airport Subsection 7A	Issued for External Approval
ULE-90130	7	TVA	5		3	Gogarburn to Edinburgh Airport Subsection 7A	Issued for External Approval
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ULE-90130	7	TVA	8		3	Gogarburn to Edinburgh Airport Subsection 7A	Issued for External Approval

COMMENTS



**THIS IS SCHEDULE PART 31 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 31
DRAWINGS

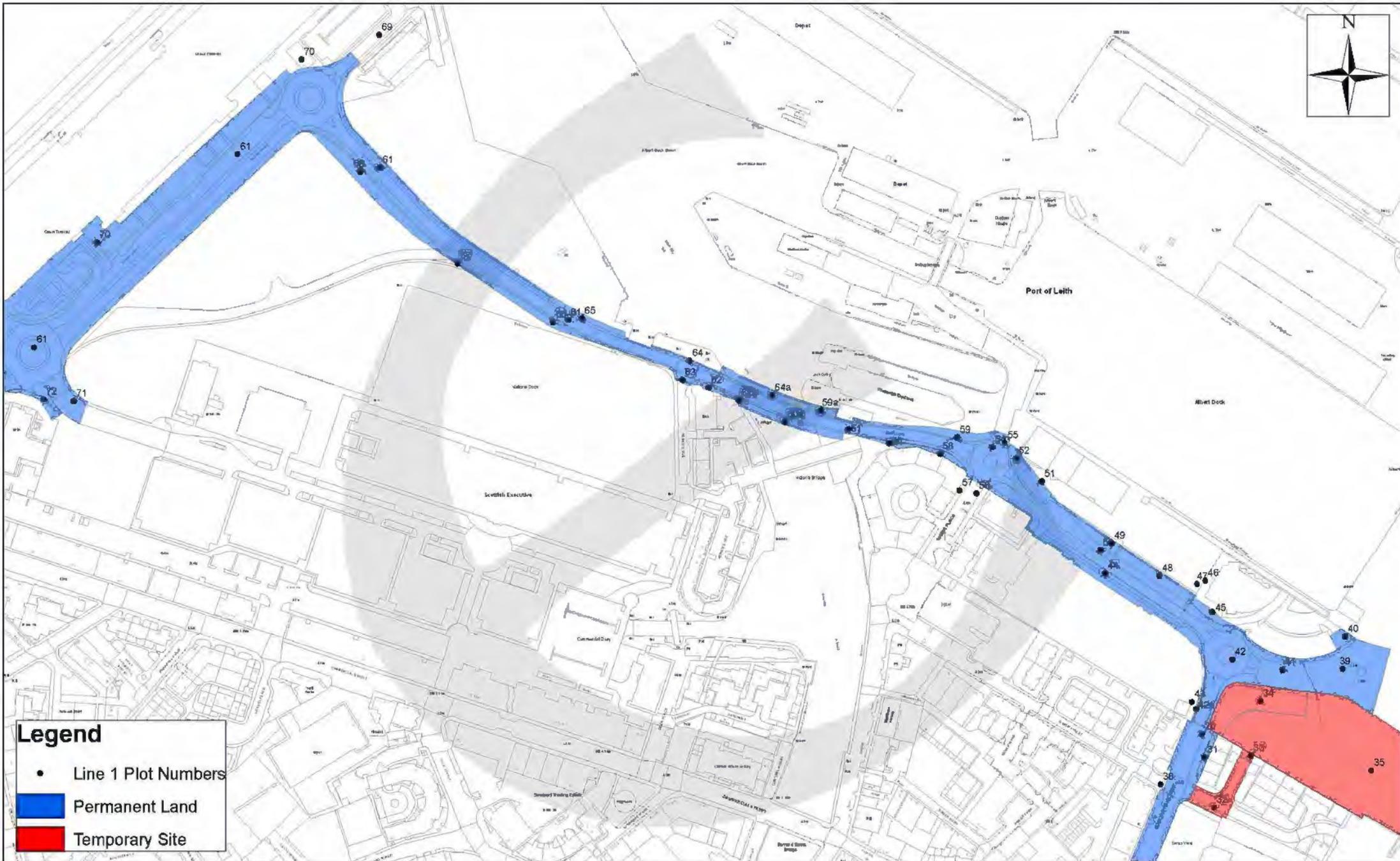


Legend

- Line 1 Plot Numbers
- Permanent Land
- Temporary Site

USB00000104_0001

Trams For Edinburgh: Land Available to INFRACO - Newhaven to Ocean Terminal		Date: Apr 08
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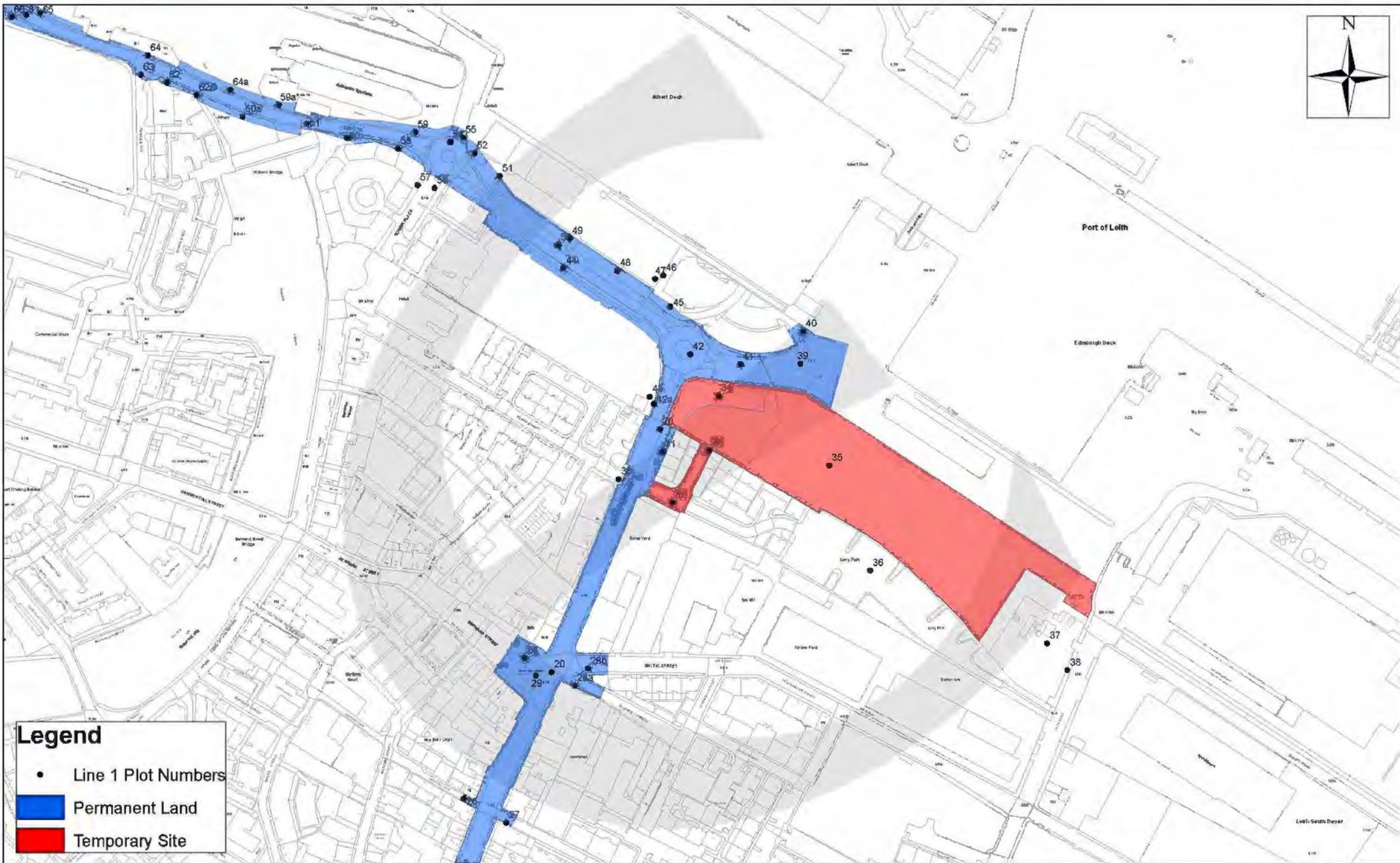


Legend

- Line 1 Plot Numbers
- Permanent Land
- Temporary Site

USB00000108_0001

Trams For Edinburgh: Land Available to INFRACO - Ocean Terminal to Casino Square (Ocean Drive)			Date: Apr 08	
			Sheet No. 2 Original Drawing Size: A3	
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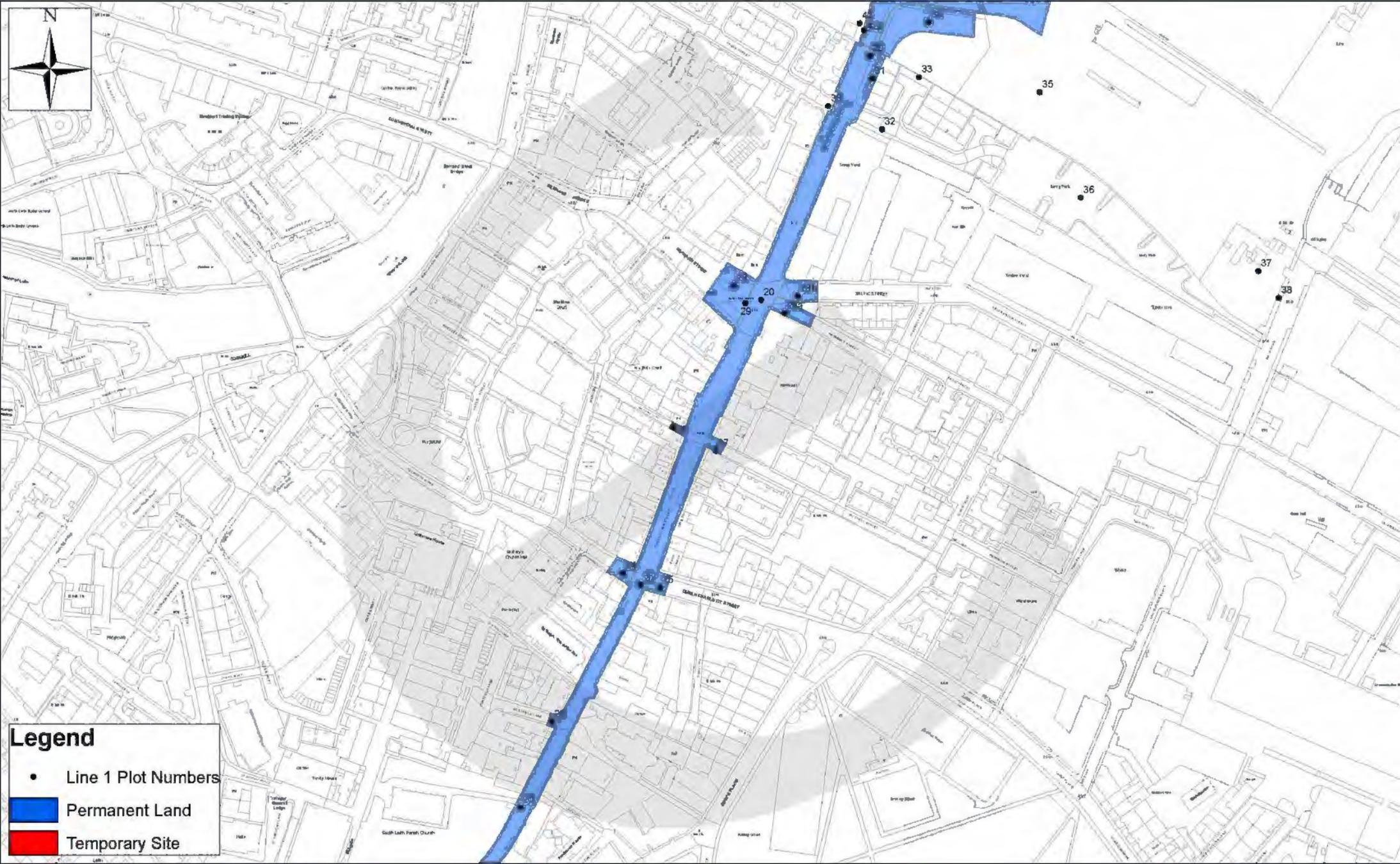


Legend

- Line 1 Plot Numbers
- Permanent Land
- Temporary Site

USB00000109_0001

Trams For Edinburgh: Land Available to INFRACO - Ocean Terminal to Casino Square (Ocean Drive) 2			Date: Apr 08	
			Sheet No. 2a Original Drawing Size: A3	
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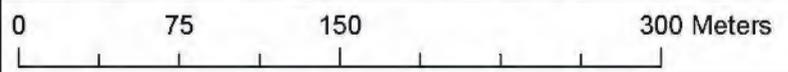
Legend

- Line 1 Plot Numbers
- Permanent Land
- Temporary Site

USB0000093_0001

Trams For Edinburgh: Land Available to INFRACO - Casino Square (Ocean Drive) to Links Lane (Constitution St)

Date: Apr 08

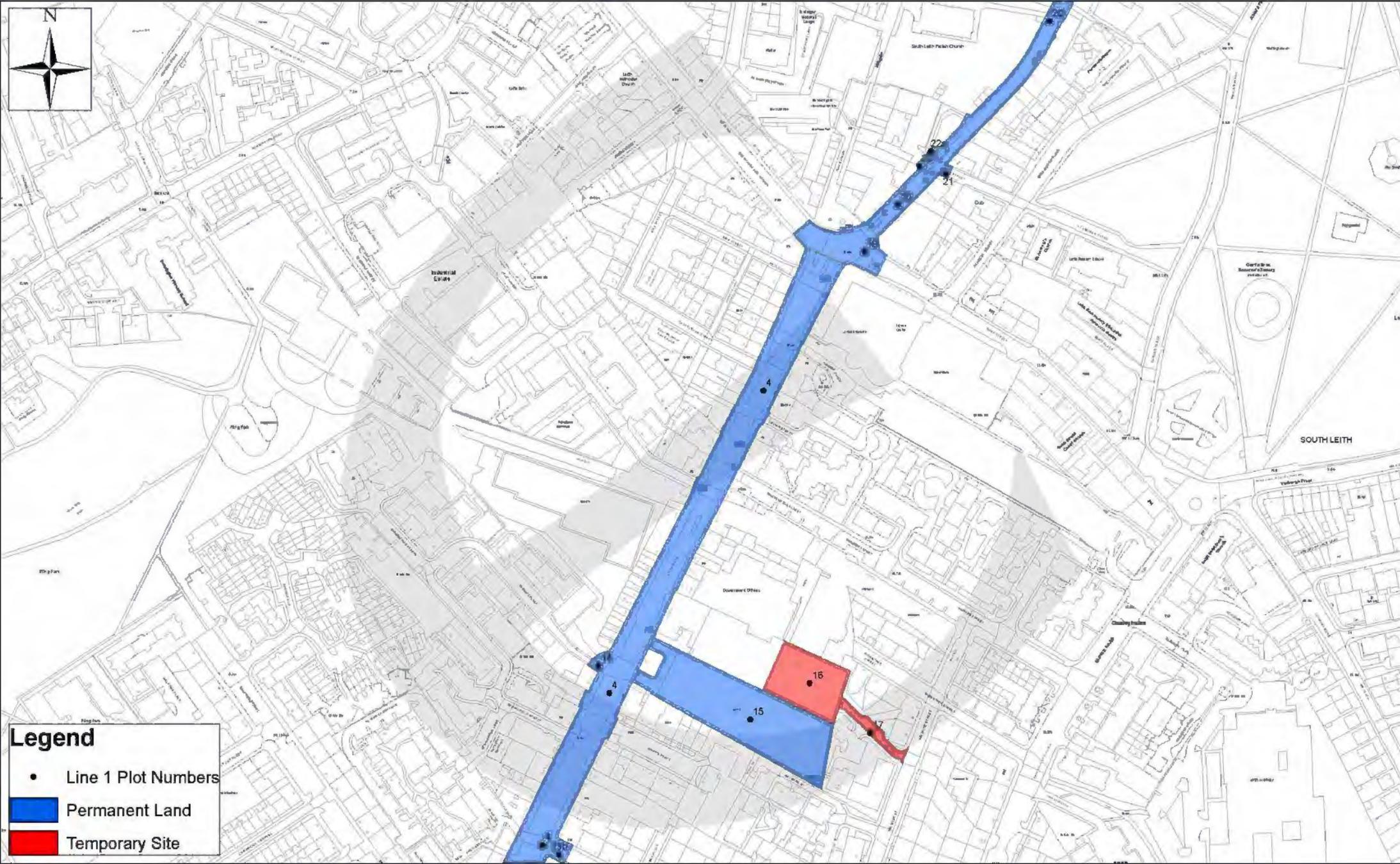


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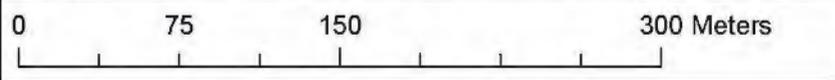
Legend

- Line 1 Plot Numbers
- Permanent Land
- Temporary Site

USB00000100_0001

Trams For Edinburgh: Land Available to INFRACO - Links Lane (Constitution St) to New Orchardfield (Leith Wk)

Date: Apr 08

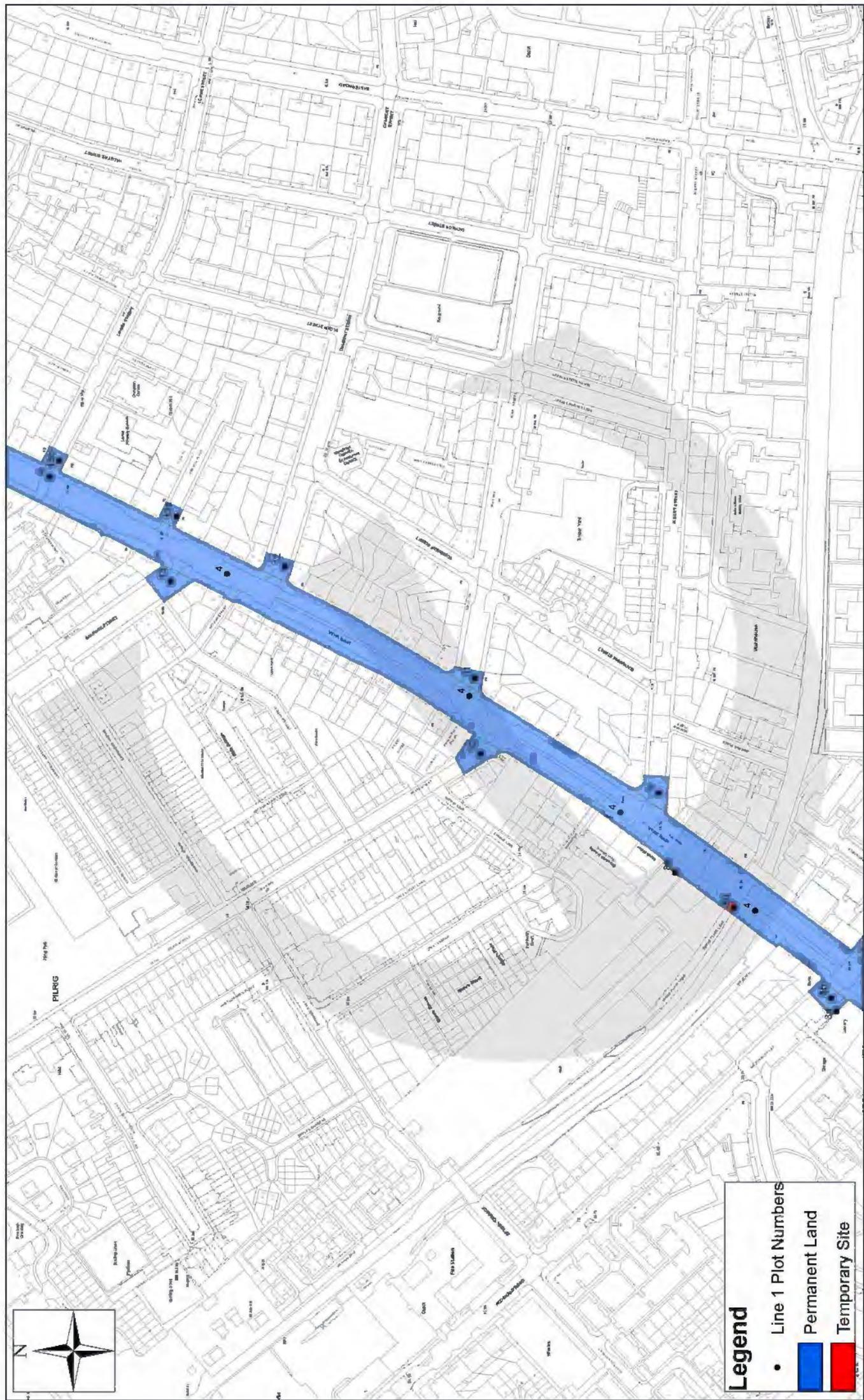


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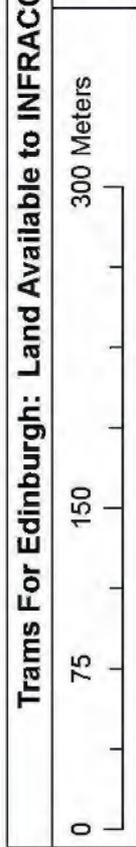
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Trams For Edinburgh: Land Available to INFRACO - New Orchardfield to Croall Place (Leith Wk)

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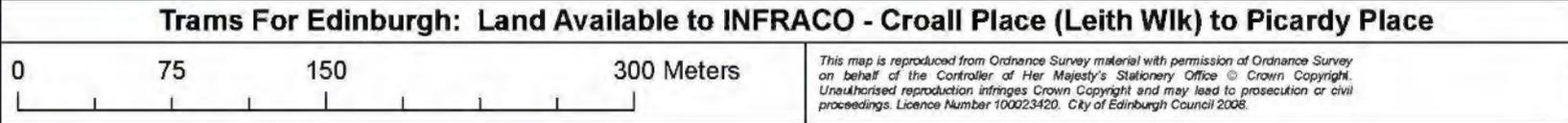


Legend

- Line 1 Plot Numbers
- Permanent Land
- Temporary Site



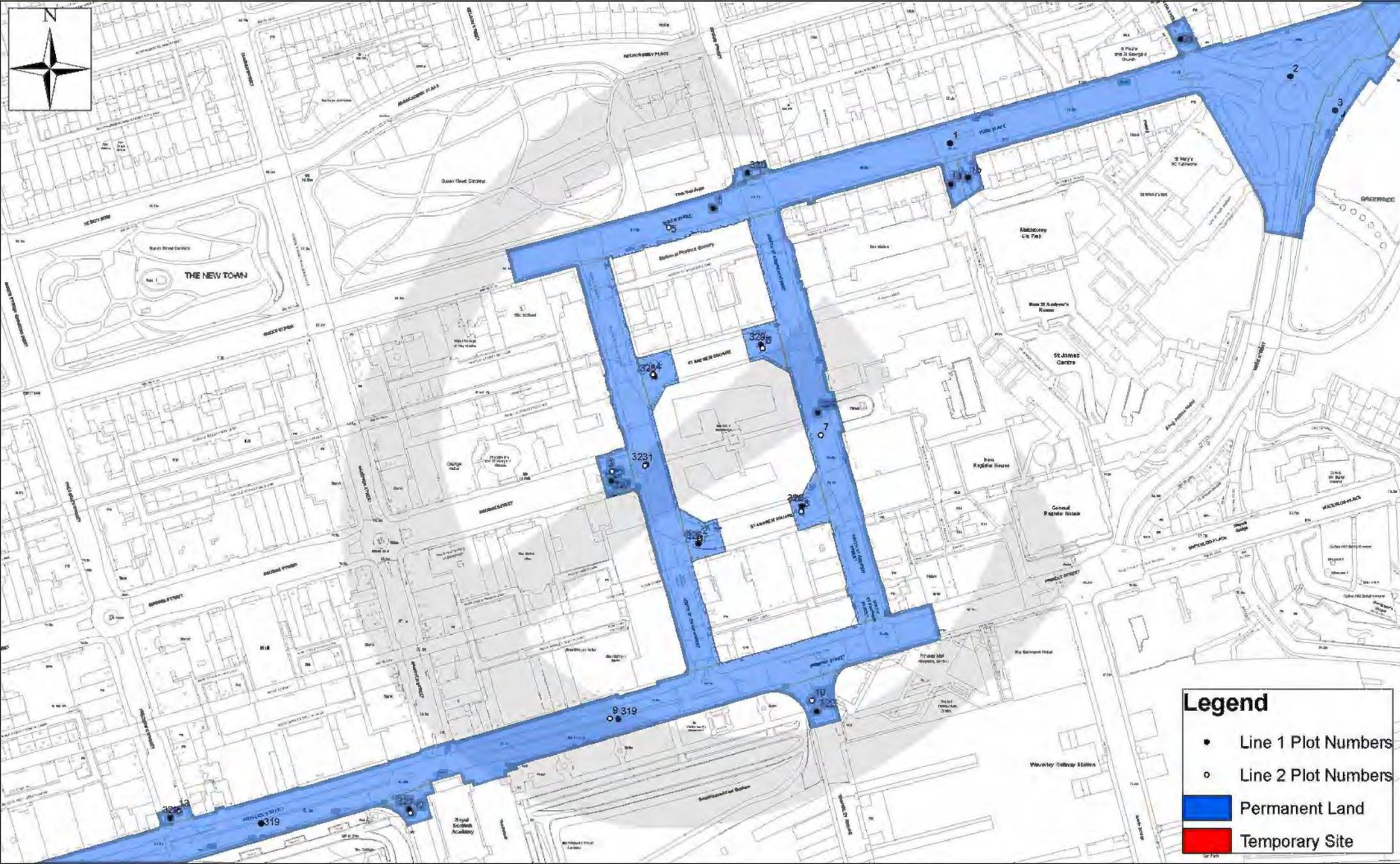
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Legend

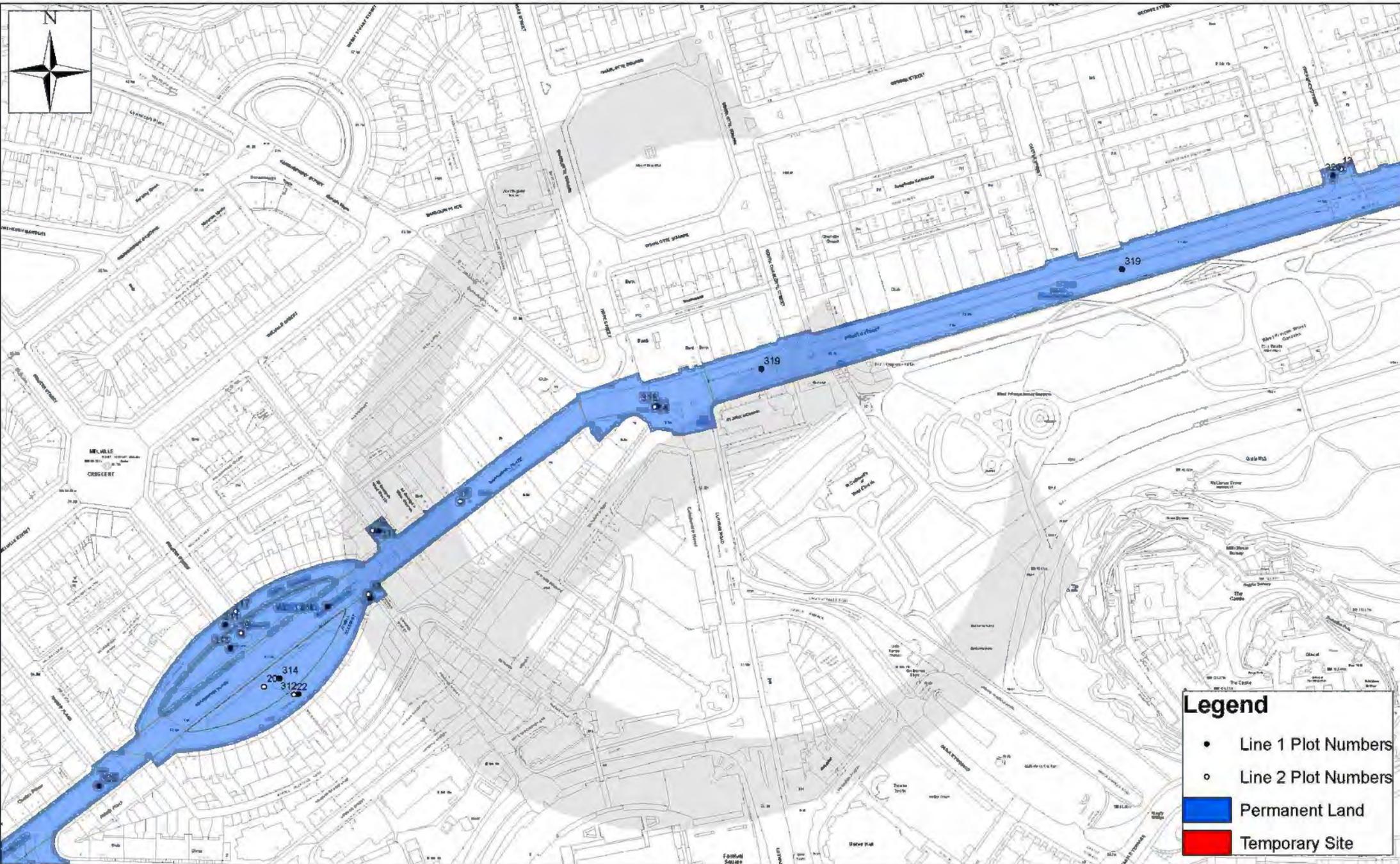
- Line 1 Plot Numbers
- Line 2 Plot Numbers
- Permanent Land
- Temporary Site

USB00000105_0001

Trams For Edinburgh: Land Available to INFRACO - Picardy Place to Frederick Street (Princes St)			
0	75	150	300 Meters
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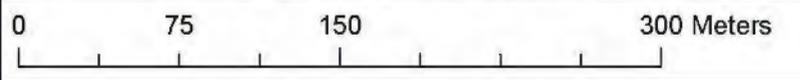
Date: Apr 08
 Sheet No 7
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 Version: 3





USB00000096_0001

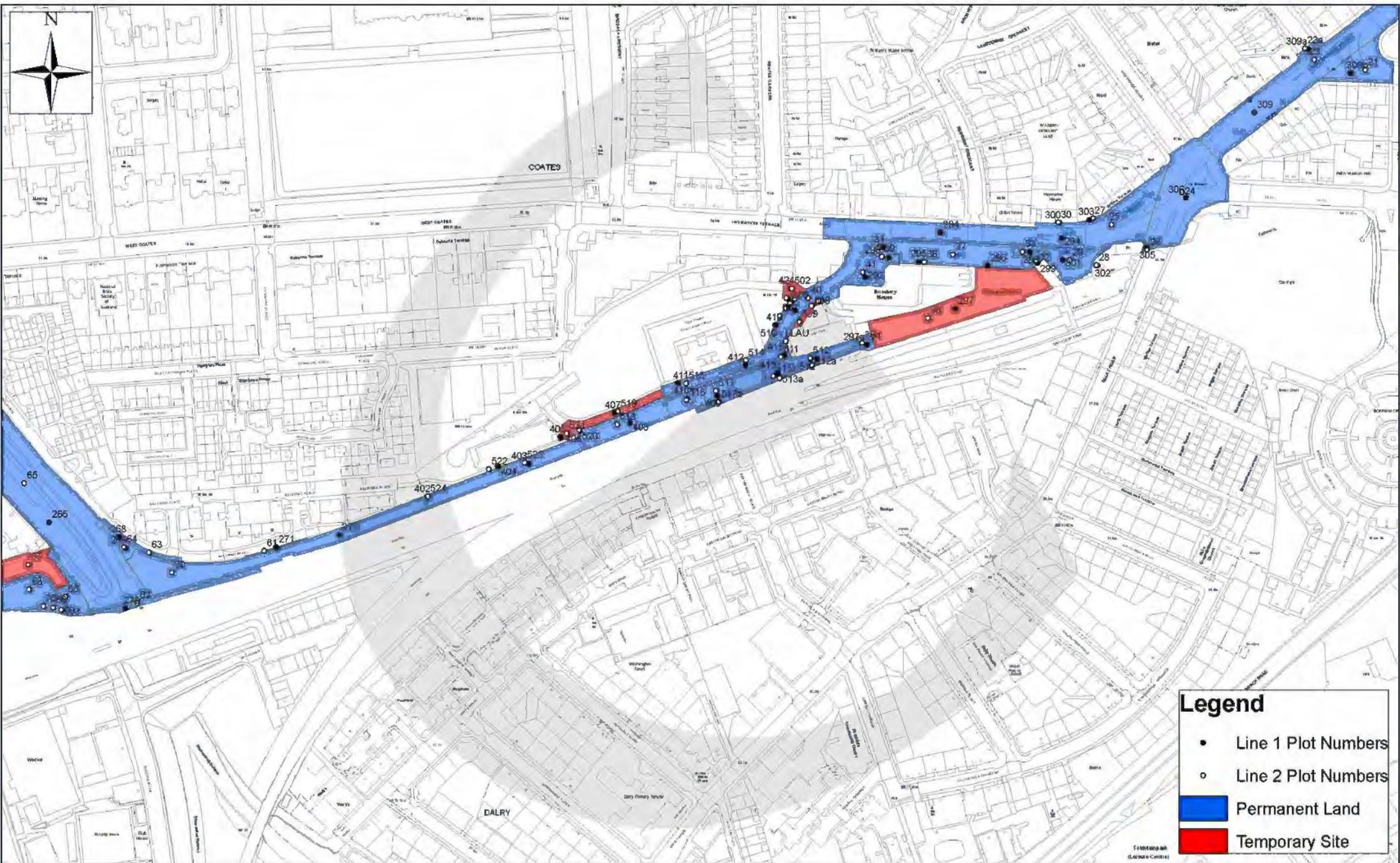
Trams For Edinburgh: Land Available to INFRACO - Frederick Street (Princes St) to Shandwick Place



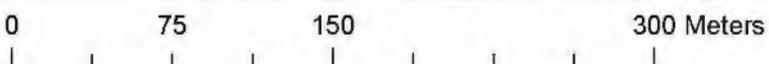
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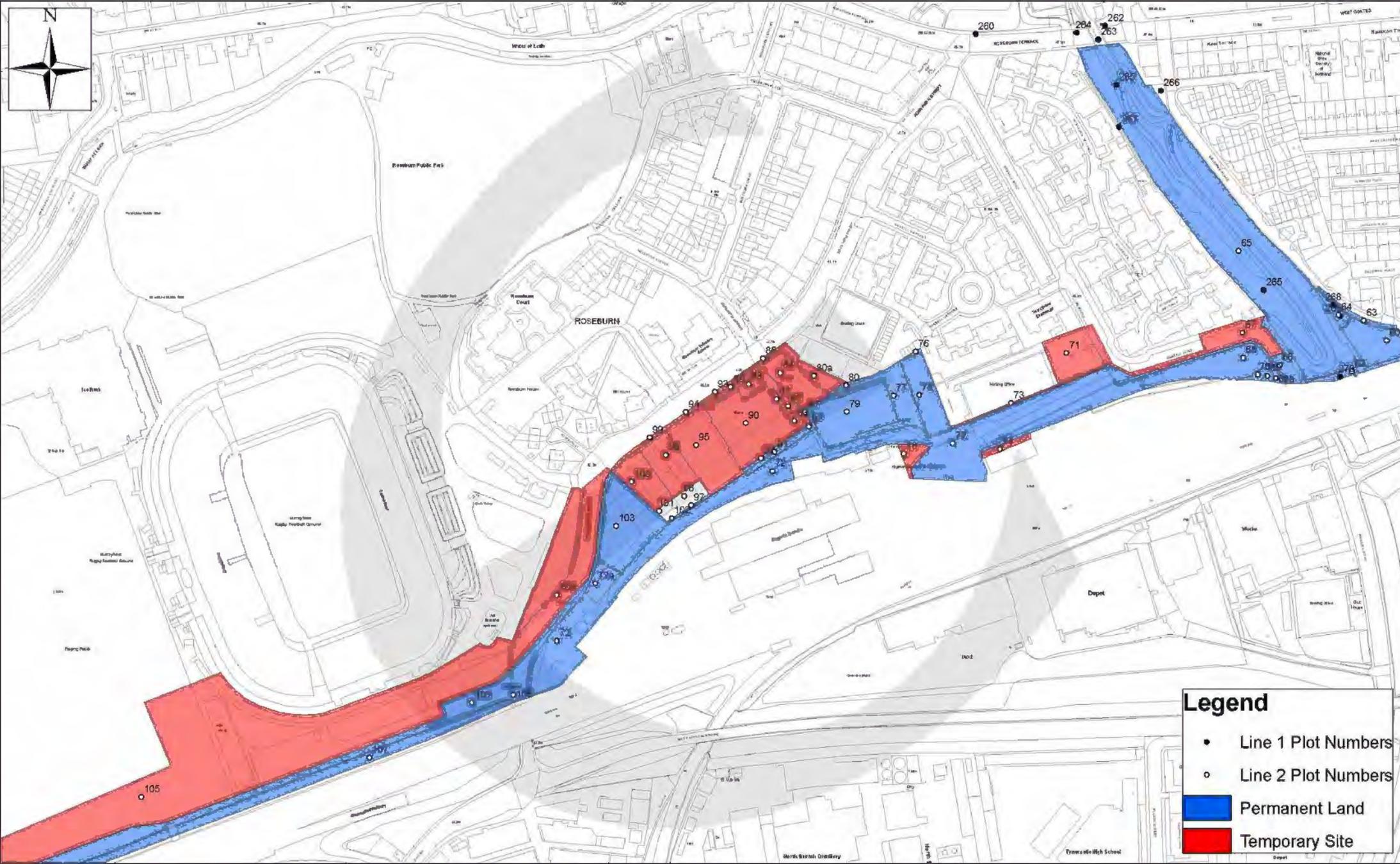
Date: Apr 08
 Sheet No. 8
 Original Drawing Size: A3
 Version: 3





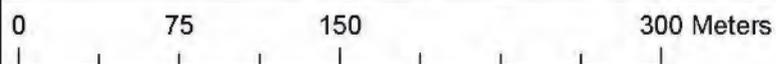
USB00000106_0001

Trams For Edinburgh: Land Available to INFRACO - Shandwick Place to Haymarket Yards		Date: Apr 08	
		Sheet No: 8 Original Drawing Size: A3	
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Trams For Edinburgh: Land Available to INFRACO - Haymarket Yards to Murrayfield



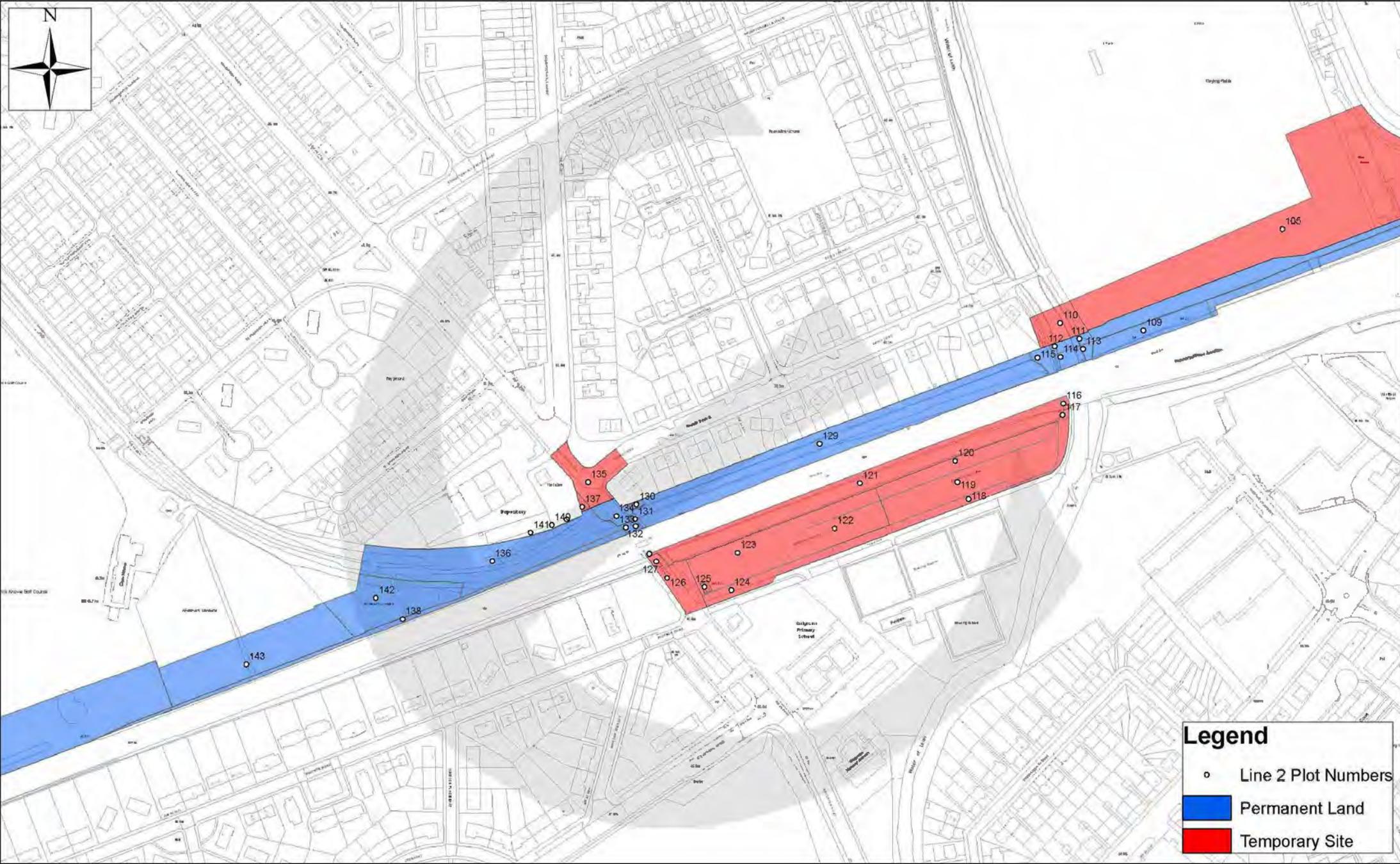
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 Original Drawing Size: A3
 Version: 3



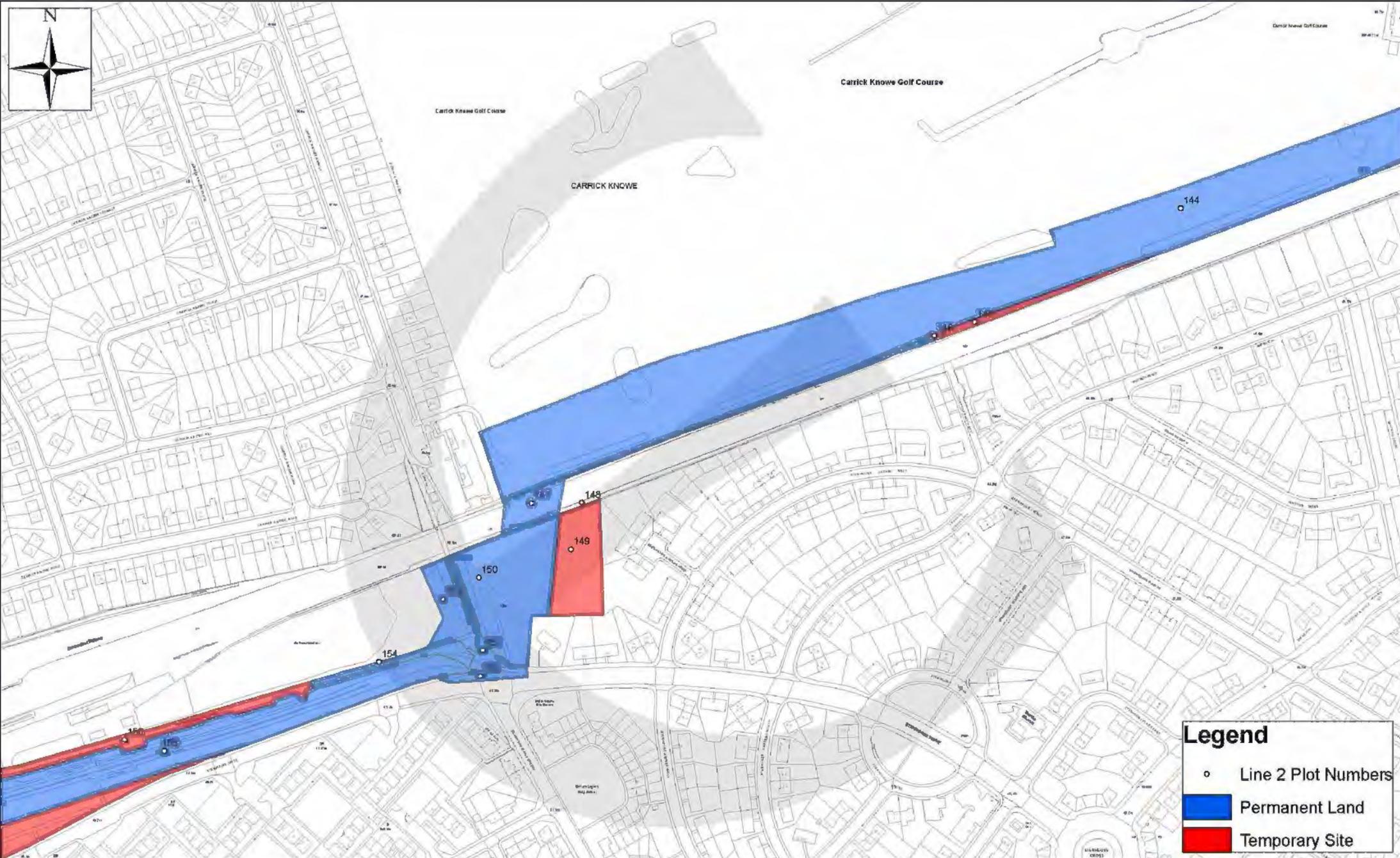
Legend

- Line 1 Plot Numbers
- Line 2 Plot Numbers
- Permanent Land
- Temporary Site



USB00000102_0001

Trams For Edinburgh: Land Available to INFRACO - Murrayfield to Carrick Knowe Golf Course		Date: Apr 08	
		Sheet No. 11 Original Drawing Size: A3	
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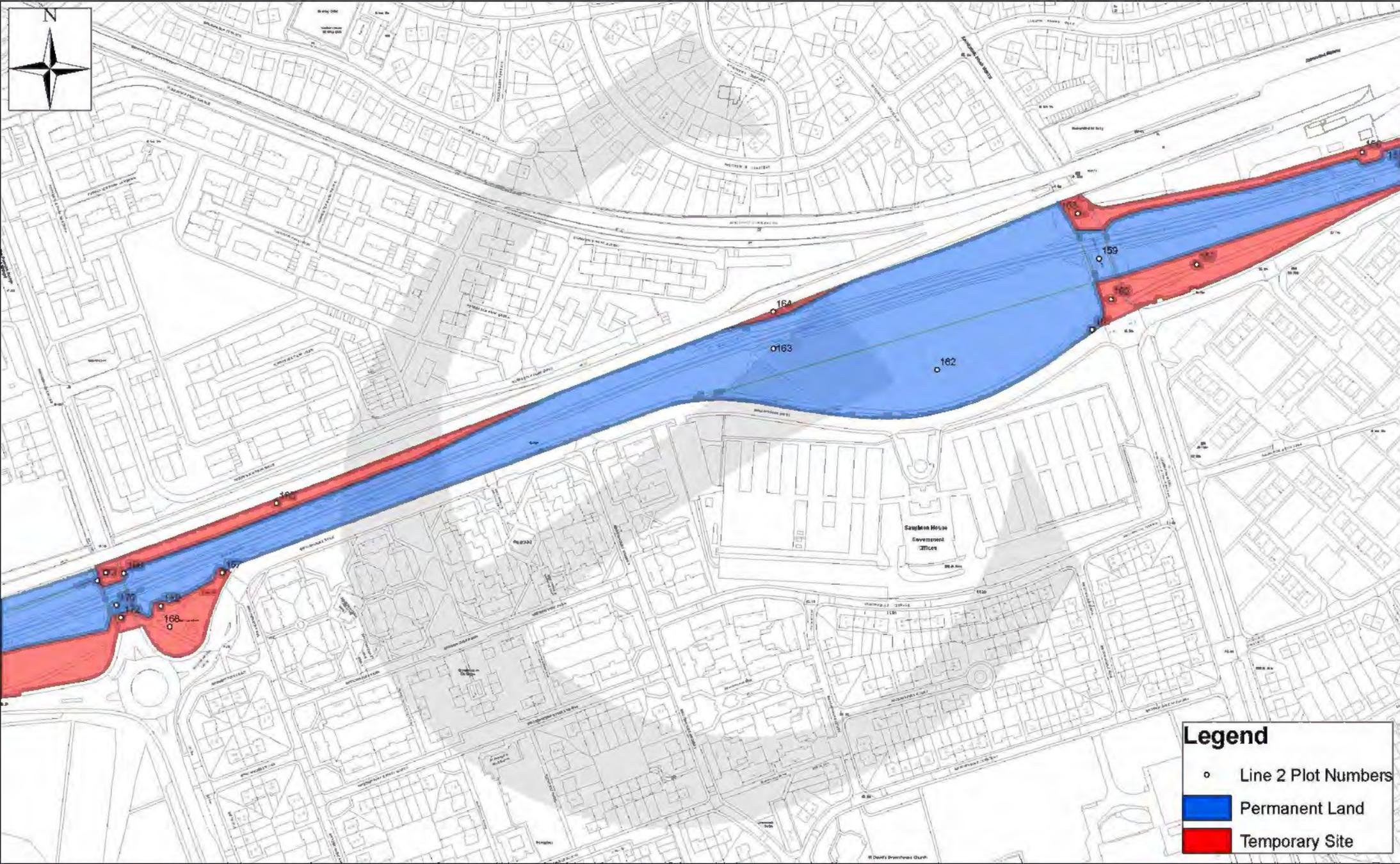


Legend

- Line 2 Plot Numbers
- Permanent Land
- Temporary Site

USB0000092_0001

Trams For Edinburgh: Land Available to INFRACO - Carrick Knowe Golf Course to Stenhouse Drive		Date: Apr 08
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Legend

- Line 2 Plot Numbers
- Permanent Land
- Temporary Site

USB0000107_0001

Trams For Edinburgh: Land Available to INFRACO - Stenhouse Drive to Broomhouse Drive

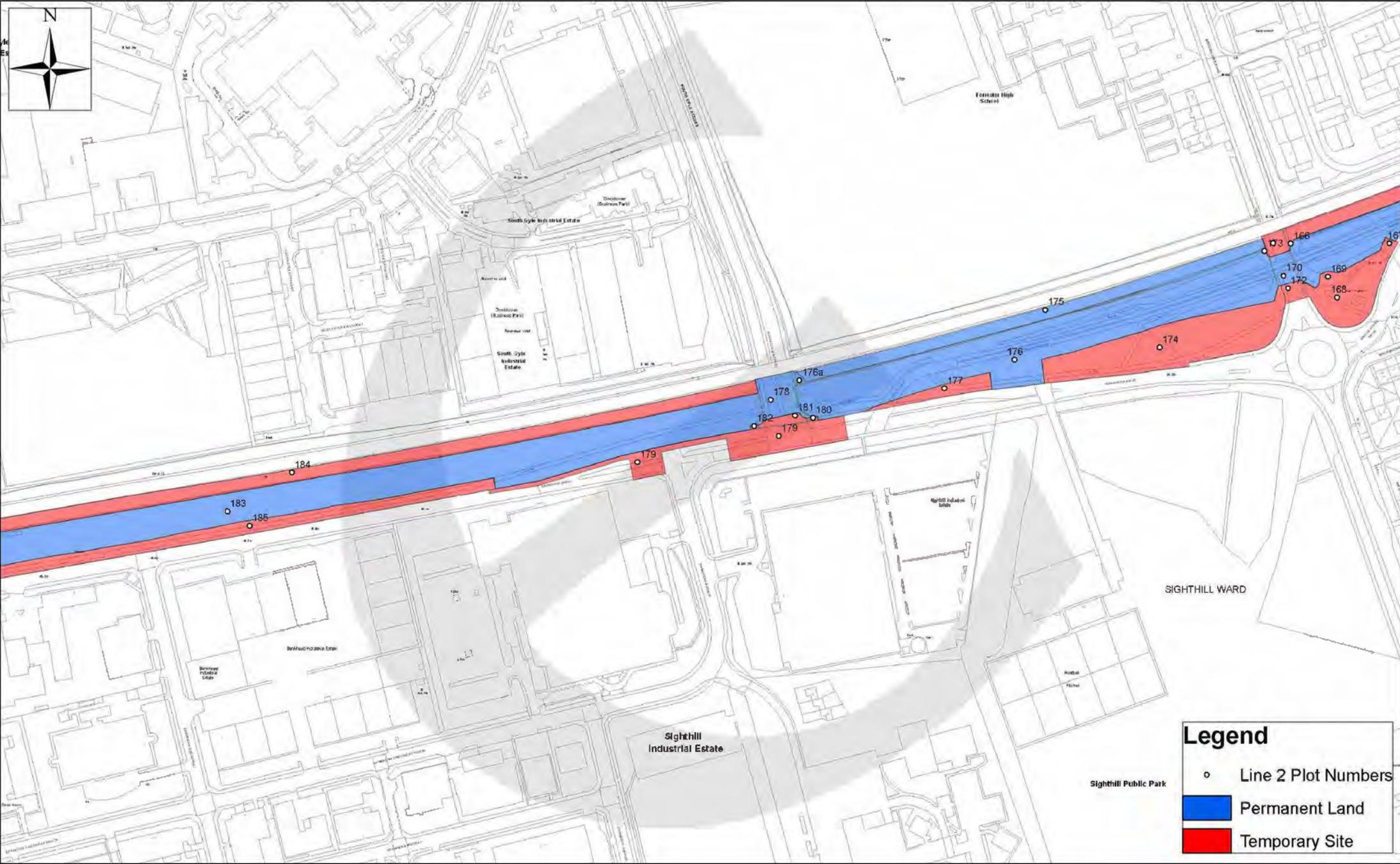
0 75 150 300 Meters

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Date: Apr 08
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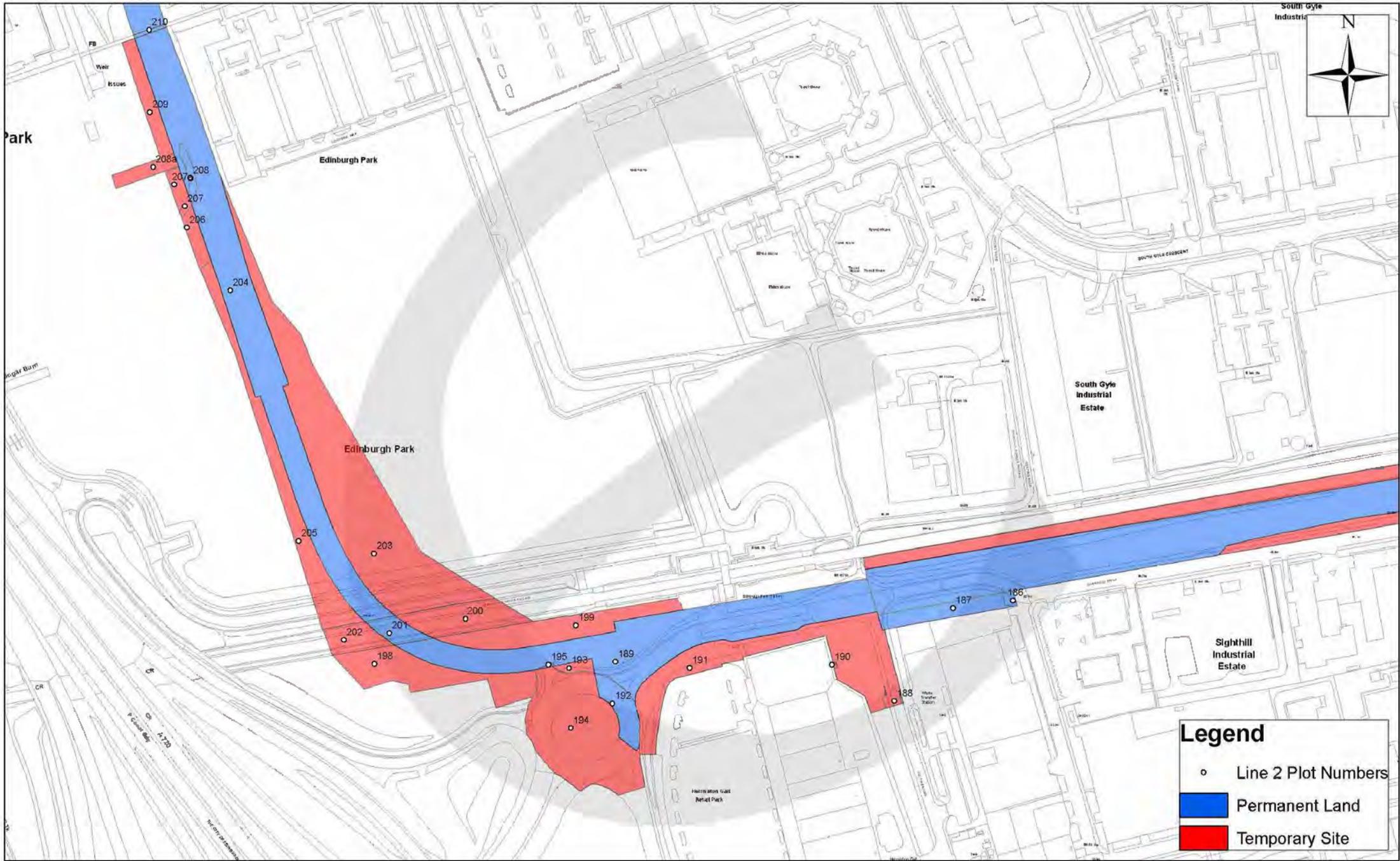


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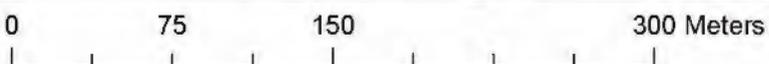
- Line 2 Plot Numbers
- Permanent Land
- Temporary Site

USB0000091_0001

Trams For Edinburgh: Land Available to INFRACO - Broomhouse Drive to Bankhead Drive		Date: Apr 08	
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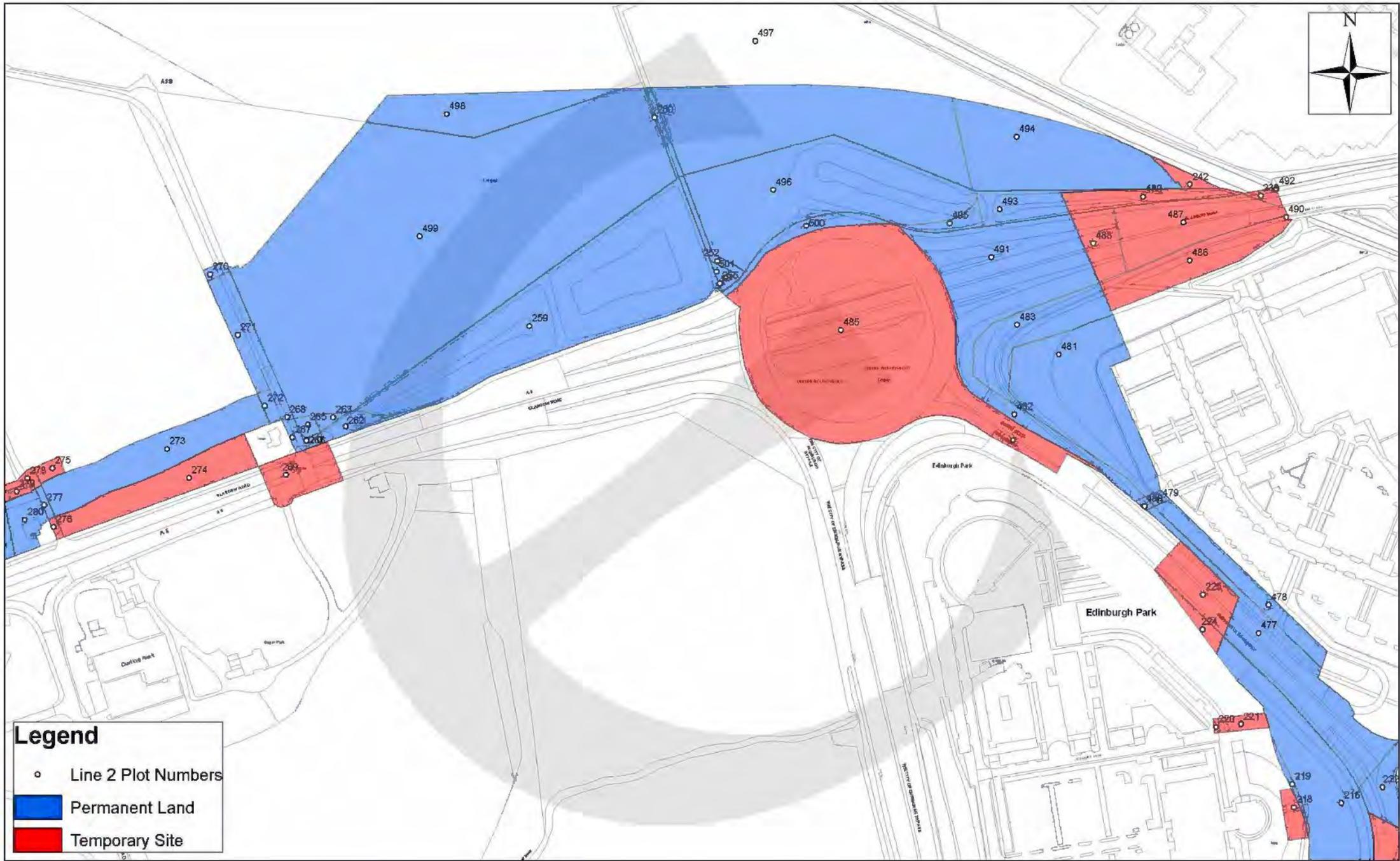
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Trams For Edinburgh: Land Available to INFRACO - Bankhead Drive to Edinburgh Park		Date: Apr 08	
		Sheet No: 15 Original Drawing Size: A3	
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USB0000095_0001

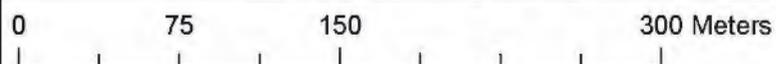
Trams For Edinburgh: Land Available to INFRACO - Edinburgh Park to Lochside Avenue		Date: Apr 08	
		Sheet No: 16 Original Drawing Sht: 43	
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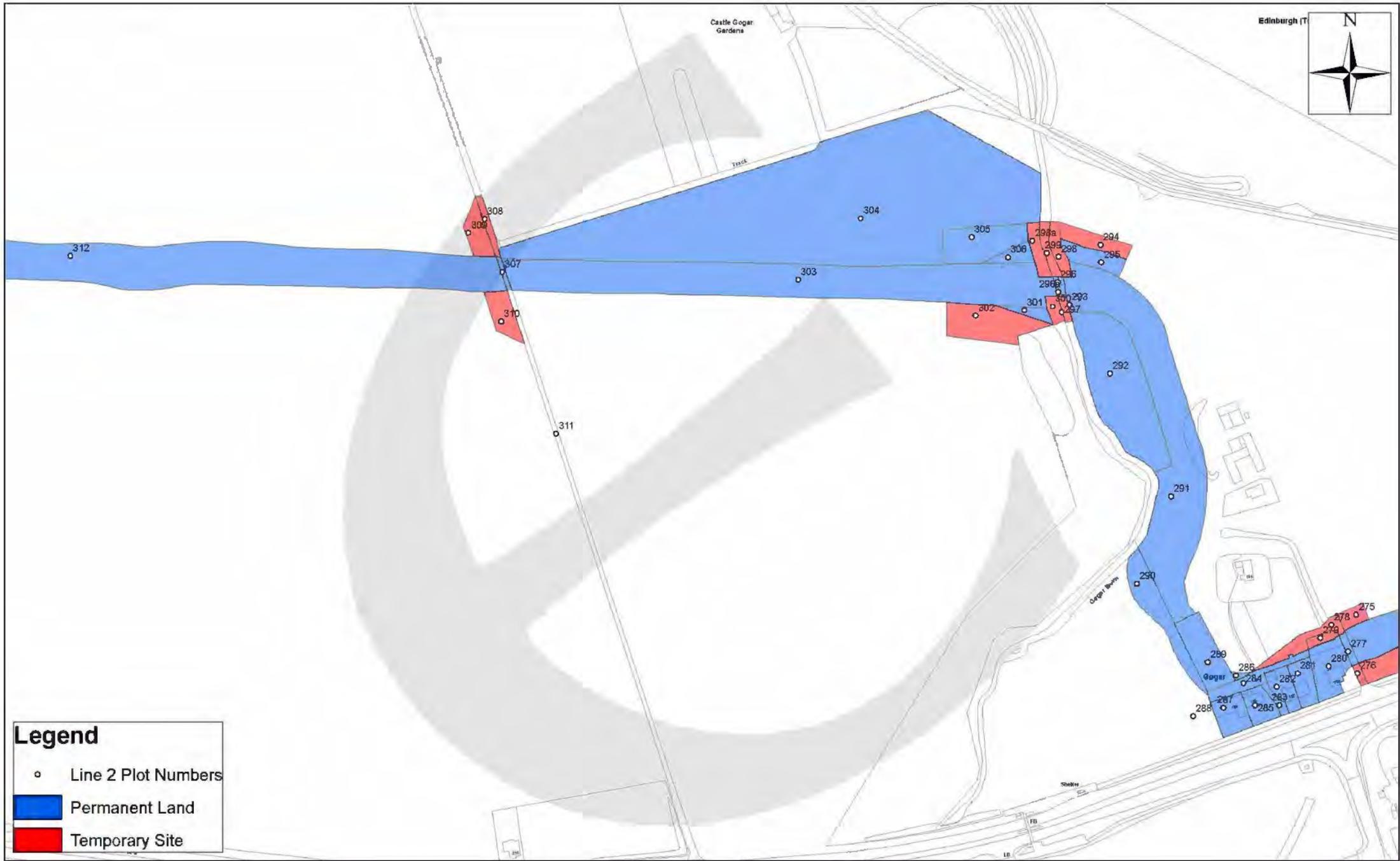


Legend

- Line 2 Plot Numbers
- Permanent Land
- Temporary Site

USB00000101_0001

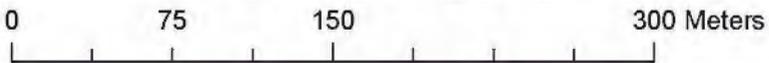
Trams For Edinburgh: Land Available to INFRACO - Lochside Avenue to Glasgow Road		Date: Apr 08	
		Sheet No: 17 Original Drawing Size: A3	
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Legend

- Line 2 Plot Numbers
- Permanent Land
- Temporary Site

USB00000097_0001

Trams For Edinburgh: Land Available to INFRACO - Glasgow Road to Gogar Farm Access		Date: Apr 08	 
		Sheet No: 18 Original Drawing Size: A3	
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Legend

- Line 2 Plot Numbers
- Permanent Land
- Temporary Site

USB0000098_0001

Trams For Edinburgh: Land Available to INFRACO - Gogar Farm Access to Ingliston P & R



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Date: Apr 08

Sheet No. 19
Original Drawing Size: A3

Version: 3





Legend

- Line 2 Plot Numbers
- Permanent Land
- Temporary Site
- Burnside Road Land

USB00000111_0001

Trams For Edinburgh: Land Available to INFRACO - Ingliston P & R to Edinburgh Airport

0 75 150 300 Meters

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Date: Apr 08

Sheet No: 20
Original Drawing Size: A3

Version: 4





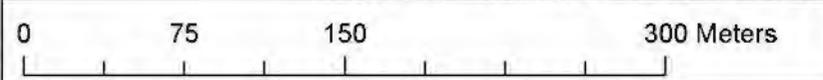
Edinburgh Airport

Legend

- Line 2 Plot Numbers
- Permanent Land
- Temporary Site
- Burnside Road Land

USB00000110_0001

Trams For Edinburgh: Land Available to INFRACO - Edinburgh Airport



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Date: Apr 08
Sheet No: 21
Original Drawing Size: A3
Version: 4





**THIS IS SCHEDULE PART 32 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 32

DEPOT LICENCE

1. In accordance with Clause 24 (*Use of the Depot*) of this Agreement **tie** grants to the Infraco a licence to occupy and use the Depot on a non-exclusive basis on the terms set out below:
 - 1.1 subject to the Infraco complying with the undertakings set out in paragraph 2 below, the Infraco shall have the right during the Term to enter into, remain in and occupy those parts of the Depot within the area shaded yellow on the Depot Plan in yellow in respect of the Tram Maintenance Services and the unshaded areas within the curtilage of the building on the Depot Plan in respect of the Infrastructure Maintenance Services for the purposes of carrying out and performing the Infraco Works and other obligations assumed by the Infraco in accordance with this Agreement including those offices and facilities shaded yellow on the Depot Plan in connection with the performance of such Infraco Works and other obligations; and
 - 1.2 **tie** and the Infraco agree that:
 - 1.2.1 the right to occupy granted pursuant to paragraph 1.1 above shall terminate on the earlier of the Termination Date or the Expiry Date;
 - 1.2.2 the Infraco's occupation of the Depot will be as a sub-licensee only and shall confer on the Infraco no greater interest than that of sub-licensee and in particular the sub-licence granted by paragraph 1.1 above shall not create a relationship of landlord and tenant;
 - 1.2.3 the benefit of the sub-licence granted by paragraph 1.1 above is personal to the Infraco, its contractors and sub-contractors and its and/or their work persons, servants and agents and is not assignable and the rights given in paragraph 1.1 above may only be exercised by the Infraco, its contractors and sub-contractors of any tier and its and/or their work persons, servants and agents.
2. The Infraco agrees and undertakes to **tie** that it shall (and shall procure that its sub-contractors shall):
 - 2.1 carry out the Infraco Works with the minimum disruption to neighbouring properties to the Depot;

- 2.2 use the Depot only for, and to the extent necessary for, the purposes of carrying out and performing the Infraco Works;
 - 2.3 keep the Depot as clean and tidy as practicable and not make any physical alterations thereto;
 - 2.4 provide cleaning, maintenance and access control services as required under Appendix 2 of this Licence;
 - 2.5 provide security services until the Service Commencement Date;
 - 2.6 not display any signs or notices at the Depot without the prior written consent of **tie**, (such consent to be at the **tie**'s absolute discretion);
 - 2.7 upon termination of the licence, make good any damage which the Infraco has caused to the Depot (fair wear and tear excepted) and remove all equipment and apparatus which it has brought into the Depot; and
 - 2.8 not cause unreasonable interference to the other users of the Depot.
3. The Infraco acknowledges that the Operator shall have responsibility for the co-ordination of health and safety issues at the Depot and the Infraco hereby agrees to comply with any instruction from the Operator in relation to health and safety issues at the Depot.

EXECUTED for and on behalf of **[INFRACO]**

at

on _____ 2008 by:

Authorised Signatory

Full Name

Witness Signature

Full Name

Address

APPENDIX 2

DEPOT RESPONSIBILITIES ALLOCATION MATRIX

See Schedule Part 2 (Employer's Requirements) Section 40 – Table 83 and Table 89



**THIS IS SCHEDULE PART 33 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRA CO**

SCHEDULE PART 33



BUILDING FIXING AGREEMENT

between

(1) [◆]

and

(2) [◆]

and

(3) TIE LIMITED

and

(4) CITY OF EDINBURGH COUNCIL

relating to

the affixing of building fixing apparatus in
respect of the Edinburgh Tram Network

upon

[insert Building address]

AGREEMENT

AMONG

- (1) ◆ ("Building Owner"); and
- (2) ◆ ("Infraco"); hereinafter referred to as "Infraco" which expression shall include its successors and assignees in terms of the Infraco Contract; and
- (3) **tie LIMITED**, a company incorporated in Scotland under number SC230949 and having its registered office at City Chambers, High Street, Edinburgh EH1 1YJ (hereinafter referred to as "**tie**", which expression shall include its successors, permitted assignees and transferees as CEC's agent in respect of the Edinburgh Tram Network); and
- (4) **THE CITY OF EDINBURGH COUNCIL**, constituted under the Local Government Etc. (Scotland) Act 1994 and having its principal office formerly at Council Headquarters, Wellington Court, Waterloo Place, Edinburgh, EH1 3EG and now at City Chambers, High Street, Edinburgh, EH1 3YJ (hereinafter referred to as "**CEC**", which expression shall include its statutory successors as authorised undertaker under the Tram Legislation)

BACKGROUND

- (A) CEC is empowered by Section 16 of each Act comprising the Tram Legislation to affix Apparatus to any building or structure as required in connection with the Edinburgh Tram Network subject to obtaining the consent of the owner (or failing that, the consent of the sheriff as appropriate);
- (B) **tie** is a wholly owned subsidiary of CEC and act as CEC's authorised agent in procuring the design, construction, installation, commissioning, maintenance and of the Edinburgh Tram Network;
- (C) **tie** has by virtue of the Infraco Contract appointed the Infraco to, subject to the terms of the Infraco Contract, inter alia design, construct and maintain the Edinburgh Tram Network and affix Apparatus to relevant buildings or structures;
- (C) The Building Owner is the heritable proprietor of the Building and has agreed to allow the Infraco to affix Apparatus to the Building, to allow the Apparatus to remain affixed to and supported by the Building and to occupy air space taken up by such Apparatus upon the terms set out below.

1. DEFINITIONS

1.1 In this Agreement, the following terms shall, unless the context otherwise requires, have the following meanings:

"**Agreement**" means this building fixing agreement and any written amendment thereto all as entered into between the parties hereto;

"**Apparatus**" means all and any brackets, cables, wires, insulators and other apparatus required to be affixed to the Building pursuant to the carrying out of the Infraco Works, and requiring to remain in place following completion of the Infraco Works to facilitate the effective operation of the tram such Apparatus being more particularly described in the Appendix to this Agreement;

"**Apparatus Ancillary Works**" means all works necessary to inspect, fix, use, maintain, repair, alter, protect, enlarge, renew, reinstate, replace, remove or dismantle the Apparatus from time to time;

"**Apparatus Attachment Works**" means all works necessary for the attachment of the Apparatus to the Building;

"**Building**" means [*details of the Building Owner's property*] shown for the purpose of identification only on the attached plan;

"**Consents**" means without limitation, all permissions, consents, approvals, non objections, certificates, permits, licences, agreements, statutory agreements and authorisations, Planning Permissions, temporary traffic regulation orders, building control approvals, building warrants, and all other necessary consents and agreements whether required by Law or the Tram Legislation or under contract;

"**Edinburgh Tram Network**" means the tramway which is authorised by the Tram Legislation;

"**Infraco Contract**" means the agreement dated [◆] 2008 between **tie** and the Infraco;

"**Infraco Works**" means all works carried out by the Infraco pursuant to the Infraco Contract, and in particular the attaching of apparatus to support OLE for the Edinburgh Tram Network and the regular maintenance of such apparatus;

"**OLE**" means the overhead lines forming part of the Edinburgh Tram Network;

"Planning Permission" means any planning permission, planning approval, approval of reserved matters, listed building consent and/or conservation areas consent;

"Repairs Notice" means a written notice specifying:

- (a) the anticipated commencement date for the Repair Works provided always that this shall be at least three months after the date on which the notice is served in order that the Infraco can make alternative arrangements to ensure that the Edinburgh Tram Network can continue to operate;
- (b) the anticipated completion date for the Repair Works;
- (c) the nature and extent of the Repair Works; and
- (d) those parts of the Apparatus which, in the reasonable opinion of the Building Owner, are required to be temporarily removed to enable the Repair Works to be effected;

"Repair Works" means any works of repair or redecoration intended to be carried out to the Building by the Building Owner which reasonably requires the temporary removal of the Apparatus to enable such works to be carried out;

"Redevelopment Notice" means a written notice specifying:

- (a) the anticipated commencement date for the Redevelopment Works provided always that this shall be not less than three months after the date on which the notice is served in order that the Infraco can make alternative arrangements to ensure that the Edinburgh Tram Network can continue to operate;
- (b) the anticipated completion date for the Redevelopment Works;
- (c) the nature and extent of the Redevelopment Works; and
- (d) those parts of the Apparatus which, in the reasonable opinion of the Building Owner, are required to be temporarily removed to enable the Redevelopment Works to be effected;

"Redevelopment Works" means works by the Building Owner to reconstruct, demolish or undertake major structural works which reasonably require the removal of the Apparatus from the Building; and

"Tram Legislation" means the Edinburgh Tram (Line One) Act 2006 and the Edinburgh Tram (Line Two) Act 2006 which received Royal Assent on 8 May 2006 and 27 April 2006.

2. THE GRANT

The Building Owner hereby:

- 2.1 grants to the Infraco, its agents, contractors, workmen and others employed or authorised by the Infraco the right to enter in and onto the Building (together with any necessary equipment including scaffolding) in order to:
 - 2.1.1 survey the Building and ascertain its suitability for the Apparatus Attachment Works and (as ancillary thereto) the right to examine all available drawings and information relating to the structure and condition of the Building which are in the possession or control of the Building Owner; and
 - 2.1.2 carry out and complete the Apparatus Attachment Works;
- 2.2 grants to the Infraco the right to carry out and complete the Apparatus Ancillary Works at all reasonable times and upon not less than 14 days notice; and
- 2.3 grants to the Infraco the right, notwithstanding the terms of Clause 2.2 to enter the Building at any time without giving notice in the case of emergency in order to carry out any works to the Apparatus authorised by this Agreement.

3. THE OBLIGATIONS OF THE INFRACO

- 3.1 In the exercise of the rights granted by Clause 2.1 above, the Infraco shall at all times:
 - (a) comply with the terms of all necessary Consents for the Apparatus Attachment Works and shall further comply with the provisions of the Tram Legislation and all other applicable legislation governing the exercise of such rights;
 - (b) carry out the Apparatus Attachment Works to the Building in a good and workmanlike manner and at its own expense;
 - (c) carry out all Apparatus Attachment Works in such a way as to use reasonable endeavours to minimise interference and inconvenience to the Building Owner; and

- (d) make good any damage caused to the Building by the Apparatus Attachment Works so far as reasonably practicable provided always that the Infraco shall not be required to make good any damage which is caused by or results from general deterioration or wear and tear to the Building which is not solely attributable to the Apparatus Attachment Works.

3.2 In the exercise of the rights granted by Clause 2.2 above, the Infraco shall at all times:

3.2.1 (subject to the Building Owner complying with its obligations under Clause 5 below) keep and maintain the Apparatus in good and safe working order and shall comply with all relevant health and safety legislation;

3.2.2 carry out all Apparatus Ancillary Works in such a manner as to use reasonable endeavours to minimise interference and inconvenience to the Building Owner;

3.2.3 make good any damage caused to the Building in the course of carrying out the Apparatus Ancillary Works so far as reasonably practicable provided always that the Infraco shall not be required to make good any damage which is caused by or results from general deterioration or wear and tear to the Building which is not solely attributable to the Apparatus Ancillary Works.

4. CEC INDEMNITY AND BUILDING OWNER'S REMEDIES

4.1 Subject to Clause 5 below, CEC hereby undertakes to the Building Owner to keep the Building Owner indemnified from and against any loss, damage, actions, claims, demands or liability suffered by the Building Owner and directly arising out of damage or destruction of the Building directly caused by the negligence of the Infraco.

4.2 The Building Owner accepts and agrees that Clause 4.1 shall be in lieu of any and all remedies which the Building Owner shall be or become entitled to against the Infraco.

4.3 Any rights, obligations and liabilities as between the Infraco, **tie** and CEC shall be dealt with in accordance with the Infraco Contract.

5. THE BUILDING OWNER'S OBLIGATIONS

5.1 The Building Owner hereby undertakes to CEC and separately undertakes to each of **tie** and the Infraco that the Building Owner will not either personally or by way of authorising,

causing, enabling or inviting third parties (including by way of illustration but not limitation tenants, sub-tenants, agents, contractors, sub-contractors, employees, maintenance persons and the like) to touch or otherwise damage or interfere with the Apparatus whilst it remains attached to the Building.

- 5.2 The Building Owner hereby accepts that neither the Infraco nor **tie** nor CEC shall be liable or responsible for loss, damage or injury caused or suffered by any person or property which arises as a result of a breach of the undertaking in Clause 5.1.

6. REPAIR WORKS

In the event that the Building Owner intends to carry out Repair Works:

- 6.1 the Building Owner shall serve a Repairs Notice on **tie**, the Infraco and CEC;
- 6.2 the Building Owner will carry out the Repair Works as expeditiously as possible;
- 6.3 the Infraco shall, subject to Clause 6.4 prior to the expiry of the notice period specified in the Repairs Notice (which, for the avoidance of doubt, will not be less than three months), remove such parts of the Apparatus as are specified in the Repairs Notice;
- 6.4 the Infraco shall be entitled, as required, to support the OLE at that location by erecting a temporary pole provided that the Infraco has obtained necessary Consents in relation thereto which the Infraco shall use reasonable endeavours to obtain as expeditiously as possible. The Infraco's obligations under Clause 6.3 shall not apply unless and until such Consents have been granted;
- 6.5 the Building Owner shall immediately upon completion of the Repair Works in respect of which the Repairs Notice was served notify the Infraco and CEC and shall afford the Infraco such rights and facilities as are required to remove the temporary pole and reinstate the Apparatus removed under this Clause 6;
- 6.6 service of a Repairs Notice shall amount to a temporary modification of the provisions of this Agreement only and shall not terminate or prejudice the continuing effect of this Agreement; and
- 6.7 the Building Owner undertakes that in the event that the Building Owner serves a Repairs Notice upon the Infraco, **tie** and CEC in accordance with Clause 6.1, it or any third party acting on the Building Owner's behalf will not make any objection to the erection of a

temporary pole or other means of support for the OLE necessitated by the temporary removal of the Apparatus from the Building.

7. REDEVELOPMENT WORKS

7.1 In the event that the Building Owner:

7.1.1 intends to carry out Redevelopment Works; and

7.1.2 has obtained all necessary Planning Permissions and other Consents for those Redevelopment Works;

the Building Owner shall serve a Redevelopment Notice upon the Infraco, **tie** and CEC, enclosing copies and details of such necessary Planning Permissions and other Consents.

7.2 The Infraco shall subject to Clause 7.3 prior to the expiry of the notice period given in the Redevelopment Notice (which, for the avoidance of doubt, will not be less than three months), remove the Apparatus from the Building.

7.3 The Infraco shall be entitled as required to support the OLE at that location by erecting a temporary pole provided that Infraco has obtained the necessary Consents in relation thereto which the Infraco shall use reasonable endeavours to obtain as expeditiously as possible. The Infraco's obligations under Clause 7.2 shall not apply unless and until such Consents have been granted.

7.4 The Building Owner shall carry out the Redevelopment Works as expeditiously as possible and shall, immediately upon completion of the Redevelopment Works in respect of which the Redevelopment Notice was served, notify the Infraco, **tie** and CEC and shall afford the Infraco such rights and facilities as are required to remove the temporary pole and to reinstate the Apparatus removed under this Clause 7.

7.5 Service of the Redevelopment Notice shall amount to a temporary modification of the provisions of this Agreement only and shall not terminate or prejudice the continuing effect of this Agreement.

7.6 The Building Owner undertakes that in the event that the Building Owner serves a Redevelopment Notice upon the Infraco, **tie** and CEC in accordance with Clause 7.1, it or any third party acting on the Building Owner's behalf will not make any objection to the erection

of a temporary pole or other means of support for the OHLE necessitated by the temporary removal of the Apparatus from the Building.

8. HERITABLE CREDITORS AND OTHERS

The Building Owner hereby warrants that it is the heritable proprietor of the Building (or its part of the Building) and that it has obtained all relevant Consents relating to the Building (or its part of the Building) from any heritable creditor or other parties with an interest in the Building (or relevant part thereof) at the date of the Building Owner's execution of this Agreement.

9. NOTICES

All notices in relation to this Agreement shall be sent by recorded delivery or delivered by hand to the parties at their respective addresses given above or as otherwise notified to each other from time to time in writing.

10. STEP-IN

10.1 From the date of termination, disposal or expiry of the Infraco Contract, CEC shall undertake the rights and obligations of the Infraco in relation to this Agreement.

10.2 From the date of termination, disposal or expiry of the Infraco Contract referred to under Clause 10.1, this Agreement shall continue and:

10.2.1 the Building Owner shall, where it owes obligations to the Infraco under this Agreement, owe such obligations to CEC; and

10.2.2 CEC shall assume the rights and obligations of the Infraco under this Agreement, but without prejudice to any liability of the Infraco or CEC to the Building Owner arising prior to the date of the termination, disposal or expiry of the Infraco Contract referred to under Clause 10.1.

11. ASSIGNATION

11.1 Neither the Infraco nor the Building Owner may assign, novate or otherwise transfer the whole of any part of the Agreement without the prior written agreement of the other parties to the this Agreement (not to be unreasonably withheld or delayed).

11.2 Both **tie** and CEC may assign, novate or transfer their part in this Agreement, with such assignation, novation or transfer becoming effective on notice being issued to the other parties to this Agreement in accordance with its terms.

12. ALIENATION BY BUILDING OWNER

In the event of the Building Owner alienating (whether by sale, lease or otherwise) its interest in the Building, in whole or in part, it shall:

12.1 Take the person to whom such whole or part interest is alienated bound (and that expressly for the benefit of the Infraco, **tie** and CEC) to enter into an agreement with the Infraco, **tie** and CEC in terms mutatis mutandis with the terms of this Agreement; and

12.2 Immediately notify the Infraco, **tie** and CEC of the nature and extent of such alienation and the name and address of the person to whom such alienation has been made.

13. VARIATIONS

No variation or alteration of any of the provisions of this Agreement shall be effective unless it is in writing and signed by all parties to this Agreement.

14. THIRD PARTY RIGHTS

Subject to any other express provisions of this Agreement, a person who is not a party to this Agreement shall have no right to enforce any term of this Agreement. There shall not be created by this Agreement a jus quaesitum tertio in favour of any party whatsoever.

15. APPLICABLE LAW

15.1 This Agreement and any matters arising from this Agreement shall be governed by and construed in accordance with Scots Law.

15.2 The parties hereto irrevocably submit to the exclusive jurisdiction of the Scottish Courts in relation to this Agreement and any matters arising from this Agreement.

IN WITNESS WHEREOF



**THIS IS SCHEDULE PART 34 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 34



(1) tie LIMITED

- and -

(2) BILFINGER BERGER (UK) LIMITED

- and -

(3) SIEMENS plc

- and -

(4) [TRAM INSPECTOR]

APPOINTMENT OF TRAM INSPECTOR

**RELATING TO THE EDINBURGH
TRAM NETWORK**

AGREEMENT

BETWEEN

- (1) **tie LIMITED** a company registered in Scotland under company number SC230949 whose registered office is at City Chambers, High Street, Edinburgh, Midlothian EH1 1YL ("**tie**") and which expression shall include its successors and permitted assignees;
- (2) **BILFINGER BERGER UK LIMITED**, a company incorporated in England and Wales under number 02418086 and having its registered office at 150 Aldersgate Street, London EC1A 4EJ which expression shall include its successors, permitted assignees and transferees; and
- (3) **SIEMENS PLC**, a company incorporated in England and Wales under number 00727817 and having its registered office at Faraday House, Sir William Siemens Square, Frimley, Camberley, Surrey GU16 8QD which expression shall include its successors, permitted assignees and transferees,

(Bilfinger Berger UK Limited and Siemens Plc together "**the Infraco**" and each separately an "**Infraco Member**"); and

- (4) [◆] a company registered in [◆] under company number [◆] whose registered office is at [◆] ("**Tram Inspector**") or such other person duly appointed pursuant to the terms of this Agreement.

BACKGROUND

- A **tie** has appointed the Tram Supplier for the provision of tram vehicles on the terms of the Tram Supply Agreement.
- B **tie** has appointed the Infraco to be responsible for the carrying out and/or managing a comprehensive turnkey contract including the design, construction, installation, commissioning, tram procurement, system integration, infrastructure maintenance, tram maintenance and supply of related equipment and materials, trams and related infrastructure in relation to the Edinburgh Tram Network.
- C The terms of the Tram Supply Agreement require the appointment of a Tram Inspector for certification purposes.
- D Accordingly, **tie**, the Infraco and the Tram Inspector have agreed to enter into this Agreement for the purposes of setting out the terms upon which the Tram Inspector is appointed.

IT IS AGREED AS FOLLOWS:

1. DEFINITIONS AND INTERPRETATION

"**Agreement**" means Clauses 1 to 17 (inclusive) together with the Schedules all as may be amended from time to time in accordance with this Agreement;

"**Certificate**" means a Certificate of Tram Delivery, Certificate of Tram Commissioning, Tram Commissioning Type Test Certificate, Tram Rejection Notice, Factory Acceptance Type Test Certificate and Factory Acceptance Routine Test Certificate, each as defined in the Tram Supply Agreement;

"**Director**" means the person named in Schedule 1 or such replacement person appointed in accordance with clause 4.2;

"**Documents**" means all technical information (whether or not stored in computer systems), drawings, models, bills of quantities, specifications, schedules, details, plans, programmes, budgets, reports, calculations or other documents whatsoever provided or to be provided by the Tram Inspector in connection with the Edinburgh Tram Network;

"**Edinburgh Tram Parties**" means any of **tie**, the Infraco, SDS Provider, Tram Supplier, Tram Maintainer, and any contractors, agents, sub-contractors, professional advisers or consultants engaged by such parties to perform, facilitate or assist with the performance of any design, works, supplies, services and activities to be performed for the purposes of the Edinburgh Tram Network and its or their sub-contractors of any tier and its or their directors, officers, employees and workmen in relation to the Edinburgh Tram Network and "**Edinburgh Tram Party**" shall be construed accordingly;

"**Fee**" means the amounts stated in Clause 5 payable to the Tram Inspector in consideration of the performance of the Tram Inspection Services;

"**Final Date for Payment**" has the meaning ascribed to it in clause 5.4;

"**Infraco Contract**" means the agreement and schedules (including any variation or replacement of such agreement from time to time) entered into between **tie** and the Infraco or the operation and maintenance of the Edinburgh Tram Network;

"**Party**" means a party to this Agreement and "Parties" shall be construed accordingly;

"**Schedules**" means Schedule 1, Schedule 2 and Schedule 3 as the same may be amended from time to time in accordance with the terms of this Agreement;

"Statutory Requirements" means the requirements of any present or future legislation as apply from time to time in respect of the works and/or the services and/or any other obligations of the Tram Inspector under this Agreement;

"Tram Inspection Services" means the services to be performed by the Tram Inspector in connection with the Edinburgh Tram Network as set out in the body of this Agreement;

"Trams" means the Trams to be designed, manufactured, engineered, fitted out, equipped, installed and delivered by the Tram Supplier in accordance with the Tram Supply Agreement;

"Tram Supplier" means the party contracted under the Tram Supply Agreement to design, manufacture, engineer, supply, test, commission, deliver and provide an initial fleet of 27 Trams for the Edinburgh Tram Network.

"Tram Supply Agreement" means the agreement entered into between **tie** and the Tram Supplier for the supply of Trams for the Edinburgh Tram Network;

"Works" means the works to be performed by the Infraco in accordance with the Infraco Contract;

- 1.1 The clause headings in this Agreement are for the convenience of the Parties only and do not affect its interpretation.
- 1.2 Words importing the singular meaning include the plural meaning and vice versa.
- 1.3 Words denoting the masculine gender include the feminine and neuter genders and words denoting natural persons include corporations and firms and all such words shall be construed interchangeably in that manner.
- 1.4 Reference in this Agreement to a clause or Schedule or Appendix are to a clause or Schedule or Appendix of this Agreement unless otherwise specified.
- 1.5 Reference in this Agreement to any statute or statutory instrument includes and refers to any statutory amendment or re-enactment thereof from time to time and for the time being in force.
- 1.6 Terms used in this Agreement that are defined in the Tram Supply Agreement shall have the respective meanings given to them in the Tram Supply Agreement save where otherwise expressly defined herein.

2. APPOINTMENT OF TRAM INSPECTOR

- 2.1 **tie** and the Infraco hereby appoint and the Tram Inspector hereby agrees to perform the Tram Inspection Services.
- 2.2 **tie** and the Infraco shall act in good faith towards the Tram Inspector at all times.
- 2.3 The Tram Inspector shall perform the Tram Inspection Services which shall consist of all services and obligations to be carried out by the Tram Inspector pursuant to the Tram Supply Agreement.
- 2.4 Without prejudice to the other provisions of this clause 2, the role of the Tram Inspector in relation to the Tram Supply Agreement shall be, without limitation, to:
 - 2.4.1 inspect the Trams, component parts of Trams and the method of manufacture of the Trams and component parts of Trams before they are despatched to the Depot pursuant to clauses 28.3 of the Tram Supply Agreement;
 - 2.4.2 review quality control reports produced by the Tram Supplier in accordance with 28.2.3 of the Tram Supply Agreement;
 - 2.4.3 issue Factory Acceptance Type Test Certificates and Factory Acceptance Routine Test Certificates for each Tram pursuant to clause 28.4 and 28.5 of the Tram Supply Agreement;
 - 2.4.4 issue a Certificate of Tram Delivery in accordance with the provisions of clause 30.3.2 of the Tram Supply Agreement;
 - 2.4.5 issue a Tram Rejection Notice where necessary pursuant to the provisions of clauses 28.6, 31.10 and 32.1 of the Tram Supply Agreement;
 - 2.4.6 attend the Site Commissioning Type Tests pursuant to clause 31.9 of the Tram Supply Agreement;
 - 2.4.7 attend the Site Commissioning Routine Tests pursuant to clause 31.7.2 of the Tram Supply Agreement;
 - 2.4.8 issue the Certificate of Tram Commissioning in accordance with the provisions of clause 31.8 of the Tram Supply Agreement;
 - 2.4.9 issue a Tram Commissioning Type Test Certificate in accordance with the provisions of clause 31.9 of the Tram Supply Agreement;

2.4.10 consider and if appropriate approve any rectification plan under clause 32.2, 32.3, 32.3.3 and 31.10 and issue a Certificate of Tram Commissioning where appropriate;

2.4.11 review Potential Relief Event Notices in accordance with clause 47.1 of the Tram Supply Agreement.

3. TRAM INSPECTOR'S DUTIES

3.1 The Tram Inspector shall perform, and has performed to the extent work has been carried out prior to the execution of this Agreement, the Tram Inspection Services fully and faithfully upon and subject to the provisions of this Agreement and the Tram Inspector acknowledges that **tie** and the Infraco are relying and will continue to rely on the professional skill and care of the Tram Inspector in the performance of the Tram Inspection Services and that he owes a duty of care to each of **tie** and the Infraco in relation thereto.

3.2 Where, in the performance of the Tram Inspection Services, the Tram Inspector is required to exercise a discretion as between the Counterparties and/or any third party, the Tram Inspector shall at all times act objectively and impartially and shall in no circumstances place the interests of any one party above those of any other party including any third party. The Tram Inspector shall act in good faith.

3.3 Where, in the performance of the Tram Inspection Services, the Tram Inspector seeks or is obliged to seek the approval or agreement of **tie** or the Infraco to any matter or issue, the giving or confirming of the same shall not in any way derogate from the Tram Inspector's obligations under this Agreement nor diminish any liability on his part for breach of such obligations and no enquiry, inspection, comment, consent, decision or instruction at any time made or given by or on behalf of **tie** or the Infraco shall operate to exclude or limit the obligations of the Tram Inspector to exercise all the skill care and diligence required by this clause or to comply with the obligations contained in this Agreement.

3.4 The Tram Inspector warrants to **tie** and the Infraco jointly and severally that it has exercised and will continue to exercise, in the performance of the Tram Inspection Services and all its duties hereunder, all the reasonable skill, care, diligence, prudence and foresight as may reasonably be expected of a suitably qualified and competent professional Tram Inspector rendering the Tram Inspection Services and experienced in projects of a similar size, scope and complexity as the Edinburgh Tram Network.

- 3.5 The Tram Inspector further warrants to **tie** and the Infraco severally that in the provision of the Tram Inspection Services he will comply with all Statutory Requirements and, without limiting the generality of the foregoing, have due and proper regard to:
- 3.5.1 the Construction (Design and Management) Regulations 2007; and
 - 3.5.2 the approved code of practice "Managing Construction for Health & Safety" produced by the Health & Safety Executive as amended from time to time
- and shall comply with directions, instructions or requests relating to or in pursuance of the same given or made by **tie**.
- 3.6 **tie** and the Infraco shall procure that the Tram Inspector has immediate access to the necessary sites as he may reasonably require for the purposes of carrying out the Tram Inspection Services and all purposes ancillary or related to this Agreement.
- 3.7 In the performance of the Tram Inspection Services the Tram Inspector shall have full regard to any relevant requirements and/or obligations of the Tram Supply Agreement copies or relevant extracts of which the Tram Inspector acknowledges it has received and shall perform the Tram Inspection Services in such manner and at such times that no act, omission or default of the Tram Inspector in relation thereto shall constitute or cause any breach by **tie** and/or the Tram Supplier of any such requirements and/or obligations.
- 3.8 Without prejudice to clause 3.7 the Tram Inspector shall:
- 3.8.1 liaise and co-operate with **tie** and the Infraco and provide each of them with all such information in relation to the Edinburgh Tram Network as they may from time to time reasonably require promptly and in good time so as not to delay or disrupt the progress of the Edinburgh Tram Network or cause **tie** and the Infraco to be in breach of any of their respective obligations under the Tram Supply Agreement;
 - 3.8.2 in particular subject to clause 3.8.4 but without limitation, in determining whether to issue a Certificate, the Tram Inspector shall take account of the requirements of the Tram Supply Agreement in respect of certification of the Trams;

- 3.8.3 give to **tie** and the Infraco (as appropriate) not less than 2 Business Days prior notice of his intention to issue any Certificate (or such shorter period as set out in the Tram Supply Agreement);
- 3.8.4 have due regard to any written representations made to him by either **tie** and/or the Tram Supplier, (the Party making the representation having previously sent the others a copy), in respect of any matter connected with the Tram Supply Agreement, provided that nothing in clause 3.7 shall in any way fetter the discretion of the Tram Inspector (acting in accordance with the requirements of the Tram Supply Agreement and his obligations under this Agreement) as to whether any Certificate should properly be issued; and
- 3.8.5 provide copies of any Certificate to **tie** and the Infraco forthwith upon their issue.
- 3.9 The decision of the Tram Inspector with respect to the issue of a Certificate, and any matters referred to in the other clauses of the Tram Supply Agreement listed in the Tram Inspection Services shall be final and binding subject only to the terms of the Tram Supply Agreement.
- 3.10 The Tram Inspector acknowledges that nothing contained in this Agreement shall detract from or prejudice his liability in delict to **tie** or the Infraco.
- 3.11 The Tram Inspector shall only be liable under this Agreement in respect of claims whether made in contract or in delict which are notified in writing to the Tram Inspector before the expiration of the later of twelve years from the date on which the last professional service is performed by the Tram Inspector under the terms of this Agreement or twelve years from such earlier date if this Agreement is to be terminated in accordance with its provisions.
- 3.12 The Tram Inspector shall not make or purport to make any alteration or addition to or omission from the design of the Edinburgh Tram Network (including, without limitation, the setting of performance standards) or issue any instruction or direction to any Edinburgh Tram Party, sub-contractor or professional consultant employed or engaged in connection with the Edinburgh Tram Network or consent or agree to any waiver or release of any obligation of any Edinburgh Tram Party or **tie** under the Tram Supply Agreement or of any professional consultant employed or engaged by any Edinburgh Tram Party, in connection with the Edinburgh Tram Network and hereby undertakes to perform all its duties under this Agreement in accordance with

the requirements and objectives of **tie** and the Infraco as set out in the Tram Supply Agreement.

- 3.13 **tie** may, by notice given by **tie**, and consented to by the Tram Supplier and the Infraco, to the Tram Inspector suspend the activities of the Tram Inspector for a period previously agreed or determined by **tie** and the Tram Supplier and Infraco which may be for a period not exceeding 6 consecutive months without giving rise to rights of termination to each Party.

4. TRAM INSPECTOR'S PERSONNEL

- 4.1 The Tram Inspector shall forthwith appoint the Director to direct and control the overall performance by the Tram Inspector of the Tram Inspection Services and act as the primary contact and liaison with **tie** and the Infraco. Such person or any replacement approved by **tie** and the Infraco pursuant to clause 4.2 from time to time shall have full authority to act on behalf of the Tram Inspector for all purposes in connection with this Agreement.

- 4.2 The Tram Inspector shall not replace the Director nor any person approved by **tie** and the Infraco pursuant to this clause 4 without the prior written approval of **tie** and the Infraco (which approval shall not be unreasonably withheld or delayed) as to the fact and identity of such replacement and if such approval is given the identity of the replacement must be previously approved in writing by **tie** and the Infraco.

5. REMUNERATION

- 5.1 In full consideration of performance of the Tram Inspection Services in accordance with this Agreement, **tie** shall pay by instalments to the Tram Inspector the Fee in accordance with this clause 5 and, for the avoidance of doubt, payment thereof shall constitute full reimbursement to the Tram Inspector of all costs, losses, expenses, overheads or profits suffered, incurred or earned, as the case may be, by the Tram Inspector in respect of the performance of its obligations under this Agreement, whenever they are performed.

- 5.2 The Tram Inspector may submit an invoice for payment of an instalment to **tie** at the address set out in clause 16.1 (*Notices*) and marked for the attention of the person identified in clause 16.1 on or after the occurrence of the event(s) as reasonably agreed by **tie** and the Infraco. The Fee is inclusive of all disbursements, including inter alia, travel, photocopying and printing, accommodation, save as expressly

provided in Schedule 3 but exclusive of any applicable Value Added Tax at the rate from time to time in force which shall be additionally payable by **tie**, together with the appropriate Fee.

5.3 Any sum properly included in an invoice submitted under and in accordance with this clause 5 shall become due on the date 30 days after the end of the month following the month in which the invoice is received by **tie**.

5.4 The final date for the making of any payment of any sum due pursuant to this Agreement shall be 28 days after the sum becomes due under the terms of this Agreement ("**the Final Date for Payment**"). Subject to clause 5.5, **tie** may (without prejudice to any other right or remedy which **tie** or the Infraco may have under or arising from or pursuant to this Agreement, any other agreement or statute, at common law or otherwise) deduct or withhold from any money otherwise due to the Tram Inspector under or pursuant to this Agreement any sum or sums for which the Tram Inspector is liable to **tie** or the Infraco under, arising from or pursuant to this Agreement or statute or at common law.

5.5 Not later than five days after the date on which any sum becomes due or would have become due to the Tram Inspector pursuant to this Agreement if:

5.5.1 the Tram Inspector had carried out its obligations under this Agreement; and

5.5.2 no set-off or abatement was permitted by reference to any sum claimed,

tie shall give notice to the Tram Inspector specifying the amount (if any) of the payment made or proposed to be made and the basis on which that amount is calculated.

5.6 If **tie** intends to withhold payment of any sum due to the Tram Inspector under this Agreement pursuant to clause 5.4, **tie** shall give the Tram Inspector notice not later than seven days prior to the Final Date for Payment specifying:

5.6.1 the amount proposed to be withheld and the ground for withholding payment;
or

5.6.2 if there is more than one ground, each ground and the amount attributable to it.

5.7 **tie** shall pay to the Tram Inspector upon receipt of a valid vat invoice, the total amount of Value Added Tax at the rate from time to time in force properly chargeable by the Tram Inspector on the supply by the Tram Inspector of any goods or services under this Agreement.

6. PROFESSIONAL INDEMNITY INSURANCE

6.1 Without prejudice to his other obligations under this Agreement or otherwise at law, the Tram Inspector confirms that it has professional indemnity insurance and shall maintain professional indemnity insurance with reputable insurers or underwriters carrying on business within the European Union from the commencement of Tram Inspection Services and for a period expiring no earlier than twelve (12) years after the completion of the Tram Inspection Services and notwithstanding the termination for any reason of the Tram Inspector's engagement under this Agreement, shall maintain such professional indemnity insurance to cover each and every claim or series of claims consequent upon or attributable to the same cause or original source which he may incur under this Agreement, with a limit of indemnity of not less than ten million pounds (£10,000,000) in respect of each and every claim or series of claims as aforesaid, provided always that such insurance continues to be available to it in the European Union insurance market upon reasonable terms and at commercially reasonable premium rates and (for the avoidance of doubt) provided further that payment of any increased or additional premiums required by insurers by reason of the Tram Inspector's own claims record or other acts omission matters or things peculiar to the Tram Inspector will be deemed to be within the Tram Inspector's obligation.

6.2 As and when he is reasonably required to do so, the Tram Inspector shall produce for inspection by **tie** or the Infraco documentary evidence that the insurance required by clause 6.1 is being properly maintained subject to the same not constituting a breach of the terms of such insurance.

6.3 The Tram Inspector shall forthwith notify **tie** and the Infraco if the insurance required by clause 6.1 ceases to be available upon reasonable terms and at commercially reasonable premium rates or if for any other reason the Tram Inspector is unable to continue to maintain such insurance or if they become aware that such insurance may cease to be available and (in this event) shall take all such steps as may be required by **tie** in order to obtain alternative insurance and shall in any event continue to maintain

insurance upon such terms and with such a limit of indemnity as may then be available to it.

- 6.4 The Tram Inspector shall not compromise, settle or waive any claim which he may have under such insurance in respect of any professional liability which he may incur under this Agreement without the prior written consent of **tie** and the Infraco.

7. CONFIDENTIALITY

7.1 The Tram Inspector shall not, at all times during the period of his engagement hereunder (save in the proper course of his duties or as may be required by law or any regulatory authority) and at any time after its expiry or termination for any reason, disclose to any person nor otherwise make use of any confidential information (including, but without limitation, information relating to methods and techniques of construction for the Edinburgh Tram Network and financial information relating to the Edinburgh Tram Network) of which he has or may in the course of his engagement hereunder become aware relating to the Edinburgh Tram Network, **tie**, the Infraco or otherwise, nor shall he disclose to any person whatsoever (save as aforesaid or to his insurance or professional advisers) anything contained in this Agreement, without the prior written consent of **tie** and the Infraco.

7.2 The Tram Inspector shall comply with its obligations under the Data Protection Act 1998 and other applicable legal requirements in respect of such data.

8. ASSIGNATION AND SUB-LETTING

8.1 The Tram Inspector shall not assign this Agreement or any part thereof nor any right arising hereunder to any person without the prior written consent of **tie** and the Infraco and only then on terms expressly approved in writing by **tie** and the Infraco and subject to the Tram Inspector's obligations under this Agreement remaining in full force and effect.

8.2 The Tram Inspector shall not without the prior written consent of **tie** and the Infraco as to the identity and terms of appointment of any sub-consultant sub-contract the performance of any of the Tram Inspection Services and where **tie** and the Infraco give consent to the Tram Inspector sub-contracting any of its duties pursuant to this clause 8.2:

8.2.1 the Tram Inspector shall be responsible for the breaches acts omissions negligence and/or other default of any sub-consultant its agents or employees

appointed by the Tram Inspector as fully as if they were the breaches, acts, omissions, negligence and/or other defaults of the Tram Inspector its agents or employees and such sub-contracting shall not modify release diminish or in any way effect the liabilities and/or obligations of the Tram Inspector under this Agreement and/or at law or otherwise; and

8.2.2 the remuneration payable to the Tram Inspector in accordance with clause 5 shall not be increased by any amount payable to the Tram Inspector or its sub-consultants; and

8.2.3 the Tram Inspector shall procure from any sub-consultant engaged by the Tram Inspector for the performance of the Tram Inspection Services a collateral warranty in the form, set out in Schedule 2 in favour of **tie** and the Infraco.

8.3 **tie** and the Infraco may at any time assign, charge or transfer their respective interests in this Agreement to any person upon notice to the Tram Inspector.

9. TERMINATION OF TRAM INSPECTOR ENGAGEMENT BY TIE

9.1 In the event of a material breach by the Tram Inspector of his obligations under this Agreement which he either fails to remedy or continues, within 14 working days from receipt of written notice **tie** specifying the breach and requiring its remedy, **tie** or the Infraco (with the consent of **tie** such consent not to be unreasonably withheld or delayed) may then on, or within 10 days from the expiry of that 14 day period by a further written notice to the Tram Inspector terminate the Tram Inspector's engagement under this Agreement. Such termination shall take effect on the date of receipt of such further notice.

9.2 Alternatively, **tie** may give 20 working days written notice to the Tram Inspector of their intention to bring to an end the performance of any divisible part of the Tram Inspection Services. The termination of such part of the Tram Inspection Services shall take effect on the date of receipt by the Tram Inspector of a further written notice confirming such termination. The Tram Inspector shall have no right of objection.

10. TERMINATION OF TRAM INSPECTOR'S ENGAGEMENT BY TRAM INSPECTOR

In the event of a material breach by any one or more of **tie** or the Infraco of its or their obligations under this Agreement which it or they, as appropriate, shall fail to remedy within

28 days from receipt of written notice from the Tram Inspector (such notice to be copied simultaneously to the other Party) specifying the breach and requiring its remedy, the Tram Inspector may then on, or within 10 days from, the expiry of that 28 days by a further notice to **tie** and the Infraco forthwith terminate his engagement under this Agreement. Such termination shall take effect on the date of receipt of such further notice.

11. CONSEQUENCES OF TERMINATION OF TRAM INSPECTOR'S ENGAGEMENT

11.1 Upon any termination of the Tram Inspector's engagement under clause 9 or clause 10, the Tram Inspector shall be relieved of his obligation to continue with the performance of the Tram Inspection Services and shall take immediate steps to bring to an end the Tram Inspection Services in an orderly manner but with all reasonable speed, economy and with due regard to the ongoing obligations and responsibilities of the other parties and shall within 14 days deliver to **tie** and the Infraco copies of all Documents, reports, photographs, minutes of meetings and other documents prepared or in the course of preparation by the Tram Inspector in connection with the Edinburgh Tram Network and (in the event that a replacement firm has been appointed to complete the performance of the Tram Inspection Services) shall cooperate fully with such replacement to the extent that it is reasonable to do so.

11.2 Upon any termination of the Tram Inspector's engagement howsoever arising, **tie** or the Infraco shall not be liable to the Tram Inspector for any loss of profit, loss of contracts or other consequential costs, losses and/or expenses arising out of or in connection with such termination.

11.3 Termination of the Tram Inspector's engagement howsoever arising shall be without prejudice to the rights and remedies of any Party in relation to any negligence, omission or default of any other Party prior to such termination.

11.4 The provisions of this Agreement shall continue to bind the Parties insofar as and for as long as may be necessary to give effect to their respective rights and obligations hereunder.

12. VARIATION, WAIVER AND ENTIRE AGREEMENT

12.1 All additions, amendments and variations to this Agreement shall be binding only if in writing and signed by the duly authorised representative of each Party.

12.2 No waiver by any Party of any default or defaults by any other Party in the performance of any of the provisions of this Agreement shall operate or be construed

as a waiver of any other or further default or defaults whether of a like or different character.

- 12.3 This Agreement supersedes any previous agreement or arrangement between the Parties in respect of the Tram Inspection Services (whether oral or written) and represents the entire agreement between the parties in relation thereto.
- 12.4 Notwithstanding the date of this Agreement, it shall have effect as if it had been executed upon the actual commencement of the Tram Inspection Services by the Tram Inspector.
- 12.5 Subject to any other express provision of this Agreement, a person who is not Party to this Agreement shall have no right to enforce any term of this Agreement.

13. DOCUMENTS

- 13.1 Copyright in the Documents shall remain vested in the Tram Inspector and subject thereto, the Tram Inspector hereby grants to **tie** and the Infraco an irrevocable non-exclusive royalty free licence (for the avoidance of doubt such licence to remain in full force and effect notwithstanding determination of the Tram Inspector's appointment for whatever reason or any dispute hereunder) to copy and use the Documents and to reproduce the information, programmes and schedules contained in the Documents for all purposes related to the Edinburgh Tram Network including but without limitation, to the construction completion reconstruction alteration extension maintenance letting promotion advertisement reinstatement use and repair of the Edinburgh Tram Network or **tie** or the Infraco interests in it and **tie** and the Infraco shall be entitled to grant sub-licences on terms equivalent to the provision of this clause 13.1 and **tie** or the Infraco's licence and such sub-licence shall be transferable to the other without charge.
- 13.2 The Tram Inspector shall provide to **tie** or the Infraco within 14 Working Days of any written request and subject to payment of its reasonable costs, in such manner and form as is reasonably requested, such additional copies of all or any of the Documents as are reasonably required by **tie** or the Infraco beyond those required for the construction and completion of the Edinburgh Tram Network and shall provide such additional information and co-operation as is reasonably required in connection with the same.

13.3 Where any rights are vested in the Tram Inspector by virtue of Chapter IV (Moral Rights) of Part 1 of the Copyright Designs and Patents Act 1988 the Tram Inspector hereby irrevocably waives any such rights in relation to the Edinburgh Tram Network or any part thereof and to any Documents and shall obtain a written waiver from its employees from time to time of any rights that may have in respect of the same.

14. CUMULATIVE RIGHTS AND ENFORCEMENT

14.1 Any rights and remedies provided for in this Agreement whether in favour of **tie**, the Infraco, or the Tram Inspector are cumulative and in addition to any further rights or remedies which may otherwise be available to those Parties.

14.2 The duties and obligations of the Tram Inspector arising under or in connection with this Agreement arise to **tie** and the Infraco jointly and severally and **tie** and the Infraco may accordingly enforce the provisions hereof and pursue the prospective rights hereunder in their own name, whether separately or with each other.

14.3 **tie** and the Infraco covenant with each other that they will not waive any rights, remedies or entitlements or take any other action under this Agreement that would or might reasonably be expected to adversely affect the rights, remedies or entitlements of the other Party without the other Party's prior written consent, such consent not to be unreasonably withheld or delayed.

15. SEVERANCE

If any provision of this Agreement shall be declared invalid, unenforceable or illegal, such invalidity, unenforceability or illegality shall not prejudice or affect the validity, enforceability or legality of the remaining provisions of this Agreement.

16. NOTICES

16.1 Any demand, notice or other communication given in connection with or required by this Agreement shall be made in writing (entirely in the English language) and shall be delivered to, or sent by pre-paid first class post to, the recipient at its registered office or its address stated in this Agreement (or such other address as may be notified in writing from time to time) or sent by facsimile transmission to, for each Party, the facsimile number set out below, and unless otherwise expressly stated in this Agreement marked for the attention of the person set out below:

16.1.1 in the case of **tie**:

16.1.1.1 facsimile *[NUMBER]*;

16.1.1.2 for attention of: *[Representative]*

16.1.2 in the case of the Infraco:

16.1.2.1 facsimile *[NUMBER]*;

16.1.2.2 for attention of: *[Representative]*

16.1.3 in the case of the Tram Inspector:

16.1.3.1 facsimile *[NUMBER]*;

16.1.3.2 for attention of: *[Representative]*

16.2 Any such demand, notice or communication shall be deemed to have been duly served:

16.2.1 if delivered by hand, when left at the proper address for service; or

16.2.2 if given or made by pre-paid first class post, 2 Working Days after being posted; or

16.2.3 if sent by facsimile, on the day of transmission provided that a confirmatory copy is on the same day that the facsimile is transmitted, sent by pre-paid first class post in the manner provided for in this clause 16.2,

provided in each case that if the time of such deemed service is either after 4.00 pm on a working Day or on a day other than a Business Day service shall be deemed to occur instead at 10.00 am on the next following Business Day.

17. GOVERNING LAW AND JURISDICTION

17.1 This Agreement, any document completed or to be completed in accordance with its provisions and any matter arising from it or any other such document shall be governed by and construed in accordance with the laws of Scotland.

17.2 The Parties hereby irrevocably submit to the exclusive jurisdiction of the Court of Session in relation to this Agreement, any such document and any such matter.

IN WITNESS WHEREOF these presents on this and the preceding [◆] pages together with Schedules 1 to 3 (inclusive) which are annexed and signed as relative hereto are executed as follows:

EXECUTED for and on behalf of **TIE LIMITED** at

on 2008 by:

Authorised Signatory _____
Full Name _____
Witness Signature _____
Full Name _____
Address _____

EXECUTED for and on behalf of **BILFINGER BERGER UK LIMITED**

at

on 2008 by:

Director _____
Full Name _____
Director _____
Full Name _____

EXECUTED for and on behalf of **SIEMENS PLC** at

on 2008 by:

Authorised Signatory _____
Full Name _____
Authorised Signatory _____
Full Name _____

EXECUTED for and on behalf of

[TRAM INSPECTOR] at

on _____ 2008 by:

Authorised Signatory

Full Name

Witness Signature

Full Name

Address

SCHEDULE 1

Director: []
TEL:
FAX:
EMAIL:
MOBILE:

SCHEDULE 2

Form of Collateral Warranty

[
(the "Sub-Consultant")]

and

[TIE/INFRACO]
(the "Beneficiary")

SUB-CONSULTANT'S COLLATERAL WARRANTY
relating to the provision of Tram Inspector Services in respect of the
EDINBURGH TRAM NETWORK

AGREEMENT

BETWEEN:

- (1) []
(the "**Sub-Consultant**"); and
- (2) [TIE/INFRACO] whose registered office is at [] (the "**Beneficiary**")

BACKGROUND:

- (A) By Agreement in writing made [date] (the "**Appointment**") the Beneficiary jointly with [the other party] has employed [◆] ("**the Tram Inspector**") to undertake certification and other services (the "**Tram Inspection Services**") in connection with the detailed design, construction, commissioning, operation and maintenance of a light rail system known as the Edinburgh Tram Network ("**Project**")
- (B) By Agreement in writing between the Tram Inspector and the Sub-Consultant dated 2001 (the "**Sub-Appointment**") the Sub-Consultant has agreed to provide [◆] services in connection with the Tram Inspection Services.
- (C) At the request of the Tram Inspector the Sub-Consultant has agreed to enter into this Agreement with the Beneficiary on the terms herein contained.

IT IS AGREED AS FOLLOWS:

1. DUTY OF CARE

- 1.1 The Sub-Consultant warrants to the Beneficiary that it has carried out and will carry out the duties and obligations on its part to be performed under and in connection with the Sub-Appointment and that in performing the same the Sub-Consultant has exercised and shall continue to exercise all reasonable professional skill, care, diligence, foresight and prudence to be expected of a properly qualified and competent [architect/structural engineer/quantity surveyor/other professional] experienced in carrying out the duties and services of the type comprised in the Sub-Appointment for projects of a similar size, type, scope and complexity to the Edinburgh Tram Network PROVIDED THAT the duty of care owed by the Sub-Consultant to the Beneficiary shall be no greater than the duty of care owed by the Sub-Consultant to the Tram Inspector under the terms of the Sub-Appointment (for this purpose not taking into account any variation in the terms of the Sub-Appointment or waiver of any breach

thereof which might operate to reduce or diminish the liability to the Beneficiary under this Agreement without the Beneficiary's prior written consent).

- 1.2 No enquiry, inspection, comment, consent, decision or instruction at any time made or given by/or behalf of the Beneficiary shall operate to prejudice or diminish the obligations of the Sub-Consultant to the Beneficiary.

2. PROFESSIONAL INDEMNITY INSURANCE

- 2.1 The Sub-Consultant warrants that it maintains professional indemnity insurance covering its obligations under this Agreement with a limit of indemnity of not less than £10 million for each and every claim or series of claims. The Sub-Consultant undertakes to maintain such insurance with reputable insurers carrying on business in the European Union at all times until 12 years from the date of completion of services provided by the Sub-Consultant set out above in paragraph B (or if sooner 12 years after the termination of the employment of the Sub-Consultant under the Sub-Appointment) provided such insurance is available on commercially acceptable terms and at commercially acceptable rates and (for the avoidance of doubt) provided further that payment of any increased or additional premiums required by insurers by reason of the Sub-Consultant's own claims record or other acts omissions matter or things peculiar to the Sub-Consultant will be deemed to be within the Sub-Consultant's obligation. The Sub-Consultant shall as soon as practicable inform the Beneficiary if such insurance ceases to be available on commercially acceptable terms and rates in order that the Sub-Consultant and the Beneficiary can discuss means of best protecting their respective positions and in the meantime the Sub-Consultant shall maintain such professional indemnity insurance cover as is available to it (if any) on commercially acceptable terms and rates.
- 2.2 When reasonably requested by the Beneficiary the Sub-Consultant will provide (but not in any way which would breach any term of the insurance policy then in force) documentary evidence that the insurance required hereunder is being maintained.
- 2.3 The Sub-Consultant shall forthwith notify the Beneficiary if the insurance required by clause 2 ceases to be available upon reasonable terms and at commercially reasonable premium rates or if for any other reason the Sub-Consultant is unable to continue to maintain such insurance or if they become aware that such insurance may cease to be available and (in this event) shall take all such steps as may be required by **tie** in order to obtain alternative insurance and shall in any event continue to maintain

insurance upon such terms and with such a limit of indemnity as may then be available to it.

- 2.4 The Sub-Consultant shall not compromise, settle or waive any claim which he may have under such insurance in respect of any professional liability which he may incur under this Agreement without the prior written consent of the Beneficiary.

3. ASSIGNATION

- 3.1 The Sub-Consultant shall not assign, novate or otherwise transfer the whole or any part of the Agreement without the prior written agreement of the Beneficiary.
- 3.2 The Beneficiary shall be entitled to assign, novate or otherwise transfer the whole or any part of this Agreement:

*[[Include where the Beneficiary is **tie**]*

3.2.1 to the Scottish Ministers, TEL, the City of Edinburgh Council or any local authority or other body with no worse financial standing than that of the Beneficiary who takes over all or substantially all the functions of the Beneficiary; or

3.2.2 to any other person whose obligations under this Agreement are unconditionally and irrevocably guaranteed (in a form acceptable to the Sub-Consultant acting reasonably) by the Beneficiary or a person falling within clause 3.2.1; or

3.2.3 with the prior written consent of the Sub-Consultant (such consent not to be unreasonably withheld or delayed) to any person not covered by clauses 3.2.1 or 3.2.2.]

OR

[[Include where the Beneficiary is an other party]

3.2.1 without the consent of the Sub-Consultant to any person provided that no more than two such assignments will be permitted. Any assignments by the Beneficiary to a subsidiary or associated company of the Beneficiary or a member of the same group of companies will not count as an assignment;

3.2.2 with the prior written consent of the Sub-Consultant (such consent not to be unreasonably withheld or delayed).]]

3.3 The Sub-Consultant undertakes to the Beneficiary not to contend in any court proceedings under this Agreement that any person to whom the Beneficiary assigns or has assigned its rights under this Agreement or any of them in accordance with the foregoing provisions of this clause is to be precluded from recovering any loss resulting from any breach of this Agreement (whenever happening) by reason that such person is an assignee and not the original contracting party under this Agreement or by reason that the Beneficiary is named under this Agreement or any intermediate assignee of the Beneficiary escaped loss resulting from such breach by reason of the disposal of its interest in the same.

4. COPYRIGHT

4.1 Copyright in the Documents shall remain vested in the Sub-Consultant and subject thereto, the Sub-Consultant hereby grants to the Beneficiary an irrevocable non-exclusive royalty free licence (for the avoidance of doubt such licence to remain in full force and effect notwithstanding determination of the Sub-Consultant appointment for whatever reason or any dispute hereunder) to copy and use the Documents and to reproduce the information, programmes and schedules contained in the Documents for all purposes related to the Edinburgh Tram Network including but without limitation to the construction completion reconstruction alteration extension maintenance letting promotion advertisement reinstatement use and repair of the Edinburgh Tram Network or the Beneficiary in it and the Beneficiary entitled to grant sub-licences on terms equivalent to the provision of this clause 4.1 and the Beneficiary such sub-licence shall be transferable without charge.

4.2 The Sub-Consultant shall provide to the Beneficiary within 14 working days of any written request and subject to payment of its reasonable costs, in such manner and form as is reasonably requested, such additional copies of all or any of the Documents as are reasonably required by the Beneficiary beyond those required for the construction and completion of the Edinburgh Tram Network and shall provide such additional information and co-operation as is reasonably required in connection with the same.

4.3 Where any rights are vested in the Sub-Consultant by virtue of Chapter IV (Moral Rights) of Part 1 of the Copyright Designs and Patents Act 1988 the Sub-Consultant hereby irrevocably waives any such rights in relation to the Edinburgh Tram Network

or any part thereof and to any Documents and shall obtain a written waiver from its employees from time to time of any rights that may have in respect of the same.

5. LIABILITY OF THE SUB-CONSULTANT

- 5.1 No provision of this Agreement is intended to exclude any obligation or liability which would otherwise be implied whether by the law of contract, delict or otherwise.
- 5.2 The responsibility of the Sub-Consultant under this Agreement is not to be reduced or in any way released or limited by any enquiry or inspection by or on behalf of any person notwithstanding that such enquiry or inspection may give rise to a claim by the Beneficiary against a third party.
- 5.3 The rights and benefits conferred upon the Beneficiary by this Agreement are in addition to any other rights and remedies that the Beneficiary may have against the Sub-Consultant including (without prejudice to the generality of the foregoing) any remedies in delict.
- 5.4 Subject to the other provisions of this Agreement, the liability of the Sub-Consultant to the Beneficiary is to be determined in all respects in accordance with the terms of the Sub-Appointment and, in the event of any claim by the Beneficiary under this Agreement, the Sub-Consultant shall be entitled to rely upon any defence, right, limitation or exclusion under the Sub-Appointment as though the Beneficiary were named as the Tram Inspector under it, except that:
- 5.4.1 the Beneficiary shall not be affected by any subsequent variation of the Sub-Appointment which would adversely affect the obligations owed by the Sub-Consultant or the waiver, compromise or withdrawal of any claim made by the Tram Inspector; and
- 5.4.2 the Sub-Consultant shall not be entitled to exercise any right of set-off, retention or withholding against the beneficiary to which the Sub-Consultant may be entitled against the Tram Inspector.

6. NOTICES

- 6.1 Any notice required to be given under this Agreement is to be hand delivered or sent by prepaid registered or recorded delivery post to the party concerned at its address set out in this Agreement or to such other addresses as may be notified by such party for the purposes of this clause.

6.2 Any notice given pursuant to this clause, if sent by special or recorded delivery, is deemed to have been received on proof of delivery.

7. INVALID TERMS

7.1 If any term of this Agreement shall be held to any extent to be invalid, unlawful or unenforceable:

7.1.1 that term shall to that extent be deemed not to form part of this Agreement;
and

7.1.2 the validity and enforceability of the remainder of this Agreement shall not be affected.

8. VARIATIONS AND WAIVERS TO BE IN WRITING

8.1 No variation, alteration or waiver of any of the provisions of this Agreement shall be effective unless it is in writing and signed by or on behalf of the Party against which the enforcement of such variation, alteration or waiver is sought.

9. WAIVER

9.1 Save where expressly stated, no failure or delay by either Party to exercise any right or remedy in connection with this Agreement shall operate as a waiver of it or of any other right or remedy nor shall any single or partial exercise preclude any further exercise of the same, or of some other right or remedy. A waiver of any breach of this Agreement shall not be deemed to be a waiver of any subsequent breach.

9.2 The Parties' rights and remedies under this Agreement are, except where provided otherwise in this Agreement, independent, cumulative and do not operate to exclude one another or any rights or remedies provided by law.

10. GOVERNING LAW

This Agreement, any document completed or to be completed in accordance with its provisions and any matter arising from it or any other such document shall be governed by and construed in accordance with Scots Law. The Parties hereby irrevocably submit to the exclusive jurisdiction of the Court of Session in relation to this Agreement, any such document and any such matter.

11. THIRD PARTY RIGHTS

A person who is not party to this Agreement shall have no right to enforce any term of this Agreement.

IN WITNESS WHEREOF:

EXECUTED for and on behalf of [SUB-CONSULTANT]

at

on _____ 2008 by:

Authorised Signatory

Full Name

Witness Signature

Full Name

Address

EXECUTED for and on behalf of [TIE/INFRACO]

at

on _____ 2008 by:

Authorised Signatory

Full Name

Witness Signature

Full Name

Address

SCHEDULE 3

Fee

[DN: to set out basis of fee payable]



**THIS IS SCHEDULE PART 35 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 35

REPORTING PERIOD END DATES

PERIOD END DATES (all Saturdays except 31st March)

(subject to confirmation)

CONSTRUCTION PERIOD						
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
1	28/04/2007	26/04/2008	02/05/2009	01/05/2010	30/04/2011	28/04/2012
2	26/05/2007	24/05/2008	30/05/2009	29/05/2010	28/05/2011	26/05/2012
3	23/06/2007	21/06/2008	27/06/2009	26/06/2010	25/06/2011	23/06/2012
4	21/07/2007	19/07/2008	25/07/2009	24/07/2010	23/07/2011	21/07/2012
5	18/08/2007	16/08/2008	22/08/2009	21/08/2010	20/08/2011	-
6	15/09/2007	13/09/2008	19/09/2009	18/09/2010	17/09/2011	-
7	13/10/2007	11/10/2008	17/10/2009	16/10/2010	15/10/2011	-
8	10/11/2007	08/11/2008	14/11/2009	13/11/2010	12/11/2011	-
9	08/12/2007	06/12/2008	12/12/2009	11/12/2010	10/12/2011	-
10	05/01/2008	03/01/2009	09/01/2010	08/01/2011	07/01/2012	-
11	02/02/2008	31/01/2009	06/02/2010	05/02/2011	04/02/2012	-
12	01/03/2008	28/02/2009	02/03/2010	05/03/2011	03/03/2012	-
13	31/03/2008	31/03/2009	31/03/2010	31/03/2011	31/03/2012	-

SERVICE PERIOD					
	2012/13	2013/14	2014/15	2015/16	2016/17
1	-	27/04/2013	26/04/2014	02/05/2015	30/04/2016
2	-	25/05/2013	24/05/2014	30/05/2015	28/05/2016
3	-	22/06/2013	21/06/2014	27/06/2015	25/06/2016
4	-	20/07/2013	19/07/2014	25/07/2015	23/07/2016
5	18/08/2012	17/08/2013	16/08/2014	22/08/2015	20/08/2016
6	15/09/2012	14/09/2013	13/09/2014	19/09/2015	17/09/2016
7	13/10/2012	12/10/2013	11/10/2014	17/10/2015	15/10/2016
8	10/11/2012	09/11/2013	08/11/2014	14/11/2015	12/11/2016
9	08/12/2012	07/12/2013	06/12/2014	12/12/2015	10/12/2016
10	05/01/2013	04/01/2014	03/01/2015	09/01/2016	07/01/2017

SERVICE PERIOD					
11	02/02/2013	01/02/2014	31/01/2015	06/02/2016	04/02/2017
12	02/03/2013	01/03/2014	28/02/2015	05/03/2016	04/03/2017
13	31/03/2013	29/03/2014	31/03/2015	31/03/2016	31/03/2017

	2017 / 18	2018 / 19	2019 / 20	2020 / 21	2021 / 22
1	29/04/2017	28/04/2018	27/04/2019	02/05/2020	01/05/20
2	27/05/2017	26/05/2018	25/06/2019	30/05/2020	29/05/2021
3	24/06/2017	23/06/2018	22/06/2019	27/06/2020	26/06/2021
4	22/07/2017	21/07/2018	20/07/2019	25/07/2020	24/07/2021
5	19/08/2017	18/08/2018	17/08/2019	22/08/2020	21/08/2021
6	16/09/2017	15/09/2018	14/09/2019	19/09/2020	18/09/2021
7	14/10/2017	13/10/2018	12/10/2019	17/10/2020	16/10/2021
8	11/11/2017	10/11/2018	09/11/2019	14/11/2020	13/11/2021
9	09/12/2017	08/12/2018	07/12/2019	12/12/2020	11/12/2021
10	06/01/2018	05/01/2019	04/01/2020	09/01/2021	08/01/2022
11	03/02/2018	02/02/2019	01/02/2020	06/02/2021	05/02/2022
12	03/03/2018	02/03/2019	29/02/2020	06/03/2021	05/03/2022
13	31/03/2018	31/03/2019	31/03/2020	31/03/2021	31/03/2022

	2022 / 23	2023 / 24	2024 / 25	2025 / 26	2026 / 27
1	30/04/2022	29/02/2023	27/04/2024	26/04/2025	02/05/2026
2	28/05/2022	27/05/2023	25/05/2024	24/05/2025	30/05/2026
3	25/06/2022	24/06/2023	22/06/2024	21/06/2025	27/06/2026
4	23/07/2022	22/07/2023	20/07/2024	19/07/2025	25/07/2026
5	20/08/2022	19/08/2023	17/08/2024	16/08/2025	22/08/2026
6	17/09/2022	16/09/2023	14/09/2024	13/09/2025	19/09/2026
7	15/10/2022	14/10/2023	12/10/2024	11/10/2025	17/10/2026
8	12/11/2022	11/11/2023	09/11/2024	08/11/2025	14/11/2026
9	10/12/2022	09/12/2023	07/12/2024	06/12/2025	12/12/2026
10	07/01/2023	06/01/2024	04/01/2025	03/01/2025	09/01/2027
11	04/02/2023	03/02/2024	01/02/2025	31/01/2026	06/02/2027
12	04/03/2022	02/03/2024	01/03/2025	28/02/2026	06/03/2027
13	31/03/2022	31/03/2024	31/03/2025	31/03/2026	31/03/2027

Notes

- The later dates are provisional and may change over time. The detailed dates will be made available to the Infraco on an annual basis.
- The Reporting Periods run each year from 1st April to 31st March.
- Period One (P1) starts the first of April and generally finishes on the 4th Saturday following that date.
- Period Two (P2) starts on the next day (generally the 4th Sunday) and finishes on the 4th Saturday from that date.
- Periods Three through to Period Twelve follow at four weekly intervals.
- Period Thirteen starts the Sunday after the end Saturday of P12 and generally finishes on 31st March.
- Occasionally, perhaps once every seven years, Transport Scotland may dictate that a one week Period Fourteen may be required. If so Infraco will not be required to provide any additional reporting but amendments to payment arrangements may be made.



**THIS IS SCHEDULE PART 36 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

TUPE INFORMATION

1. The number of staff who are TUPE Employees.
2. In relation to each employee who falls within the scope of paragraph 1 above:
 - 2.1 the employee's age (so that pension entitlements can be calculated and provided for) and whether such employee is within or outside any group pension scheme; and
 - 2.2 the employee's salary, length of service, contractual period of notice, any pay settlement covering future dates which has already been agreed by the Infraco and any redundancy entitlement.
3. Information relating to or connected with the other terms and conditions of the contracts of employment with employees falling within the scope of paragraph 1 above including details of:
 - 3.1 terms incorporated from any collective agreement;
 - 3.2 so far as the Infraco should reasonably be aware any outstanding liability for past breaches of such contracts;
 - 3.3 so far as the Infraco should reasonably be aware any outstanding statutory liability (for example, any claim under non-discrimination legislation); and
 - 3.4 so far as the Infraco should reasonably be aware any other outstanding liability required to be met by any successor infrastructure maintenance contractor if its tender is accepted.
4. Such other information as **tie** may reasonably require in relation to TUPE Employees in order to enable **tie** to comply with its obligations under the TUPE Regulations.



**THIS IS SCHEDULE PART 37 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 37

PHASE 1B OPTION

In this Schedule Part 37, the following words and expressions shall have the meaning ascribed to them.

"Phase 1b Bid Price" means the price for Phase 1b identified in the Infraco's submission dated 7 August 2007, as updated by letter from the Infraco to **tie** dated 14 September 2007 and as supported by the correspondence between the Parties between the August tender submission and the date of this letter.

"Phase 1b Bid Programme" means the programme for Phase 1b set out in the Infraco's submission dated 7 August 2007, as updated by letter from the Infraco to **tie** dated 14 September 2007 and as supported by the correspondence between the Parties between the August tender submission and the date of this letter.

1. **tie** shall not later than 31 October 2008 (or such later date as may be agreed between the Parties) notify the Infraco whether, in principle, it proposes to proceed with Phase 1b. For the avoidance of doubt, this "in principle" notification shall not be a **tie** Change or a Notified Departure.
2. On receipt of a notification in accordance with paragraph 1 above, the Infraco shall commence technical and legal due diligence in relation to the Phase 1b Works including, without prejudice to the foregoing generality, in relation to:
 - (a) the Employer's Requirements for Phase 1b;
 - (b) the relationship between the Phase 1b Works and any relevant third party agreements disclosed to Infraco by **tie** prior to the issue of the notification;
 - (c) the nature and extent of the Permanent Land and Temporary Sites available for Phase 1b based on information disclosed by **tie** prior to the issue of the notification;
 - (d) the design already undertaken by the SDS Provider in relation to Phase 1b and the extent of services, if any, still to be provided by the SDS Provider (from the date of the issue of a tie Change instructing Phase 1b) in relation to the design of Phase 1b;
 - (e) the Design and Construction and Maintenance Stage Consents that will be required in relation to Phase 1b; and

- (f) the nature and extent of amendments that Infraco considers may be required to the Infraco Contract, having regard to the conditions and qualifications attached to the Phase 1b Bid Price and the Phase 1b Bid Programme.
3. On conclusion of the technical and legal due diligence referred to in paragraph 2 above (which the Infraco shall use reasonable endeavours to complete within 12 weeks of the date of notification), the Infraco shall prepare and submit to **tie** the following (the "**Phase 1b Proposal**):
- (a) a Minute of Amendment indicating the amendments that the Infraco considers will be required to the Infraco Contract including without prejudice to the foregoing generality:
- (i) amendments to reflect the risk allocation between the Parties in relation to Phase 1b to the extent that such risk allocation requires amendment (i) to reflect the conditions and qualifications attached to the Phase 1b Bid Price and/or Phase 1b Bid Programme, or (ii) arising from the nature of the Phase 1b works (i.e. the condition of structures);
- (ii) any additional pricing assumptions applicable to Phase 1b;
- (b) draft Infraco Proposals in relation to Phase 1b;
- (c) an updated programme for Phase 1b (including the programme for Consents, the programming assumptions and the Phase 1b Works programme) which shall be based on the Phase 1b Bid Programme;
- (d) the proposed fixed price for Phase 1b (on the assumption that the Phase 1b Works commence on 6 July 2009); and
- (e) a report identifying the differences between (c) and (d) above and the Phase 1b Bid Price and the Phase 1b Bid Programme.
4. The Parties shall use reasonable endeavours to agree the content of the Phase 1b Proposal by 31 March 2009. The Phase 1b Proposal as so agreed shall form the basis of the Estimate provided by the Infraco in the event that **tie** issues a **tie** Change instructing the Phase 1b Works.
5. On the issue of a **tie** Change instructing the Phase 1b Works, **tie** shall pay to the Infraco such demonstrable costs as the Infraco shall have reasonably incurred in performing its obligations in this Schedule Part 37.

6. The Infraco shall use reasonable endeavours to cooperate with any party that **tie** appoints to implement Phase 1b, in particular with regard to technical interfaces.
7. If **tie** does not proceed with Phase 1b or **tie** does proceed but the Infraco has produced an Estimate pursuant to paragraph 4 which **tie** has rejected unreasonably then:
 - (a) the Infraco shall be compensated for its work in the procurement period on Phase 1b by a payment of £3,200,000 (three million two hundred thousand pounds) (such amount is currently contained in the Phase 1b Bid Price); and
 - (b) **tie** shall make such payment within 30 days of the date set out at paragraph 3(d) above, namely 6 July 2009 unless the parties otherwise agree, against a valid VAT invoice submitted by the Infraco.
8. In the event that **tie** and the Infraco subsequently agree to recommence negotiations on a Phase 1b Proposal (price, programme, scope and terms) and **tie** instructs a **tie** Change pursuant to paragraph 5, the £3,200,000 (three million two hundred thousand pounds) paid by **tie** to the Infraco will be discounted from the final price paid by **tie** to the Infraco for Phase 1b.



**THIS IS SCHEDULE PART 38 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 38

APPROVED SUPPLIERS AND SUB-CONTRACTORS (AND TRADES)

PART I - APPROVED SUB-CONTRACTORS

Section 1A

- Designers
- OHLE Installers
- System Integrators
- Trackwork Supplier Installers
- Major Civils Works Contractors
- Piling Contractors
- Ground Stabilisation Specialists
- Specialist Telecoms/Signalling Suppliers
- Testing and Commissioning Specialists
- E+M Installers

Provided that:

1. the categories suppliers referred to in this Section 1A shall exclude any:
 - (a) supplier that is a subsidiary or associated company of Siemens plc or Siemens AG for so long as such supplier remains a subsidiary, affiliate or associated company of Siemens plc or Siemens AG;
 - (b) supplier of generic or commodity material or goods; and
 - (c) supplier employed under a labour only contract.
2. Major Civil Works Contractors means civil engineering works contractors who are engaged by the Infracore with responsibility for the majority of civil engineering elements of any section of Phase 1a (other than obligations of the SDS Provider).

PART II - INFRACO PROVISIONS TO BE INCLUDED IN KEY SUB-CONTRACTS

The following provisions of Clause 7 (Duty of Care and General Obligations in Relation to the Infraco Works) - 7.3.6, 7.3.7, 7.3.8, 7.5.3

Clause 9 (Title)

Clause 27 (Removal of Infraco's Employees)

Clause 30.3 (Safety and Security)

Clause 49.1 (Non-Removal of Materials and Contractor's Equipment)

Clause 92 (Termination for Corrupt Gifts and Fraud)

Clause 97 (Dispute Resolution Procedure)

Clause 115 (Discrimination)



**THIS IS SCHEDULE PART 39 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 39

TRAM SUPPLY AGREEMENT AND TRAM MAINTENANCE AGREEMENT OBLIGATIONS

1. In accordance with Clause 8.7 of the Agreement, the Infraco shall procure that the Tram Supplier complies with the following obligations under the Tram Supply Agreement:

15. DESIGN DEVELOPMENT

- 15.1 The Tram Supplier shall develop and finalise the Deliverables in accordance with this Agreement, and the Client shall be entitled to review the Deliverables (which shall include any amendment to any submitted item) in accordance with Schedule 9 (*Review Procedure*).
- 15.2 The Tram Supplier shall submit the design of any changes and any other Deliverables associated with any Permitted Variations to the Client's Representative for review pursuant to Schedule 9 (*Review Procedure*).
- 15.3 The Tram Supplier shall allow the Client's Representative, at any reasonable time, a reasonable opportunity to view any Deliverable at any stage of development, and this opportunity shall be made available to the Client's Representative as soon as reasonably practicable following receipt of any written request from the Client's Representative. Where electronic versions of the Deliverables are available, the Tram Supplier shall upload such Deliverables (including any drawings comprised within the Deliverables) on the extranet established and maintained by the Client as soon as practicable.
- 15.4 The Tram Supplier shall provide the Deliverables in accordance with the Deliverables Programme set out in part 5 of Schedule 4 (*Programme*).
- 15.5 During the preparation of the Deliverables, the Client and/or the Client's Representative shall at its discretion but acting reasonably be entitled to call for a meeting to discuss the development of any Deliverable, and the Tram Supplier shall give due consideration to any comments made by the Client or the Client's Representative at any such meetings. As soon as reasonably practicable following any such meeting, the Tram Supplier will prepare and circulate to those attending the meeting, a report listing the Deliverables discussed and any comments made at such meeting.
- 15.6 If it should be found that the Deliverables do not fulfil the requirements of this Agreement or the needs of any Approval Bodies, the Tram Supplier shall at its own expense amend the Deliverable. Such amendment shall be made in accordance with Schedule 9 (*Review*

Procedure) and such amendment and rectification shall ensure that the Deliverable shall satisfy the requirements of this Agreement and any Approval Bodies.

- 15.7 The Tram Supplier shall provide the Client with all Deliverables in accordance with the terms of this Agreement and where no timescale for provision of such Deliverables is specified in the Deliverables Programme, such Deliverables shall be provided to the Client as soon as reasonably practicable. The Tram Supplier shall provide to the Client three copies of the agreed Deliverables in hard copy form and one copy in an agreed soft copy form (as appropriate to the format of the Deliverables).
- 15.8 The Tram Supplier accepts all risks arising from any conflicts, ambiguities, discrepancies, errors or omissions that subsequently appear within or between any of the Tram Requirements Specification and any of the other Deliverables, and the Tram Supplier shall not be entitled to make any claim against the Client for an extension of time, payment or otherwise in respect of any such conflicts, ambiguities, discrepancies, errors or omissions.
- 15.9 The Tram Supplier shall within 10 Business Days notify the Client upon becoming aware of any conflicts, ambiguities, discrepancies, errors or omissions within or between any of the Tram Requirements Specification, and any of the other Deliverables. Where there are any conflicts, ambiguities, discrepancies, errors or omissions, the Tram Supplier shall provide with any such notification its proposals for resolving such conflicts, ambiguities, discrepancies, errors or omissions in compliance with this Agreement. Such proposals could include the suggestion that no action is required. The Tram Supplier shall proceed with its proposals to resolve any such conflicts, ambiguities, discrepancies, errors or omissions as soon as reasonably practicable. If the proposal from the Tram Supplier is that no action is required or the Client does not agree with the action proposed by the Tram Supplier, the Client may notify the Tram Supplier, within 10 Business Days of the Tram Supplier's notice, to resolve any conflicts, ambiguities, discrepancies, errors or omissions in a different manner (which notification shall be binding on the Tram Supplier).

22. ADDITIONAL TRAMS

22.1 The Client may, by providing the Tram Supplier with a written notice or notices, order Additional Trams with related Spare Parts and Special Tools ("**Additional Trams Order**") from the Tram Supplier on the following terms:

22.1.1 if the Client places an Additional Trams Order or Orders for a maximum total of 4 Additional Trams before 17 months have expired from the date of execution of this

Agreement, then the price for such Additional Trams Order or Orders shall be as set out in Schedule 19 (*Additional Trams*);

22.1.2 if the Client places an Additional Trams Order or Orders for a maximum total of 8 Additional Trams (including any Additional Trams ordered under Clause 22.1) after 17 months have expired from the date of execution of this Agreement, then the price and indexation mechanism for such Additional Trams Order or Orders which is set out in Schedule 19 (*Additional Trams*) shall be applied.

22.2 Any necessary changes to this Agreement arising out of any Additional Trams Orders shall be agreed by the Parties (both acting reasonably and in good faith).

23. MOCK-UP

23.1 Mock-Up

23.1.1 The Tram Supplier shall prepare a mock-up of the Tram in accordance with this Clause 23 (*Mock Up*). The Tram Supplier has a target date for completion of the mock-up as shown in part 1 of Schedule 4 (*Tram Manufacturing and Delivery Programme*), and recognises and acknowledges the need for its participation in the process of reviewing and commenting upon the mock-up to be carried out expeditiously and regularly as the design and fabrication of the mock-up proceeds. The Client and **tie** will be invited (and will be expected) to make periodic inspections at the premises where the mock-up is being fabricated during construction of the mock-up and, subject to the following terms of this Clause 23 (*Mock-Up*), to make comments. Upon completion of the mock-up, the Client and **tie** shall be invited to make further inspections and meetings will be held to discuss and resolve the Client's and **tie's** comments upon the final presentation of the mock-up, provided that no new comments shall be made after the expiry of 20 Business days from the date upon which the Tram Supplier notifies the Client and **tie** that the mock-up is complete.

23.1.2 The mock-up shall be prepared in accordance with the requirements of section 2 of the Tram Requirements Specification. The mock-up will be used to demonstrate, subject to the provisions of this Clause 23 (*Mock-Up*):

23.1.2.1 compliance with the Tram Employer's Requirements;

23.1.2.2 compliance with the Rail Vehicle Accessibility Regulations 1998 (as amended from time to time) and Railway Safety Publication 2;

- 23.1.2.3 cab and saloon interior and external styling, livery design and provision of advertising space;
- 23.1.2.4 interior layout, including:
 - (i) seat spacing, dimensions and design;
 - (ii) wheelchair positions;
 - (iii) aisle widths;
 - (iv) window arrangement;
 - (v) luggage racks;
 - (vi) hand rails;
- 23.1.2.5 cab interior and controls layout;
- 23.1.2.6 passenger information displays; and
- 23.1.2.7 passenger emergency communication units.

23.2 Client's rights to comment and approve

23.2.1 The Client's and/or **tie's** rights to make comments upon and approve the mock-up shall be subject to the time limits set out in Clause 23.1 above, and to the following further provisions.

23.2.2 The Client and/or **tie** shall act reasonably in approving the mock-up, and shall not unreasonably disapprove any aspect of the design which is materially similar to that contained in the relevant drawings and colour renderings listed or described in Schedule 23 (*Tram Supplier's Proposals*). Without prejudice to this, the Client may not require any changes in respect of the following:

23.2.2.1 overall vehicle dimensions (length, width, height);

23.2.2.2 heating, ventilation and air conditioning air distribution system;

23.2.2.3 door sizes;

23.2.2.4 any dimension which would change the Developed Kinematic Envelope and in particular the length of the Tram nose.

The Client and/or **tie** shall not require any changes to the Trams which will prevent or make materially more difficult compliance with the Disability Discrimination Act 1995, the Rail Vehicle Accessibility Regulations 1998 (as amended), or any other Legislation.

23.2.3 The Client and/or **tie** may require reasonable changes in respect of exterior cab styling (provided due consideration has been given to the Developed Kinematic Envelope, passenger compartment, viewing angles and the like and that such changes shall not impact upon the structural design of the Tram seating arrangement, handrail location, seat selection, interior and exterior colour schemes).

23.2.4 Notwithstanding anything else in this Clause 23.2, the Client and/or **tie** may not require changes which would materially change the intent of the Employer's Requirements unless such change is instructed as a Client Change under Clause 20 (*Changes*).

23.2.5 The approval by the Client or the Tram Inspector of the mock-up shall not in any way relieve the Tram Supplier of any of its obligations under this Agreement.

23.3 Design finalisation and use of mock-up for display purposes

23.3.1 Upon such completion, the Tram Supplier shall incorporate the agreed design changes into the final design of the Tram, and shall make such changes to the mock-up as are required to reflect the agreed changes.

23.3.2 The Tram Supplier shall, provided it no longer reasonably requires the mock-up for the purposes of finalisation of the design of the Tram, make the mock-up available to **tie**, upon reasonable notice by **tie** to the Tram Supplier, for the purposes of display to the public at a venue in Edinburgh selected by **tie** and thereafter at a site to be jointly agreed and secured by the Parties.

34. SPARES AND SPECIAL TOOLS

34.1 The Tram Supplier shall deliver to the Client on or before the Tram Maintenance Commencement Date at the Depot:

34.1.1 the Spare Parts set out in Part 4 of Schedule 2 (*Employer's Requirements*); and

34.1.2 the Special Tools set out in Part 5 of Schedule 2 (*Employer's Requirements*).

- 34.2 The Tram Supplier shall provide to the Client as soon as reasonably practicable and in any event within 12 months of the Commencement Date a list of all first tier Sub-contractors used by or intended to be used by it to obtain, manufacture and supply Spare Parts and Special Tools. The extent of first tier Sub-contractors shall be agreed by the Client and the Tram Supplier and in reaching such agreement, the Client shall be entitled to ask the Tram Supplier for details of those Sub-contractors who are not listed.
- 34.3 For a period of 30 years following the Tram Maintenance Commencement Date the Tram Supplier shall (at the price and within the delivery timescales set out for each Special Tool or Spare Part in Parts 4 and 5 (respectively) of Schedule 2 (*Employer's Requirements*)) continue to make available to the Client, **tie** and/or the Tram Maintainer, Spare Parts and Special Tools as may reasonably be required to operate the Trams and maintain them.
- 34.4 If the Tram Supplier cannot provide a Spare Part and/or a Special Tool at the price or within the delivery timescale specified then the Client, and/or **tie** (or the Tram Maintainer acting on **tie's** behalf) shall be entitled to use the rights granted to it pursuant to Clause 51 (*Copyright and Intellectual Property*) in relation to the relevant Spare Parts and/or Special Tools to either manufacture such Spare Part and/or Special Tool itself or appoint a third party to do so. Any dispute arising out of this Clause 34.4 shall be resolved in accordance with the Dispute Resolution Procedure.
- 34.5 The purchase price for the Spare Parts and Special Tools provided pursuant to Clause 34.1 shall be payable by the Client as part of the Aggregate Tram Price in accordance with the Milestone Payment Schedule. The detailed list of Spare Parts is contained in part 4 of Schedule 2 (*Employer's Requirements*), and the detailed list of Special Tools is contained in part 5 of Schedule 2 (*Employer's Requirements*).
- 34.6 If any Spare Part or Special Tool is reasonably considered by the Client or **tie** to be defective or otherwise fails to meet the Required Standards within two years of delivery then provided that the Client (upon becoming aware of such situation) promptly notifies the Tram Supplier in writing of that fact and either (at the cost of the Tram Supplier):
- 34.6.1 makes such Spare Part reasonably available for collection by the Tram Supplier; or
- 34.6.2 returns such Spare Part to the Tram Supplier,
- the Tram Supplier shall replace or modify (as appropriate) such Spare Part or Special Tool within 30 days of the notification (or such other period as the parties may agree acting reasonably and taking into account the nature of the relevant Spare Part or Special Tool),

failing which the Aggregate Tram Price shall be reduced or (if the Aggregate Tram Price has already been paid) a rebate payment made within 10 days thereafter of an amount equal to the value of such Spare Part or Special Tool.

36. WARRANTY REGIME

36.1 Subject to the provisions of this Clause 36 (*Warranty Regime*), the Tram Supplier warrants that:

36.1.1 each Tram shall be free from Tram Defects during the Primary Tram Warranty Period;

36.1.2 all Paint and Finishes shall be free from Paint and Finish Defects during the Paint and Finish Warranty Period;

36.1.3 all Extended Tram Warranty Parts shall be free from Extended Tram Warranty Defects during the Extended Tram Warranty Period; and

36.1.4 the fleet of Trams shall be free from Fleet Tram Defects during the Fleet Tram Defect Period,

each a "**Warranty**" and together the "**Warranties**".

36.2 If the Client claims that there is a Tram Defect, an Extended Tram Warranty Defect, a Paint and Finish Defect and/or a Fleet Tram Defect:

36.2.1 the Client:

36.2.1.1 shall, subject to Clause 36.2.1.3 promptly send to the Tram Supplier a notice ("**Defect Notice**") detailing and identifying:

(a) the type of defect as a Tram Defect, a Fleet Tram Defect, a Paint and Finish Defect and/or an Extended Tram Warranty Defect (each an "**Identified Defect**" and together the "**Identified Defects**"); and

(b) when it expects to make the Tram available to the Tram Supplier for rectification;

36.2.1.2 shall, if it submits a Defect Notice, provide the Tram Supplier with all records reasonably requested by the Tram Supplier in writing and which are reasonably necessary to enable the Tram Supplier to carry out its obligations under Clause 36.2.2; and

36.2.1.3 may, if the Tram Supplier does not diligently investigate and rectify the Identified Defect in accordance with Clause 36.2.2, carry out the rectification work or appoint a suitably qualified and insured third party to carry out the rectification work (including giving such warranty as is appropriate without prejudice to the continuation of any Warranty) and without prejudice to its other rights and remedies recover its reasonable costs of so doing from the Tram Supplier; and

36.2.2 upon the delivery of the Defect Notice, the Tram Supplier shall:

36.2.2.1 promptly, diligently and carefully investigate and search for the cause of the Identified Defect;

36.2.2.2 immediately notify the Client and the Tram Maintainer where it appears to the Tram Supplier that the Tram is unlikely to be available for a period of more than four hours;

36.2.2.3 subject to Clause 0, promptly propose a rectification plan ("**Rectification Plan**") and a rectification period ("**Rectification Period**") (which may be extended by agreement of the parties) to be approved by the Client (such approval not to be unreasonably withheld or delayed); and

32.2.2.4 in accordance with the approved Rectification Plan:

- (a) remedy the Identified Defect; and
- (b) in respect of Fleet Tram Defects, execute all works of repair or rectification to ensure that the relevant Fleet Tram Defect is corrected and that such Fleet Tram Defect is not present in the Trams already delivered or to be delivered.

36.3 If the Tram Supplier fails to rectify an Identified Defect in accordance with Clause 36.2.2.3, the Client may itself carry out the rectification work or appoint a third party to carry out the rectification work and without prejudice to its other rights and remedies under this Agreement (including the full benefit of any Warranty under this Clause 36 (*Warranty Regime*)), recover the costs of so doing as a debt due from the Tram Supplier.

36.4 If the Client does not approve the Rectification Plan proposed by the Tram Supplier in accordance with Clause 36.2.2.3, then a Dispute shall be deemed to have occurred and the Client and the Tram Supplier shall resolve the Dispute in accordance with the Dispute

Resolution Procedure, provided that before submitting to the Dispute Resolution Procedure, the Client reserves the right to appoint a qualified third party to perform or itself perform the relevant rectification work, with the party who is responsible for paying the costs of the rectification works being decided as part of the resolution of the Dispute pursuant to the Dispute Resolution Procedure.

36.5 If having rectified an Identified Defect, the Tram Supplier considers that the Client did not have the right to require it to rectify an Identified Defect under Warranty and/or it was not entitled to recover all or some of its costs incurred in rectifying an Identified Defect because:

36.5.1 the Identified Defect was in fact outside the scope of the Warranty or the Warranty Period applicable to the Identified Defect;

36.5.2 the Client did not comply in all material respects with the relevant obligations pursuant to Clause 36.2.1.2;

36.5.3 the Identified Defect was caused by the Tram Maintainer or Operator respectively not maintaining or operating the Trams in accordance with the relevant parts of the Tram Documentation;

36.5.4 the infrastructure of the Edinburgh Tram Network not being maintained in accordance with Good Industry Practice;

36.5.5 there was a material change in the operating conditions (as specified in the Tram Requirements Specification and/or the Tram Employer's Requirements) of the Tram the subject of the Identified Defect;

36.5.6 an accident had occurred involving the Tram the subject of the Identified Defect (excluding those accidents which arise out of or in connection with the inadequacy of the training provided by the Tram Supplier and/or the inadequacy of the Tram Documentation or the occurrence of the Identified Defect);

36.5.7 the Identified Defect is caused by a clear act of vandalism; and/or

36.5.8 in relation to an Extended Tram Warranty Defect, such defect had been caused by modifications to the Extended Tram Warranty Part identified as defective which had not been approved by the Tram Supplier (excluding such modifications that were required by Law or by this Agreement and/or had been performed by the Tram Supplier or by a third party pursuant to Clauses 0 or 0),

then the Tram Supplier shall notify the Client of such reason and a Dispute shall be deemed to have occurred and the Tram Supplier and the Client shall resolve the Dispute in accordance with the Dispute Resolution Procedure.

36.6 If any part, component or system of a Tram is repaired, rebuilt or replaced under Warranty then it shall have applied to it the appropriate full Primary Warranty Tram Period, Extended Tram Warranty Period, Paint and Finish Warranty Period and/or Fleet Tram Defect Period (as appropriate to the repaired, rebuilt or replaced part, component or system).

36.7 Following the submission of a Defect Notice, if a Tram is taken out of service for rectification under Warranty pursuant to this Clause 36 (*Warranty Regime*), the Warranties given in respect of that Tram and all Warranties applicable to all relevant systems, section, parts, components, or equipment incorporated in or supplied with such Tram shall continue until:

36.7.1 the rectification has been completed in accordance with the approved rectification plan or has otherwise been rectified by the Client and/or its Sub-contractors;

36.7.2 any necessary consents have been obtained to enable such Tram to resume Passenger Services; and

36.7.3 the Tram has been returned to the Client for use in Passenger Services,

and thereafter for a period (in respect of each Warranty) equal to the unexpired portion of each Warranty at the date of the Defect Notice.

28. PRE-DELIVERY INSPECTIONS AND FACTORY ACCEPTANCE TESTS

28.1 The Tram Supplier acknowledges and agrees that **tie**, the Client and the Tram Inspector shall be involved in inspecting the Trams at various stages of the manufacturing process.

28.2 The Tram Supplier shall:

28.2.1 supply to the Client and **tie** photographs in a suitable digital format setting out each key stage of the Tram build process;

28.2.2 deliver the Trams to the delivery point designated by the Client in the Depot in accordance with the Tram Manufacturing and Delivery Programme;

28.2.3 notify the Tram Inspector and the Client's Representative of the expected delivery date not less than 30 days prior to such delivery date and provide the Tram Inspector

and the Client's Representative with a quality control report before transporting any Tram to the Depot;

- 28.2.4 allow the Tram Inspector to inspect each Tram before it leaves the Tram Supplier's premises to be transported to the Depot; and
 - 28.2.5 not transport a Tram to the Depot until the Tram Inspector has issued the Factory Acceptance Type Test Certificate and a Factory Acceptance Routine Test Certificate in respect of the Tram to be despatched and the Tram Supplier has confirmed with the Client that the Depot is ready to accept delivery of the Tram
- 28.3 The Tram Inspector shall inspect and the Tram Supplier shall provide all assistance requested by the Tram Inspector to enable it to so inspect:
- 28.3.1 each Tram before it is despatched to the Depot in accordance with the Factory Acceptance Routine Tests; and
 - 28.3.2 specified Tram or Trams (identified in the Factory Acceptance Type Tests) before they are despatched to the Depot in accordance with the Factory Acceptance Type Tests.
- 28.4 The Factory Acceptance Type Test Certificate shall not be issued in respect of any Tram until all of the Factory Acceptance Type Tests have in the reasonable opinion of the Tram Inspector been satisfactorily completed.
- 28.5 A Factory Acceptance Routine Test Certificate shall not be issued in respect of any Tram until:
- 28.4.1 the Factory Acceptance Type Test Certificate has been issued; and
 - 28.4.2 the Factory Acceptance Routine Tests in respect of that Tram have in the reasonable opinion of the Tram Inspector been satisfactorily completed.
- 28.6 If, in the reasonable opinion of the Tram Inspector, either the Factory Acceptance Routine Test and/or the Factory Acceptance Type Tests have not been satisfactorily completed, the Tram Inspector may issue a Tram Rejection Notice, identifying the Testing Failures and the Tram Supplier shall propose a rectification plan and period for rectification for agreement by the Tram Inspector (such agreement not to be unreasonably withheld or delayed).
- 28.7 Once the Tram Supplier has (at its own cost) rectified the failures identified in the Tram Rejection Notice in accordance with the rectification plan and within the rectification period,

the Tram Supplier shall resubmit the Tram for inspection in accordance with the relevant Factory Acceptance Tests and the process set out in Clauses 28.3 to 28.7 shall continue until the Tram Inspector issues a Factory Acceptance Type Test Certificate and/or a Factory Acceptance Routine Test Certificate.

28.8 Notwithstanding any other provision of this Clause 28 (*Pre-Delivery Inspections and Factory Acceptance Tests*), once the Tram Inspector has issued a Factory Acceptance Type Test Certificate:

28.8.1 no further Factory Acceptance Type Tests shall be conducted (unless any one or more of such tests are also Factory Acceptance Routine Tests); and

28.8.2 there shall be no further requirement for the Tram Supplier to obtain a Factory Acceptance Type Test Certificate in respect of any further Tram

29. DELIVERY

29.1 The Tram Supplier shall:

29.1.1 deliver the Trams to the point of delivery designated by the Client at the Depot;

29.1.2 use every reasonable means available to it in delivering the Trams pursuant to Clause 29.1.1, to prevent any of the roads or bridges communicating with or en route to the Depot being subjected to extraordinary traffic within the meaning of applicable legislation and specifically the Roads (Scotland) Act 1984 (as amended) by any traffic of the Tram Supplier or any Tram Supplier Party;

29.1.3 be responsible for the costs associated with the strengthening of any bridges or altering or improving any road communicating with or on route to the Depot to facilitate the movement and delivery of the Trams to the Depot;

29.1.4 be solely responsible for unloading the Trams at the point of delivery;

29.1.5 indemnify the Client and keep the Client indemnified against any and all Losses suffered or incurred by the Client arising out of or in connection with the movement and delivery of the Trams to the Depot, the unloading, loading or other removal or storage of that Tram at the point of delivery; and

29.1.6 be responsible for obtaining such export and import licences and other consents in relation to the Trams as are from time to time required and, if required by the Client

will make those licences and consents available to the Client prior to the relevant shipment.

29.1.7 if, notwithstanding Clause 29.1.2, any damage occurs to any bridge or road communicating with or on the route to the Depot arising from the transport of the Trams, notify the Client's Representative as soon as the Tram Supplier becomes aware of such damage or as soon as the Tram Supplier receives any claim from the authority entitled to make such claim. For the avoidance of doubt, the Client shall not be liable for any costs charges or expenses in respect thereof in relation thereto.

29.2 In relation to all Tram delivery dates set out in the Tram Manufacturing and Delivery Programme, time shall be of the essence (save in circumstances where an extension of time is granted pursuant to the express terms of this Agreement).

30. TRAM DELIVERY TESTS AND CERTIFICATION

30.1 Tram Delivery Tests shall be conducted by the Tram Supplier on all Trams on delivery (or as soon as reasonably practicable thereafter) to the Depot and witnessed by the Tram Inspector.

30.2 The Certificate of Tram Delivery in respect of any Tram shall not be issued before:

30.2.1 all Tram Documentation has been received in accordance with the Tram Documentation Delivery Programme;

30.2.2 all of the Tram Delivery Tests in respect of that Tram have been satisfactorily completed;

30.2.3 the Tram Inspector is satisfied that the Tram conforms with the Tram Requirements Specification and all other requirements of this Agreement; and

30.2.4 in respect of the twenty seventh Certificate of Tram Delivery only, the Reliability Bond has been put in place in accordance with Clause 44 (*Bonds and Collateral Warranty*);

(together, the "**Tram Delivery Requirements**").

30.3 If the Tram fails to meet the Tram Delivery Requirements then the Tram Inspector shall issue a Tram Rejection Notice, identifying the Testing Failures and the Tram Supplier shall propose a rectification plan and period for rectification for agreement by the Tram Inspector (such agreement not to be unreasonably withheld or delayed). Once the Tram Supplier has rectified the failures identified in the Tram Rejection Notice in accordance with the rectification plan

and within the rectification period, the Tram Supplier shall resubmit the Tram to be tested in accordance with the Tram Delivery Tests and the process set out in this Clause 30 (*Tram Delivery Tests and Certification*) shall be repeated until the Tram Inspector issues a Certificate of Tram Delivery in respect of the rejected Tram.

30.4 The Tram Inspector shall have the right to require the Tram Supplier to repeat any Tram Delivery Test if:

30.4.1 the Tram Supplier has been unable to provide to the Tram Inspector such written evidence, details or other information as the Tram Inspector may reasonably require to evidence that the Tram Delivery Tests have been properly conducted and that the conditions for the issue of a Certificate of Tram Delivery set out in this Clause 30 (*Tram Delivery Tests and Certification*) are satisfied; or

30.4.2 the Tram Inspector is not reasonably satisfied that:

30.4.2.1 any part of the Tram Delivery Test has been or is being conducted properly;
or

following any part of the Tram Delivery Test having been conducted, a Tram, in any respect, satisfies the conditions for the issue of such a Certificate of Tram Delivery.

31. TRAINING, COMMISSIONING, TESTING AND CERTIFICATION

31.1 The Tram Supplier, the Client, **tie** and the Operator shall within 12 months of the Commencement Date (each party acting reasonably and in good faith) agree the Training Programme and the detailed implementation of the Training Programme. The Tram Supplier shall implement the Training Programme in accordance with this Clause 31 (*Training, Commissioning, Testing and Certification*) and the terms of the Training Programme.

31.2 The Tram Supplier acknowledges that **tie** shall procure that on the date falling no later than two weeks prior to the date on which the first Tram is scheduled for delivery the Operator shall provide 4 drivers (in each case appropriately qualified) ready to commence the Training Programme and once trained participate in the Tram Delivery Tests and Tram Commissioning Tests. The Tram Supplier further acknowledges that **tie** shall procure that on the date on which the first Tram has been issued with a Certificate of Tram Delivery there are a further 2 drivers and 10 maintenance staff (in each case appropriately qualified) ready to commence the Training Programme and, if required, once trained participate in the Tram Delivery Tests and Tram Commissioning Tests.

- 31.3 The Client shall procure that, for the purposes of the Tram Commissioning Tests the following are made available to the Tram Supplier:
- 31.3.1 the Depot (to the extent necessary for the Tram Commissioning Tests); and
 - 31.3.2 the Test Track, power supplies and other facilities, as required to meet the Tram Manufacturing and Delivery Programme;
- 31.4 The Tram Supplier acknowledges that **tie** shall procure reasonable assistance from the Operator in relation to the provision of operational staff, including drivers, (subject to appropriate training by the Tram Supplier pursuant to Clause 31.2);
- 31.5 The Tram Supplier and the Client shall, and the Client shall procure that all other relevant Client Parties shall, observe all reasonable requirements of the Operator (as may be notified in writing by **tie** to the Client) during the carrying out of the Tram Commissioning Tests, to use reasonable endeavours to:
- 31.5.1 preserve health and safety;
 - 31.5.2 protect the Trams against damage; and
 - 31.5.3 avoid unnecessary disruption to the Operator's operations;
- 31.6 The Tram Supplier shall make available throughout the Tram Commissioning Tests qualified staff to:
- 31.6.1 conduct, supervise and record the results of all the Tram Commissioning Tests; and;
 - 31.6.2 respond to all reasonable enquiries about the condition or performance of the Trams and the major systems, sections, apparatus, equipment, components, internal seating, fixtures and fittings and devices, system configuration, modification status and software version control including all structural, electrical, hydraulic and other major components and assemblies and to rectify any failures of the same;
- 31.7 Subject to the provision by the Client and **tie** of the requisite operational facilities and staff:
- 31.7.1 the Tram Supplier shall conduct the Site Commissioning Type Tests and the Client shall conduct the System Integration Type Tests on the first Tram; and
 - 31.7.2 the Tram Supplier shall conduct the Site Commissioning Routine Tests and the Client shall conduct the System Integration Routine Tests on every Tram.

31.8 Subject to Clause 31.12, the Certificate of Tram Commissioning in respect of a Tram shall not be issued before:

31.8.1 all Tram Documentation has been received in accordance with the Tram Documentation Delivery Programme;

31.8.2 all of the Tram Commissioning Routine Tests in respect of that Tram have been satisfactorily completed; and

31.8.3 the Tram Inspector is satisfied that the Tram is in accordance with the terms of the Tram Requirements Specification and all other requirements of this Agreement,

(together the "**Tram Commissioning Requirements**").

31.9 The Tram Inspector shall issue a certificate ("**Tram Commissioning Type Test Certificate**") when the specified number of Trams (identified in the Tram Commissioning Type Tests) in the reasonable opinion of the Tram Inspector have completed and passed the Tram commissioning type tests ("**Tram Commissioning Type Tests**") as detailed in section 23 of the Tram Employer's Requirements. Notwithstanding any other provisions of this Clause 31 (*Training, Commissioning, Testing and Certification*) no Certificate of Tram Commissioning shall be issued in respect of any Tram until the Tram Supplier has been issued with a Tram Commissioning Type Test Certificate.

31.10 If a Tram does not meet the Tram Commissioning Requirements to the reasonable satisfaction of the Tram Inspector then the Tram Inspector may issue a Tram Rejection Notice, identifying the Testing Failures and the Tram Supplier shall propose a rectification plan and period for rectification for agreement by the Tram Inspector (such agreement not to be unreasonably withheld or delayed). Once the Tram Supplier has (at its own cost) rectified the failures identified in the Tram Rejection Notice in accordance with the rectification plan and within the rectification period, the Tram Supplier shall resubmit the Tram to be commissioned in accordance with the relevant Tram Commissioning Routine Tests and/or Tram Commissioning Type Tests and the process set out in this Clause 31 (*Training, Commissioning, Testing and Certification*) shall be repeated until the Tram Inspector issues a Certificate of Tram Commissioning.

31.11 The Tram Inspector shall have the right to require the Tram Supplier to repeat any Routine Test and/or Type Test if:

31.11.1 the Tram Supplier has been unable to provide to the Tram Inspector such written evidence, details or other information as the Tram Inspector may reasonably require to

evidence that the Tram Commissioning Routine Tests and/or Tram Commissioning Type Tests have been properly conducted and that the conditions for the issue of a Certificate of Tram Commissioning set out in this Clause 31 (*Training, Commissioning, Testing and Certification*) are satisfied; or

31.11.2 the Tram Inspector is not reasonably satisfied that:

31.11.2.1 any part of the Tram Commissioning Routine Test and/or Tram Commissioning Type Test has been or is being conducted properly; or

31.11.2.2 following any part of the Tram Commissioning Routine Test and/or Tram Commissioning Type Test having been conducted, a Tram, in any respect, satisfies the conditions for the issue of such a Certificate of Tram Commissioning.

31.12 Notwithstanding any other provision of this Clause 31 (*Training, Commissioning, Testing and Certification*) once the Tram Supplier has been issued with a Tram Commissioning Type Test Certificate no further Tram Commissioning Type Tests shall be conducted (unless any one or more of such Tram Commissioning Type Tests are also Tram Commissioning Routine Tests);

31.13 Following the issue of the first Certificate of Tram Commissioning, the Tram issued with such a certificate shall be weighed in accordance with part 2 of Schedule 5 (*Payments*).

32. REPEATED TESTING AND COMMISSIONING FAILURES

32.1 If at any time four or more Trams have been issued with a Tram Rejection Notice then, unless the Tram Supplier can demonstrate to the reasonable satisfaction of the Client that the causes of such notices have been rectified, the Client may issue a written notice to the Tram Supplier setting out the fact that four or more Trams have been issued with a Tram Rejection Notice and requesting that the Tram Supplier submits a remedy plan in relation to such failure ("**Repeated Failure Notice**") and until such remedy plan is implemented in accordance with this Clause 32 (*Repeated Testing and Commissioning Failures*):

32.1.1 the Tram Inspector shall not issue any further Certificates of Tram Commissioning;

32.1.2 notwithstanding any other provision of this Agreement, the Client shall not be under any obligation to pay any sums due to the Tram Supplier in relation to which:

32.1.2.1 an invoice has been raised but not yet paid; or

32.1.2.2 the Tram Supplier subsequently raises an invoice;

- 32.1.3 the Client shall not be under any obligation to accept delivery of further Trams and the Tram Supplier shall pay Liquidated Damages where applicable in accordance with Clause 41 (*Liability, Indemnities, Retention and Liquidated Damages*).
- 32.2 Upon receipt of a Repeated Failure Notice, the Tram Supplier shall promptly propose a remedy plan for agreement by the Tram Inspector, the Client's Representative and **tie's** Representative (such agreement not to be unreasonably withheld or delayed) ("**Repeated Failure Remedy Plan**").
- 32.3 If the Tram Inspector, the Client's Representative and **tie's** Representative agree the Repeated Failure Remedy Plan, the Tram Supplier shall promptly implement, at its own cost and expense, the Repeated Failure Remedy Plan. Provided that the Repeated Failure Remedy Plan has been implemented to the reasonable satisfaction of the Tram Inspector, the Client's Representative and **tie's** Representative:
- 32.3.1 the Client shall accept delivery of those Trams awaiting to be dispatched to the Depot subject to Clause 0 (*Pre-Delivery Inspections and Factory Acceptance Tests*) and in accordance with Clause 0 (*Delivery*),
- 32.3.2 the Client shall within 30 days pay all sums due to the Tram Supplier in respect of those invoices raised before the date of the Repeated Failure Notice (save for invoices which are the subject of genuine dispute other than pursuant to Clause 32.1.2); and
- 32.3.3 the Tram Inspector shall issue a Certificate of Tram Commissioning in respect of those Trams which have passed the relevant tests as a result of the Tram Supplier implementing the Repeated Failure Remedy Plan.
- 32.4 If the Tram Inspector, the Client's Representative and **tie's** Representative do not agree the Repeated Failure Remedy Plan, the provisions of Clauses 32.1.1 to 32.1.3 shall continue to apply until the date on which an alternative remedy plan is agreed by the Tram Inspector, the Client's Representative and **tie's** Representative (such agreement not to be unreasonably withheld or delayed) and successfully implemented by the Tram Supplier to the reasonable satisfaction of the Tram Inspector, the Client's Representative and **tie's** Representative whereupon the provisions of Clause 32.3 shall apply.
- 32.5 If the Tram Supplier fails to implement any agreed Repeated Failure Remedy Plan in accordance with its terms then the provisions of Clauses 32.1.1 to 32.1.3 shall continue to apply until the date on which the Tram Supplier implements such Repeated Failure Remedy

Plan to the reasonable satisfaction of the Tram Inspector, the Client's Representative and **tie's** Representative whereupon the provisions of Clause 32.3 shall apply.

32.6 The Tram Supplier shall not be entitled to any extensions of time to comply with any Milestone or Agreed Delivery Date, as a result of the occurrence of a failure in accordance with this Clause 32 (*Repeated Testing and Commissioning Failures*).

32.7 Any disputes which arise between the Tram Supplier and the Client's Representative shall be resolved in accordance with the Dispute Resolution Procedure.

The Client Representative, if requested by the Client, **tie** and any **tie** Party shall be entitled to attend and witness the carrying out of inspections and tests to be performed by the Tram Inspector pursuant to Clauses 28 (*Pre-Delivery Inspections and Factory Acceptance Tests*) to 32 (*Repeated Testing and Commissioning Failures*) (inclusive).

33. TRAM DOCUMENTATION

33.1 The Tram Supplier shall provide to the Client the Tram Documentation in accordance with the Tram Documentation Delivery Programme. The Tram Documentation shall be subject to approval by the Client.

33.2 The Tram Supplier shall until the expiry of the last of:

33.2.1 the Primary Tram Warranty Period in respect of all aspects of the Trams which are not Paint or Finishes or Extended Tram Warranty Parts;

33.2.2 the Paint and Finish Warranty Period in respect of the Paint and Finishes; and

33.2.3 the Extended Tram Warranty Period in respect of the Extended Tram Warranty Parts,

keep the Tram Documentation (held on all media on which such Tram Documentation has been supplied to the Client) current and up to date with (and shall promptly inform the Client of) any changes due to alterations to the Trams made, or authorised, by the Tram Supplier, availability of parts and components, identified faults in existing procedures or other relevant circumstances covered under the relevant warranty provided that the Tram Supplier shall in respect of a defect first identified during any Warranty Period, update the Tram Documentation upon a solution being found notwithstanding that the relevant Warranty Period may have elapsed. If an Identified Defect is notified to the Tram Supplier under a Warranty and is repaired by the Tram Supplier under Warranty, the Tram Supplier shall, as part of the repair process, update the Tram Documentation in relation to the Identified Defect repaired.

The Tram Supplier shall update the Tram Documentation upon any changes introduced by the Tram Supplier, which arise as a result of an Client Change or which result from a Change in Law.

33.3 Without prejudice to Clause 33.2, the Tram Supplier shall as soon as reasonably practicable and in any event within 28 days of the occurrence of any relevant event referred to in this Clause 33.3, update the Tram Documentation (held on all media on which such Tram Documentation has been supplied to the Client):

33.3.1 if the Tram Requirements Specification is amended after a Certificate of Tram Commissioning is issued in respect of a Tram;

33.3.2 in the event that at any time during the term of this Agreement there are product wide changes to the Trams and for the purposes of this Clause 33.3.2, "product wide changes" shall mean changes made to a Tram or a component or part of a Tram as a result of a modification to a tram, component or part of a tram by the Tram Supplier that has been applied to the Trams; or

33.3.3 where reasonably requested by the Client:

33.3.3.1 during the period from the date on which the first Tram delivered is issued with a Certificate of Tram Commissioning until the date on which the last Tram to be issued with a Certificate of Tram Commissioning is issued with a Certificate of Tram Commissioning; and

33.3.3.2 once the last Tram to be issued with a Certificate of Tram Commissioning is issued with a Certificate of Tram Commissioning, during a period of no more than 9 months from the date on which such Certificate of Tram Commissioning is issued.

33.4 The Tram Supplier shall ensure that the Tram Documentation shall:

33.4.1 be complete and of good legible quality, in the English Language;

33.4.2 contain all necessary drawings and all drawings shall set out:

33.4.2.1 equipment title;

33.4.2.2 unique document number;

33.4.2.3 number of pages;

33.4.2.4 revision number, date of revision and content of any revision (where applicable);

33.4.2.5 originator, checker and authorised signature; and

33.4.2.6 (where larger than A3 size) be capable of being photo reduced to A3 size without loss of clarity; and

33.4.3 wherever practicable, be provided both in hard copy and electronic media and all electronic media shall:

33.4.3.1 be provided in suitable Microsoft Office or Adobe Acrobat format (which shall, for the avoidance of doubt, be easily printable and electronically copiable); and

33.4.3.2 shall be delivered virus checked in accordance with Good Industry Practice.

33.5 Such of the Tram Documentation, including that Tram Documentation referred to in Clause 33.3, that relates exclusively to Software shall, as soon as reasonably practicable and in any event within 25 Business Days of the Software having been updated, be deposited by the Tram Supplier as escrow material in accordance with the Escrow Agreement. The Client shall have equivalent access rights to the material as to the Tram Documentation save only that the Client shall only have access to said escrow material in the circumstances set out in the Escrow Agreement.

51. COPYRIGHT AND INTELLECTUAL PROPERTY

51.1 All Tram Supplier IPR shall continue to be owned by the Tram Supplier.

51.2 The Tram Supplier hereby:

51.2.1 assigns by way of future assignation to the Client with full title guarantee the Project IPR which is created by it and shall procure that Project IPR created by any Tram Supplier Party is also so assigned, for all of the residue of the term of such rights and all renewals or extensions thereof and together with all accrued causes of action in respect thereof;

51.2.2 grants to the Client a non-exclusive perpetual irrevocable royalty free licence to use such Tram Supplier IPR as may be necessary for the Client to use in relation to the Tram Supplier's scope of supply and having regard to the operating, maintaining and

repairing of the Edinburgh Tram Network, and including any and all Intellectual Property Rights which subsist at any time in:

51.2.2.1 the Tram Documentation;

51.2.2.2 the Trams; and

51.2.2.3 Spare Parts and/or Special Tools.

For clarity, nothing within this sub-clause shall permit the Client to use Tram Supplier IPR for any commercial or tendering purposes (except by CEC, TEL or **tie** Limited in connection with the extension or expansion of the infrastructure of the Edinburgh Tram Network). Such Tram Supplier IPR shall not, without the express written consent of the Tram Supplier, be used, copied or disclosed in whole or in part by the Client other than for the purposes outlined in this Clause 51.2.2;

51.2.3 grants to the Client, with the prior written consent of the Tram Supplier (such consent not to be unreasonably withheld or delayed) the right to grant non-exclusive non-assignable sub-licences to third parties for such lengths of time as the Client may reasonably require and otherwise on the same terms as the licence granted to the Client pursuant to Clause 51.2.2 above, to use the Tram Supplier IPR referred to in that Clause (other than in relation to Third Party Software in respect of which the Tram Supplier shall use its reasonable endeavours to obtain the grant of a license to use such Software in so far as is necessary or desirable for such third party to use such Tram Supplier IPR in relation to any projects associated with the Tram Works including in relation to any extension or expansion of the Edinburgh Tram Network;

51.3 The Tram Supplier shall promptly deliver to the Client copies of all Tram Supplier IPR licensed to the Client pursuant to this Clause 51 (*Copyright and Intellectual Property*).

51.4 For the avoidance of doubt, the persons to whom the Client may grant sub-licences pursuant to Clause 51.2.3 shall include:

51.4.1 **tie** and any **tie** Party;

51.4.2 any Client Party;

51.4.3 the Operator and any party other than the Operator providing support to **tie** in relation to the System;

51.4.4 the SDS Provider;

- 51.4.5 the Tram Maintainer;
- 51.4.6 CEC and Transport Edinburgh Limited with the prior written consent of the Tram Supplier such consent not to be unreasonably withheld
- 51.4.7 any assignee or transferee under this Agreement;
- 51.4.8 any party providing maintenance in respect of the Edinburgh Tram Network.
- 51.5 The Client hereby grants to the Tram Supplier a non-exclusive revocable royalty free licence for the duration of this Agreement to use such Project IPR as is owned by it as may be necessary for the Tram Supplier to use solely and exclusively for the purpose of performing the Tram Works.
- 51.6 The copyright of this Agreement and any data or software supplied to the Tram Supplier by the Client, shall remain solely with the Client.
- 51.7 The Tram Supplier shall at any time and from time to time hereafter at the request of the Client execute all such documents and do all such further acts as may be required in order to vest the rights referred to in Clause 51.2.1 in the Client.
- 51.8 The Tram Supplier waives any and all moral rights held or to be held by the Tram Supplier in the Deliverables and Project IPR and shall use best endeavours that all of the Tram Supplier Parties who are authors of the whole or any part of the Project IPR waive and abandon in writing all moral rights.
- 51.9 The Tram Supplier agrees that all rights in the Project IPR shall remain the property of the Client and the Tram Supplier shall retain no rights in the Project IPR beyond the licence granted in Clause 51.5. The Tram Supplier shall be entitled to use such Project IPR only on the terms set out herein and solely for the purpose of the performance of the Tram Works. In particular, otherwise as permitted in this Agreement herein, the Tram Supplier shall not disclose, assign, sub-license, lease, rent or otherwise dispose of the Project IPR.
- 51.10 The Client shall be entitled to use the rights granted to it pursuant to Clause 51.2 (and to sub-license to third parties such rights) to perform its obligations and exercise its rights and allow all Client Parties to perform their obligations and exercise their rights in respect of the Project, such performance of rights and exercise of obligations to include:
- 51.10.1 carrying out any necessary completion of the design, manufacture, construction and commissioning of any Trams and each part thereof;

- 51.10.2 carrying out any and all work in relation to the design and construction, testing and operation of the System;
- 51.10.3 carrying out all and any necessary maintenance, repairs and work including work to rectify any faults with the Spare Parts and Special Tools or breach of the Warranties and to modify them to comply with any Law or other mandatory requirements or otherwise;
- 51.10.4 making copies of using and reproducing in any format the Tram Documentation and all other documents which the Tram Supplier is required to deliver in accordance with this Agreement for the purposes of maintenance and repair of the Trams and/or the maintenance of the Spare Parts and Special Tools but only such copies as may be reasonably necessary to achieve such purpose; and
- 51.10.5 enabling and allowing relevant third parties to perform their obligations in respect of the Project.
- 51.11 For the purposes of this Clause 51 (*Copyright and Intellectual Property*), "use" shall include the acts of copying, modifying, adapting and translating the material in question and/or incorporating them with other materials and the term "the right to use" shall be construed accordingly.
- 51.12 The Tram Supplier:
- 51.12.1 hereby grants to the Client, free of charge, an irrevocable, perpetual, non-exclusive and transferable (but only to any assignee or transferee of any rights or benefits under this Agreement or upon or at any time following termination or expiry of this Agreement) a licence (carrying the right to grant sub-licences) to use the Intellectual Property Rights which are or become at any time during the Term vested in the Tram Supplier to the same extent as the Tram Supplier has acquired such rights; and
- 51.12.2 shall in respect of any of the Intellectual Property Rights which the Tram Supplier is not entitled to license to the Client pursuant to Clause 51.2, use its best endeavours to procure the grant of a licence from the owners of such Intellectual Property Rights in favour of the Client in substantially the same terms as the licence set forth in Clause 51.2.
- 51.13 The Client shall not exercise any of the rights licensed to it pursuant to this Clause 51 (*Copyright and Intellectual Property*) to design, construct, manufacture or commission or

have designed, constructed, manufactured or commissioned any of the Trams or any part thereof unless and until:

51.13.1 the Client and the Tram Supplier cannot agree a price and/or delivery time in relation to a Spare Part or Special Tool pursuant to Clause 34.3; and/or

51.13.2 there occurs a Tram Supplier Default;

51.14 The Client shall not be entitled to adapt, reverse engineer, decompile, disassemble and/or modify the Tram Supplier Software in whole or in part except:

51.14.1 as permitted by Law; and

51.14.2 to the extent that such action is legitimately required for the purposes of integrating the operation of the Tram Supplier Software with the operation of other software or systems used by the Client or any of the Client Parties on the Edinburgh Tram Network.

51.15 All payments and royalties payable in one sum or by instalments or otherwise in connection with Intellectual Property Rights used by the Tram Supplier in connection with or to enable the Tram Supplier to carry out the Project or licensed to the Client shall be deemed to be included in the Aggregate Tram Price and shall be paid by the Tram Supplier to those to whom they may be due or payable.

51.16 Where a claim or proceeding is made or brought against the Client or its permitted licensees which arises out of the infringement of any Intellectual Property Rights in any materials provided by the Tram Supplier or any Tram Supplier Party to the Client then the Tram Supplier shall indemnify and keep the Client indemnified on demand at all times from and against all Indemnified Liabilities arising in connection with such claim or proceedings.

51.17 The provisions of this Clause 51 (*Copyright and Intellectual Property*) shall apply during the continuance of this Agreement and after its termination howsoever arising, and immediately following termination howsoever arising, the Tram Supplier shall provide the Client with:

51.17.1 a copy of the Object Code on media that is reasonably acceptable to the Client; and

51.17.2 a copy of all documentation, manuals and other technical information relating to the Software that is reasonably required by the Client;

51.18 The Tram Supplier shall not reproduce or publish any document or matter relating to the Tram Works or this Agreement, either alone or in association with any other body or person, without the prior written consent of the Client.

51.19 Software

51.19.1 In designing and creating Tram Supplier Software forming part of the Deliverables, the Tram Supplier shall ensure (and the Tram Inspector shall audit):

51.19.1.1 that orderly auditable records of the progress of the development of the Tram Supplier Software from the functional requirements to the final code are maintained, and that regular verification and testing occurs at each stage of the design process;

51.19.1.2 that it shall produce, during the development of the Tram Supplier Software comprehensive and accurate documentation including specifications, cause and effect charts and flowcharts are produced;

51.19.1.3 that the documentation, access rights, details of configuration software and the like produced in accordance with Clause 51.19.1.1, is such as to enable an appropriately qualified independent auditor (who is not involved in the original design) to:

- (i) relate the Tram Supplier Software to the performance of the relevant equipment under normal and fault conditions;
- (ii) to verify its compliance with the functional requirements of that equipment; and
- (iii) to operate and reconfigure the Tram Supplier Software without the assistance of the Infracore; and

51.19.1.4 that the Tram Supplier Software is designed, developed and documented following an industry-recognised standard (and where no particular standard is required by the Upgrade Works Specifications or Central SCADA Works Specifications (as such terms are used in the Employer's Requirements)), using recognised quality control methods.

51.19.2 Subject to the terms of any Third Party Software Licence, the Tram Supplier shall to a reasonable extent, create or provide:

51.19.2.1 coding and documentation, in machine readable form, of the final structure of the Tram Supplier Software, and of the intermediate stages leading to it (i.e. source and object codes); and

51.19.2.2 where the Client so instructs, usable copies of any ancillary computer programs used to generate the code (such as compilers) provided that the Client meet the costs of any additional Third Party Software Licence.

51.19.3 Where the Tram Supplier is required to provide Tram Supplier Software as part of a Deliverable under this Agreement it shall, within thirty (30) days of acceptance of the Tram Supplier Software by the Client place, or shall procure the placement of, a copy of the source code of the Tram Supplier Software in escrow with the NCC Group of Manchester Technology Centre, Oxford Road, Manchester ("**NCC**") or such other escrow agent as the Parties may agree. The Parties shall enter into NCC's standard escrow agreement (provided that, in the case of Third Party Software, the Tram Supplier shall procure that the owner of such software enters into such escrow agreement) for a single licensee (or if no such agreement exists, the appropriate standard agreement as stipulated by NCC). The cost of such source code deposit (including all renewal costs) shall be payable by the Client.

Technical Library

51.20 The Tram Supplier shall;

51.20.1 as soon as reasonably practicable shall cooperate with the Client in the establishment by the Client of a secure, virtual electronic site for the storage of Deliverables other than the source code (the "**Technical Library**"). Such electronic site shall be capable of being accessed through a standard web browser. At the Client's request, the Tram Supplier will in addition also cooperate with the Client in delivering and managing documents to establish a physical site with paper copies of the Technical Library;

51.20.2 as and when Deliverables (other than the source code) are produced or updated from time to time:

51.20.2.1 where such Deliverables are produced or updated by the Tram Supplier, promptly ensure that a copy of those Deliverables or its updated version is placed in the Technical Library;

51.20.2.2 where such Deliverables are produced or updated by any sub-contractor of the Tram Supplier, as soon as reasonably practical ensure that a

copy of those Deliverables or their updated version(s) are placed in the Technical Library;

51.20.2.3 establish an index, in a format approved by the Client, of all Deliverables deposited in the Technical Library from time to time and update that index whenever any such Deliverables are deposited in the Technical Library;

51.20.2.4 deliver one copy of the index and each update established under Clause 51.20.2.3 to the Client; and

51.20.2.5 permit the Client (or its nominee) to have access to the Technical Library from time to time during normal business hours, and following reasonable notice from the Client (or its nominee) to the Tram Supplier, for the purpose only of auditing its contents against the current catalogue.

51.21 Within three Business Days of the earlier of the release of the Reliability Bond or the termination of this Agreement, the Tram Supplier shall hand over the Technical Library, and the secure access to it, to the Client and the Tram Supplier's obligations in relation to the further maintenance of the Technical Library shall cease. Should an audit of the contents of the Technical Library against the current catalogue reveal that the index does not contain details of categories or types of Deliverables which should be contained within the Technical Library, the Client may request and the Tram Supplier grants access to the Client to the Technical Library from time to time during business hours in order to audit the contents of the Technical Library to determine whether such categories and types of Deliverables are in fact contained within the Technical Library. Any such request shall be made with reasonable notice and shall indicate with reasonable clarity the technical information or the type of Deliverable which is required for review.

2. In accordance with Clause 8.7 of the Agreement, the Infraco shall procure that the Tram Maintainer complies with the following obligations under the Tram Maintenance Agreement:

50. COPYRIGHT AND INTELLECTUAL PROPERTY

50.1 All Tram Maintainer IPR shall continue to be owned by the Tram Maintainer.

50.2 The Tram Maintainer hereby:

50.2.1 assigns by way of future assignment to the Client with full title guarantee the Project IPR which is created by it and shall procure that Project IPR created by any Tram Maintainer Party is also so assigned, for all of the residue of the term of such rights and all renewals or extensions thereof and together with all accrued causes of action in respect thereof;

50.2.2 grants to the Client a non-exclusive perpetual irrevocable royalty free licence to use such Tram Maintainer IPR as may be necessary for the Client to use in relation to the Tram Maintainer's scope of services and having regard to the operating, maintaining and repairing of the Edinburgh Tram Network, and including any and all Intellectual Property Rights which subsist at any time in:

50.2.1 the Tram Documentation;

50.2.2 the Trams; and

50.2.3 Spare Parts and/or Special Tools.

For clarity, nothing within this sub-clause shall permit the Client to use Tram Maintainer IPR for any commercial or tendering purposes (except by CEC, TEL or **tie** in connection with any extension or expansion of the infrastructure of the Edinburgh Tram Network). Such Tram Maintainer IPR shall not, without the express written consent of the Tram Maintainer, be used, copied or disclosed in whole or in part by the Client other than for the purposes outlined in this Clause 50.2.2; and

50.2.3 grants to the Client, with the prior written consent of the Tram Maintainer (such consent not to be unreasonably withheld or delayed) the right to grant non-exclusive non-assignable sub-licences to third parties for such lengths of time as the Client may reasonably require and otherwise on the same terms as the licence granted to the Client pursuant to Clause 50.2.2, to use the Tram Maintainer IPR referred to in that Clause (other than in relation to Third Party Software in so far as is necessary or

desirable for such third party to use such Tram Maintainer IPR in relation to any projects associated with the Tram Works including in relation to any extension or expansion of the Edinburgh Tram Network).

- 50.3 The Tram Maintainer shall promptly deliver to the Client copies of all Tram Maintainer IPR licensed to the Client pursuant to this Clause 50 (*Copyright and Intellectual Property*).
- 50.4 For the avoidance of doubt, the persons to whom the Client may grant sub-licences pursuant to Clause 50.2.3 shall include:
- 50.4.1 **tie** and any **tie** Party;
 - 50.4.2 any Client Party;
 - 50.4.3 the Operator and any party other than the Operator providing support to **tie** in relation to the System;
 - 50.4.4 the SDS Provider;
 - 50.4.5 the Tram Maintainer;
 - 50.4.6 CEC and Transport Edinburgh Limited with the prior written consent of the Tram Maintainer (such consent not to be unreasonably withheld or delayed);
 - 50.4.7 any assignee or transferee under this Agreement; and
 - 50.4.8 any party providing maintenance in respect of the Edinburgh Tram Network.
- 50.5 The Client hereby grants to the Tram Maintainer a non-exclusive revocable royalty free licence for the duration of this Agreement to use such Project IPR as is owned by it as may be necessary for the Tram Maintainer to use solely and exclusively for the purpose of performing the Tram Works.
- 50.6 The copyright of this Agreement and any data or software supplied to the Tram Maintainer by the Client, shall remain solely with the Client.
- 50.7 The Tram Maintainer shall at any time and from time to time hereafter at the request of the Client execute all such documents and do all such further acts as may be required in order to vest the rights referred to in Clause 50.2.1 in the Client.
- 50.8 The Tram Maintainer waives any and all moral rights held or to be held by the Tram Maintainer in the Deliverables and Project IPR and shall use best endeavours to ensure that all

of the Tram Maintainer Parties who are authors of the whole or any part of the Project IPR waive and abandon in writing all moral rights.

50.9 The Tram Maintainer agrees that all rights in the Project IPR shall remain the property of the Client and the Tram Maintainer shall retain no rights in the Project IPR beyond the licence granted in Clause 50.5. The Tram Maintainer shall be entitled to use such Project IPR only on the terms set out herein and solely for the purpose of the performance of the Tram Works. In particular, otherwise as permitted in this Agreement herein, the Tram Maintainer shall not disclose, assign, sub-license, lease, rent or otherwise dispose of the Project IPR.

50.10 The Client shall be entitled to use the rights granted to it pursuant to Clause 50.2 (and to sub-license to third parties such rights) to perform its obligations and exercise its rights and allow all Client Parties to perform their obligations and exercise their rights in respect of the Project, such performance of rights and exercise of obligations to include:

50.10.1 carrying out any necessary completion of the design, manufacture, construction and commissioning of any Trams and each part thereof;

50.10.2 carrying out any and all work in relation to the design and construction, testing and operation of the System;

50.10.3 carrying out all and any necessary maintenance, repairs and work including to work to rectify any faults with the Spare Parts and Special Tools or breach of the Warranties (as defined in the Tram Supply Agreement) and to modify them to comply with any Law or other mandatory requirements or otherwise;

50.10.4 making copies of using and reproducing in any format the Tram Documentation and all other documents which the Tram Maintainer is required to deliver in accordance with this Agreement for the purposes of maintenance and repair of the Trams and/or the maintenance of the Spare Parts and Special Tools but only such copies as may be reasonably necessary to achieve such purpose; and

50.10.5 enabling and allowing relevant third parties to perform their obligations in respect of the Project.

50.11 For the purposes of this Clause 50 (*Copyright and Intellectual Property*), "use" shall include the acts of copying, modifying, adapting and translating the material in question and/or incorporating them with other materials and the term "the right to use" shall be construed accordingly.

50.12 The Tram Maintainer:

50.12.1 hereby grants to the Client, free of charge, an irrevocable, perpetual, non-exclusive and transferable (but only to any assignee or transferee of any rights or benefits under this Agreement or upon or at any time following termination or expiry of this Agreement) licence (carrying the right to grant sub-licences) to use the Intellectual Property Rights which are or become at any time during the Term vested in the Tram Maintainer to the same extent as the Tram Maintainer has acquired such rights; and

50.12.2 shall in respect of any of the Intellectual Property Rights which the Tram Maintainer is not entitled to license to the Client pursuant to Clause 50.2, use its best endeavours to procure the grant of a licence from the owners of such Intellectual Property Rights in favour of the Client in substantially the same terms as the licence set forth in Clause 50.2.

50.13 The Client shall not exercise any of the rights licensed to it pursuant to this Clause 50 (*Copyright and Intellectual Property*) to design, construct, manufacture or commission or have designed, constructed, manufactured or commissioned any of the Trams or any part thereof unless and until:

50.13.1 the Client and the Tram Maintainer cannot agree a price and/or delivery time in relation to a Spare Part or Special Tool pursuant to Clause 34.3 of the Tram Supply Agreement (Spares and Special Tools); and/or

50.13.2 there occurs a Tram Maintainer Default.

50.14 The Client shall not be entitled to adapt, reverse engineer, decompile, disassemble and/or modify the Tram Maintainer Software in whole or in part except:

50.14.1 as permitted by Law; and

50.14.2 to the extent that such action is legitimately required for the purposes of integrating the operation of the Tram Maintainer Software with the operation of other software or systems used by the Client or any of the Client Parties on the Edinburgh Tram Network.

50.15 All payments and royalties payable in one sum or by instalments or otherwise in connection with Intellectual Property Rights used by the Tram Maintainer in connection with or to enable the Tram Maintainer to carry out the Project or licensed to the Client shall be deemed to be

included in the Services Payment and shall be paid by the Tram Maintainer to those to whom they may be due or payable.

50.16 Where a claim or proceeding is made or brought against the Client or its permitted licensees which arises out of the infringement of any Intellectual Property Rights in any materials provided by the Tram Maintainer or any Tram Maintainer Party to the Client then the Tram Maintainer shall indemnify and keep the Client indemnified on demand at all times from and against all Indemnified Liabilities arising in connection with such claim or proceedings.

50.17 The provisions of this Clause 50 (*Copyright and Intellectual Property*) shall apply during the continuance of this Agreement and after its termination howsoever arising, and immediately following termination howsoever arising, the Tram Maintainer shall provide the Client with:

50.17.1 a copy of the Object Code on media that is reasonably acceptable to the Client; and

50.17.2 a copy of all documentation, manuals and other technical information relating to the Software that is reasonably required by the Client.

50.18 The Tram Maintainer shall not reproduce or publish any document or matter relating to the Tram Works or this Agreement, either alone or in association with any other body or person, without the prior written consent of the Client.

Software

50.19 In designing and creating Tram Maintainer Software forming part of the Deliverables, the Tram Maintainer shall ensure and the Tram Inspector shall audit:

50.19.1 that orderly auditable records of the progress of the development of the Tram Maintainer Software from the functional requirements to the final code are maintained, and that regular verification and testing occurs at each stage of the design process;

50.19.2 that it shall produce, during the development of the Tram Maintainer Software comprehensive and accurate documentation including specifications, cause and effect charts and flowcharts are produced;

50.19.3 that the documentation, access rights, details of configuration software and the like produced in accordance with Clause 50.19.1, is such as to enable an appropriately qualified independent auditor (who is not involved in the original design) to:

- (a) relate the Tram Maintainer Software to the performance of the relevant equipment under normal and fault conditions;
- (b) to verify its compliance with the functional requirements of that equipment; and
- (c) to operate and reconfigure the Tram Maintainer Software without the assistance of the Infracore; and

50.19.4 that the Tram Maintainer Software is designed, developed and documented following an industry-recognised standard, using recognised quality control methods.

50.20 Subject to the terms of any Third Party Software Licence, the Tram Maintainer shall to a reasonable extent, create or provide:

50.20.1 coding and documentation, in machine readable form, of the final structure of the Tram Maintainer Software, and of the intermediate stages leading to it (i.e. source and object codes); and

50.20.2 where the Client so instructs, usable copies of any ancillary computer programs used to generate the code (such as compilers) provided that the Client meets the costs of any additional Third Party Software Licence.

50.21 Where the Tram Maintainer is required to provide Tram Maintainer Software as part of a Deliverable under this Agreement it shall, within thirty (30) days of acceptance of the Tram Maintainer Software by the Client, or shall procure the placement of, a copy of the source code of the Tram Maintainer Software in escrow with the NCC Group of Manchester Technology Centre, Oxford Road, Manchester ("NCC") or such other escrow agent as the Parties may agree. The Parties shall enter into NCC's standard escrow agreement in the form included in Schedule 8 of the Tram Supply Agreement (provided that, in the case of Third Party Software, the Tram Maintainer shall procure that the owner of such software enters into such Escrow Agreement) for a single licensee (or if no such agreement exists, the appropriate standard agreement as stipulated by NCC). The cost of such source code deposit (including all renewal costs) shall be payable by the Client.

Technical Library

50.22 The Tram Maintainer shall:

50.22.1 as soon as reasonably practicable, cooperate with the Client in the establishment by the Client of a secure, virtual electronic site for the storage of Deliverables other than the source code (the "**Technical Library**"). Such electronic site shall be capable of being accessed through a standard web browser. At the Client's request, the Tram Maintainer will in addition also cooperate with the Client in delivering and managing documents to establish a physical site with paper copies of the Technical Library; and

50.22.2 as and when Deliverables (other than the source code) are produced or updated from time to time:

50.22.2.1 where such Deliverables are produced or updated by the Tram Maintainer, promptly ensure that a copy of those Deliverables or its updated version is placed in the Technical Library;

50.22.2.2 where such Deliverables are produced or updated by any subcontractor of the Tram Maintainer, as soon as reasonably practical ensure that a copy of those Deliverables or their updated version(s) are placed in the Technical Library;

50.22.2.3 establish an index, in a format approved by the Client, of all Deliverables deposited in the Technical Library from time to time and update that index whenever any such Deliverables are deposited in the Technical Library;

50.22.2.4 deliver one copy of the index and each update established under Clause 50.22.2.3 to the Client; and

50.22.2.5 permit the Client (or its nominee) to have access to the Technical Library from time to time during normal business hours, and following reasonable notice from the Client (or its nominee) to the Tram Maintainer, for the purpose only of auditing its contents against the current catalogue.

50.23 Within three Business Days of the earlier of the release of the Reliability Bond pursuant to Clause 44.3 of the Tram Supply Agreement or the termination of this Agreement, the Tram Maintainer shall hand over the Technical Library, and the secure access to it, to the Client and

the Tram Maintainer's obligations in relation to the further maintenance of the Technical Library shall cease. Should an audit of the contents of the Technical Library against the current catalogue reveal that the index does not contain details of categories or types of Deliverables which should be contained within the Technical Library, the Client may request, and the Tram Maintainer grants, access to the Technical Library from time to time during business hours in order to audit the contents of the Technical Library to determine whether such categories and types of Deliverables are in fact contained within the Technical Library. Any such request shall be made with reasonable notice and shall indicate with reasonable clarity the technical information or the type of Deliverable which is required for review.



**THIS IS SCHEDULE PART 40 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 40

**ENVIRONMENTAL AND HEALTH AND SAFETY
KEY PERFORMANCE INDICATORS**

Key Performance Indicator	Target
Enforcement Notices	Zero
Fatalities	Zero
RIDDOR Accidents	Accident Frequency Rate: 0.25 for 2008/2009 0.25 for 2009/2010 0.24 for 2010/2011
Incidents (Health, Safety and Environmental)	Initial notification to tie within 24 hours. Submission of formal investigation reports by agreed date.
Incident Report Recommendations	Closed as per agreed dates (none overdue)
Infraco Audits Planned v. Actual	90% of plan
Infraco Site Inspections Planned v. Actual	90% of plan
Non-conformances (raised by tie)	Closed as per agreed dates (none overdue)
tie Audit Findings (Major and Minor)	Closed as per agreed dates (none overdue)
Code of Construction Practice	Zero unauthorised breaches



**THIS IS SCHEDULE PART 41 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 41

GROUND CONDITIONS AND UTILITIES INFORMATION

PART A - SCHEDULE OF KNOWN GROUND CONDITIONS

Reflects contents of CD ULE90130-SW-DTF-01990 Issued to INFRACO Aug 07

Name	Description	Date Modified	Document Date
“Report on Ground Investigation at Edinburgh Airport Rail Link” v1- Draft_Report_EARL_Ground_Investigation_Undertaken_by_SD S.pdf	Report	07/08/07	18/12/06
“Network Rail Ground Investigation – Preliminary Information” v1-Network_Rail_Ground_Investigation_- _Preliminary_Informati.pdf	Report	07/08/07	27/02/07
Ground Investigation Report Norwest Holst V1			
“Preliminary Ground Investigation Information” Preliminary Ground Investigation Information v1.pdf	Report	29/09/06	29/09/06
Appendix A GI Logs 1.pdf	Part of report	29/09/06	
Appendix A GI Logs 2.pdf	Part of report	29/09/06	
Appendix A GI Logs 3.pdf	Part of report	29/09/06	
Appendix A GI Logs 4.pdf	Part of report	29/09/06	
Phase 1 Ground Investigation Layout Plan Sheets 1 to 41.pdf	Part of report	29/09/06	
Ground Investigation Report Norwest Holst V2			
“Preliminary Ground Investigation Information” Infraco ITN - Prelim GI Information v2 formatted. pdf	Report	25/10/06	25/10/06
Norwest Holst Factual Report Issue 2 V1			
“Report on a Ground Investigation Edinburgh Tram Network Project Line 1” Report 1 of 3.pdf	Report	27/02/07	23/01/07
“Report on a Ground Investigation Edinburgh Tram Network Project Line 2, Volume 1” Report 1 of 3.pdf	Report	27/02/07	31/01/07
“Report on a Ground Investigation Edinburgh Tram Network Project Line 2, Volume 1” Report 1 of 3.pdf	Report	27/02/07	31/01/07
"Ground Investigation Final Layout Plan Sheet 1 of 41" ULE90130-SW-GEO-00091.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 2 of 41" ULE90130-SW-GEO-00092.pdf	Drawing	27/02/07	11/01/07

Name	Description	Date Modified	Document Date
"Ground Investigation Final Layout Plan Sheet 3 of 41" ULE90130-SW-GEO-00093.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 4 of 41" ULE90130-SW-GEO-00094.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 5 of 41" ULE90130-SW-GEO-00095.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 6 of 41" ULE90130-SW-GEO-00096.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 7 of 41" ULE90130-SW-GEO-00097.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 8 of 41" ULE90130-SW-GEO-00098.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 9 of 41" ULE90130-SW-GEO-00099.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 10 of 41" ULE90130-SW-GEO-00100.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 11 of 41" ULE90130-SW-GEO-00101.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 12 of 41" ULE90130-SW-GEO-00102.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 13 of 41" ULE90130-SW-GEO-00103.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 14 of 41" ULE90130-SW-GEO-00104.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 15 of 41" ULE90130-SW-GEO-00105.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 16 of 41" ULE90130-SW-GEO-00106.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 17 of 41" ULE90130-SW-GEO-00107.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 18 of 41" ULE90130-SW-GEO-00108.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 19 of 41" ULE90130-SW-GEO-00109.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 20 of 41" ULE90130-SW-GEO-00110.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 21 of 41" ULE90130-SW-GEO-00111.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 22 of 41" ULE90130-SW-GEO-00112.pdf	Drawing	27/02/07	11/01/07
"Ground Investigation Final Layout Plan Sheet 23 of 41" ULE90130-SW-GEO-00113.pdf	Drawing	27/02/07	11/01/07

Name		Description	Date Modified	Document Date
	"Ground Investigation Final Layout Plan Sheet 24 of 41" ULE90130-SW-GEO-00114.pdf	Drawing	27/02/07	11/01/07
	"Ground Investigation Final Layout Plan Sheet 25 of 41" ULE90130-SW-GEO-00115.pdf	Drawing	27/02/07	11/01/07
	"Ground Investigation Final Layout Plan Sheet 26 of 41" ULE90130-SW-GEO-00116.pdf	Drawing	27/02/07	11/01/07
	"Ground Investigation Final Layout Plan Sheet 27 of 41" ULE90130-SW-GEO-00117.pdf	Drawing	27/02/07	11/01/07
	"Ground Investigation Final Layout Plan Sheet 28 of 41" ULE90130-SW-GEO-00118.pdf	Drawing	27/02/07	11/01/07
	"Ground Investigation Final Layout Plan Sheet 29 of 41" ULE90130-SW-GEO-00119.pdf	Drawing	27/02/07	11/01/07
	"Ground Investigation Final Layout Plan Sheet 30 of 41" ULE90130-SW-GEO-00120.pdf	Drawing	27/02/07	11/01/07
	"Ground Investigation Final Layout Plan Sheet 31 of 41" ULE90130-SW-GEO-00121.pdf	Drawing	27/02/07	11/01/07
	"Ground Investigation Final Layout Plan Sheet 32 of 41" ULE90130-SW-GEO-00122.pdf	Drawing	27/02/07	11/01/07
	"Ground Investigation Final Layout Plan Sheet 33 of 41" ULE90130-SW-GEO-00123.pdf	Drawing	27/02/07	11/01/07
	"Ground Investigation Final Layout Plan Sheet 34 of 41" ULE90130-SW-GEO-00124.pdf	Drawing	27/02/07	11/01/07
	"Ground Investigation Final Layout Plan Sheet 35 of 41" ULE90130-SW-GEO-00125.pdf	Drawing	27/02/07	11/01/07
	"Ground Investigation Final Layout Plan Sheet 36 of 41" ULE90130-SW-GEO-00126.pdf	Drawing	27/02/07	11/01/07
	"Ground Investigation Final Layout Plan Sheet 37 of 41" ULE90130-SW-GEO-00127.pdf	Drawing	27/02/07	11/01/07
	"Ground Investigation Final Layout Plan Sheet 38 of 41" ULE90130-SW-GEO-00128.pdf	Drawing	27/02/07	11/01/07
	"Ground Investigation Final Layout Plan Sheet 39 of 41" ULE90130-SW-GEO-00129.pdf	Drawing	27/02/07	11/01/07
	"Ground Investigation Final Layout Plan Sheet 40 of 41" ULE90130-SW-GEO-00130.pdf	Drawing	27/02/07	11/01/07
	"Ground Investigation Final Layout Plan Sheet 41 of 41" ULE90130-SW-GEO-00131.pdf	Drawing	27/02/07	11/01/07

Ground Condition Information

F14480 - Tram Line 1 Vol 1 - "Report on a Ground Investigation at Edinburgh Tram Line 1 - Volume 1 of 3"

F14480 - Tram Line 1 Vol 2 - "Report on a Ground Investigation at Edinburgh Tram Line 1 - Volume 2 of 3"

F14480 - Tram Line 1 Vol 3 - "Report on a Ground Investigation at Edinburgh Tram Line 1 - Volume 3 of 3"

F14480 - FINAL L2 Vol1. - "Report on a Ground Investigation at Edinburgh Tram Line 2 - Volume 1 of 4"

F14480 - FINAL L2 Vol2. - "Report on a Ground Investigation at Edinburgh Tram Line 2 - Volume 2 of 4"

F14480 - FINAL L2 Vol3. - "Report on a Ground Investigation at Edinburgh Tram Line 2 - Volume 3 of 4"

F14480 - FINAL L2 Vol4. - "Report on a Ground Investigation at Edinburgh Tram Line 2 - Volume 4 of 4"

ULE90130-SW-REP-00499 - "Summarising Geotechnical Report - Volume 1 of 2"

**PART B - SCHEDULE OF KNOWN UTILITIES INFORMATION
(SDS ISSUE FOR APPROVAL DRAWINGS)**

IFA DOCUMENTATION

Section 1A Plates 6 – 10

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00006	3	
ULE90130-01-UTL-00106	3	
ULE90130-01-UTL-00206	4	
ULE90130-01-UTL-00306	3	
ULE90130-01-UTL-00406		awaiting sewer drawing
ULE90130-01-UTL-00506	3	
ULE90130-01-UTL-00706	3	
ULE90130-01-UTL-00806	3	
ULE90130-01-UTL-00906	3	
ULE90130-01-UTL-01706	3	
ULE90130-01-UTL-00007	3	
ULE90130-01-UTL-00107	3	
ULE90130-01-UTL-00207	4	
ULE90130-01-UTL-00307	3	
ULE90130-01-UTL-00407		awaiting sewer drawing
ULE90130-01-UTL-00507	3	
ULE90130-01-UTL-00707	3	
ULE90130-01-UTL-00807	3	
ULE90130-01-UTL-00907	3	
ULE90130-01-UTL-01707	3	
ULE90130-01-UTL-00008	3	
ULE90130-01-UTL-00108	3	
ULE90130-01-UTL-00208	4	

ULE90130-01-UTL-00308	3	
ULE90130-01-UTL-00408		awaiting sewer drawing
ULE90130-01-UTL-00508	3	
ULE90130-01-UTL-00708	3	
ULE90130-01-UTL-00808	3	
ULE90130-01-UTL-00908	3	
ULE90130-01-UTL-01708	3	
ULE90130-01-UTL-00009	3	
ULE90130-01-UTL-00109	3	
ULE90130-01-UTL-00209	4	
ULE90130-01-UTL-00309	3	
ULE90130-01-UTL-00409		awaiting sewer drawing
ULE90130-01-UTL-00509	3	
ULE90130-01-UTL-00709	3	
ULE90130-01-UTL-00809	3	
ULE90130-01-UTL-00909	3	
ULE90130-01-UTL-01709	3	
ULE90130-01-UTL-00010	3	
ULE90130-01-UTL-00110	3	
ULE90130-01-UTL-00210	4	
ULE90130-01-UTL-00310	3	
ULE90130-01-UTL-00410		awaiting sewer drawing
ULE90130-01-UTL-00510	3	
ULE90130-01-UTL-00710	3	
ULE90130-01-UTL-00810	3	
ULE90130-01-UTL-00910	3	
ULE90130-01-UTL-01710	3	

ULE90130-01-CAL-00103 (SGN)	3	
ULE90130-01-CAL-00104 (SP)	4	
ULE90130-01-CAL-00105 (SW Clean)	3	
(Sewer)		awaiting sewer schedule
ULE90130-01-CAL-00107 (BT)	3	
ULE90130-01-CAL-00108 (VM)	3	
ULE90130-01-CAL-00109 (C&W)	3	
ULE90130-01-CAL-00110 (Thus)	3	
ULE90130-01-CAL-00111 (Forth Ports)	3	

Section 1A Plates 13 – 15

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00013	3	
ULE90130-01-UTL-00113	3	
ULE90130-01-UTL-00213	3	
ULE90130-01-UTL-00313	3	
ULE90130-01-UTL-00413		awaiting sewer drawing
ULE90130-01-UTL-00513	3	
ULE90130-01-UTL-00713	3	
ULE90130-01-UTL-00813	3	
ULE90130-01-UTL-00913	3	
ULE90130-01-UTL-01613	3	
ULE90130-01-UTL-01713	3	
ULE90130-01-UTL-00014	3	

ULE90130-01-UTL-00114	3	
ULE90130-01-UTL-00214	3	
ULE90130-01-UTL-00314	3	
ULE90130-01-UTL-00414		awaiting sewer drawing
ULE90130-01-UTL-00514	3	
ULE90130-01-UTL-00714	3	
ULE90130-01-UTL-00814	3	
ULE90130-01-UTL-00914	3	
ULE90130-01-UTL-01614	3	
ULE90130-01-UTL-01714	3	
ULE90130-01-UTL-00015	3	
ULE90130-01-UTL-00115	3	
ULE90130-01-UTL-00215	3	
ULE90130-01-UTL-00315	3	
ULE90130-01-UTL-00415		awaiting sewer drawing
ULE90130-01-UTL-00515	3	
ULE90130-01-UTL-00715	3	
ULE90130-01-UTL-00815	3	
ULE90130-01-UTL-00915	3	
ULE90130-01-UTL-01615	3	
ULE90130-01-UTL-01715	3	
Conflict Spreadsheet (13-15) SGN	3	
Conflict Spreadsheet (13-15) SP	3	
Conflict Spreadsheet (13-15) SW Clean	3	
Conflict Spreadsheet (13-15) Sewer		awaiting sewer schedule

Conflict Spreadsheet (13-15) BT	3	
Conflict Spreadsheet (13-15) VM	3	
Conflict Spreadsheet (13-15) C&W	3	
Conflict Spreadsheet (13-15) Thus	3	
Conflict Spreadsheet (13-15) Fourth Ports	3	

Section 1A Plates 16 – 21

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00016	4	
ULE90130-01-UTL-00116	4	
ULE90130-01-UTL-00216	4	
ULE90130-01-UTL-00316	4	
ULE90130-01-UTL-00416		awaiting sewer drawing
ULE90130-01-UTL-00516	4	
ULE90130-01-UTL-00716	4	
ULE90130-01-UTL-00816	4	
ULE90130-01-UTL-00916	4	
ULE90130-01-UTL-01616		no IFA documents
ULE90130-01-UTL-00017	4	
ULE90130-01-UTL-00117	4	
ULE90130-01-UTL-00217	4	
ULE90130-01-UTL-00317	4	
ULE90130-01-UTL-00417		awaiting sewer drawing
ULE90130-01-UTL-00517	4	
ULE90130-01-UTL-00717	4	

ULE90130-01-UTL-00817	4	
ULE90130-01-UTL-00917	4	
ULE90130-01-UTL-01617		no IFA documents
ULE90130-01-UTL-00018	4	
ULE90130-01-UTL-00118	4	
ULE90130-01-UTL-00218	4	
ULE90130-01-UTL-00318	4	
ULE90130-01-UTL-00418		awaiting sewer drawing
ULE90130-01-UTL-00518	4	
ULE90130-01-UTL-00718	4	
ULE90130-01-UTL-00818	4	
ULE90130-01-UTL-00918	4	
ULE90130-01-UTL-01618		no IFA documents
ULE90130-01-UTL-00019	4	
ULE90130-01-UTL-00119	4	
ULE90130-01-UTL-00219	4	
ULE90130-01-UTL-00319	4	
ULE90130-01-UTL-00419		awaiting sewer drawing
ULE90130-01-UTL-00519	4	
ULE90130-01-UTL-00719	4	
ULE90130-01-UTL-00819	4	
ULE90130-01-UTL-00919	4	
ULE90130-01-UTL-01619		no IFA documents
ULE90130-01-UTL-00020	4	
ULE90130-01-UTL-00120	4	
ULE90130-01-UTL-00220	4	
ULE90130-01-UTL-00320	4	

ULE90130-01-UTL-00420		awaiting sewer drawing
ULE90130-01-UTL-00520	4	
ULE90130-01-UTL-00720	4	
ULE90130-01-UTL-00820	4	
ULE90130-01-UTL-00920	4	
ULE90130-01-UTL-01620		no IFA documents
ULE90130-01-UTL-00021	4	
ULE90130-01-UTL-00121	4	
ULE90130-01-UTL-00221	4	
ULE90130-01-UTL-00321	4	
ULE90130-01-UTL-00421		awaiting sewer drawing
ULE90130-01-UTL-00521	4	
ULE90130-01-UTL-00721	4	
ULE90130-01-UTL-00821	4	
ULE90130-01-UTL-00921	4	
ULE90130-01-UTL-01621		no IFA documents
ULE90130-01-CAL-00028 SGN	4	
ULE90130-01-CAL-00029 SP	4	
ULE90130-01-CAL-00030 SW Clean	4	
Conflict Spreadsheet Sewer		awaiting sewer schedule
ULE90130-01-CAL-00032 BT	4	
ULE90130-01-CAL-00033 VM	4	
ULE90130-01-CAL-00034 C&W	4	
ULE90130-01-CAL-00035 Thus	4	

Section 1B Plates 22 – 26

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00022	8	
ULE90130-01-UTL-00122	4	
ULE90130-01-UTL-00222	4	
ULE90130-01-UTL-00322	4	
ULE90130-01-UTL-00422	4	
ULE90130-01-UTL-00522	4	
ULE90130-01-UTL-00722	4	
ULE90130-01-UTL-00822	4	
ULE90130-01-UTL-00922	4	
ULE90130-01-UTL-01622	4	
ULE90130-01-UTL-00023	6	
ULE90130-01-UTL-00123	4	
ULE90130-01-UTL-00223	4	
ULE90130-01-UTL-00323	4	
ULE90130-01-UTL-00423	4	
ULE90130-01-UTL-00523	4	
ULE90130-01-UTL-00723	4	
ULE90130-01-UTL-00823	4	
ULE90130-01-UTL-00923	4	
ULE90130-01-UTL-01623	4	
ULE90130-01-UTL-00024	6	
ULE90130-01-UTL-00124	4	
ULE90130-01-UTL-00224	4	
ULE90130-01-UTL-00324	4	
ULE90130-01-UTL-00424	4	

ULE90130-01-UTL-00524	4	
ULE90130-01-UTL-00724	4	
ULE90130-01-UTL-00824	4	
ULE90130-01-UTL-00924	4	
ULE90130-01-UTL-01624	4	
ULE90130-01-UTL-00025	6	
ULE90130-01-UTL-00125	4	
ULE90130-01-UTL-00225	4	
ULE90130-01-UTL-00325	4	
ULE90130-01-UTL-00425	4	
ULE90130-01-UTL-00525	4	
ULE90130-01-UTL-00725	4	
ULE90130-01-UTL-00825	4	
ULE90130-01-UTL-00925	4	
ULE90130-01-UTL-01625	4	
ULE90130-01-UTL-00026	6	
ULE90130-01-UTL-00126	4	
ULE90130-01-UTL-00226	4	
ULE90130-01-UTL-00326	4	
ULE90130-01-UTL-00426	4	
ULE90130-01-UTL-00526	4	
ULE90130-01-UTL-00726	4	
ULE90130-01-UTL-00826	4	
ULE90130-01-UTL-00926	4	
ULE90130-01-UTL-01626	4	
ULE90130-01-UTL-02101	1	
ULE90130-01-UTL-02102	1	

ULE90130-01-UTL-02103	1	
ULE90130-01-UTL-02104	1	
ULE90130-01-UTL-02105	1	
ULE90130-01-UTL-02106	1	
ULE90130-01-CAL-00036 SGN	4	
ULE90130-01-CAL-00037 SP	4	
ULE90130-01-CAL-00038 SWClean	4	
ULE90130-01-CAL-00039 Sewer	4	
ULE90130-01-CAL-00040 BT	4	
ULE90130-01-CAL-00041 VM	4	
ULE90130-01-CAL-00042 C&W	4	
ULE90130-01-CAL-00043 Thus	4	

Section 1B Plates 27 – 31

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00027	9	
ULE90130-01-UTL-00127	4	
ULE90130-01-UTL-00227	4	
ULE90130-01-UTL-00327	4	
ULE90130-01-UTL-00427	4	
ULE90130-01-UTL-00527	4	
ULE90130-01-UTL-00727	4	
ULE90130-01-UTL-00827	4	
ULE90130-01-UTL-00927	4	

ULE90130-01-UTL-01627		no IFA documents
ULE90130-01-UTL-00028	9	
ULE90130-01-UTL-00128	4	
ULE90130-01-UTL-00228	4	
ULE90130-01-UTL-00328	4	
ULE90130-01-UTL-00428	4	
ULE90130-01-UTL-00528	4	
ULE90130-01-UTL-00728	4	
ULE90130-01-UTL-00828	4	
ULE90130-01-UTL-00928	4	
ULE90130-01-UTL-01628		no IFA documents
ULE90130-01-UTL-00029	9	
ULE90130-01-UTL-00129	4	
ULE90130-01-UTL-00229	4	
ULE90130-01-UTL-00329	4	
ULE90130-01-UTL-00429	4	
ULE90130-01-UTL-00529	4	
ULE90130-01-UTL-00729	4	
ULE90130-01-UTL-00829	4	
ULE90130-01-UTL-00929	4	
ULE90130-01-UTL-01629		no IFA documents
ULE90130-01-UTL-00030	9	
ULE90130-01-UTL-00130	4	
ULE90130-01-UTL-00230	4	
ULE90130-01-UTL-00330	4	
ULE90130-01-UTL-00430	4	
ULE90130-01-UTL-00530	4	

ULE90130-01-UTL-00730	4	
ULE90130-01-UTL-00830	4	
ULE90130-01-UTL-00930	4	
ULE90130-01-UTL-01630		no IFA documents
ULE90130-01-UTL-00031	9	
ULE90130-01-UTL-00131	4	
ULE90130-01-UTL-00231	4	
ULE90130-01-UTL-00331	4	
ULE90130-01-UTL-00431	4	
ULE90130-01-UTL-00531	4	
ULE90130-01-UTL-00731	4	
ULE90130-01-UTL-00831	4	
ULE90130-01-UTL-00931	4	
ULE90130-01-UTL-01631		no IFA documents
ULE90130-01-UTL-00082	1	
ULE90130-01-UTL-00259	1	
ULE90130-01-UTL-02107	1	
ULE90130-01-UTL-02108	1	
ULE90130-01-UTL-02109	1	
ULE90130-01-CAL-00044 SGN	4	
ULE90130-01-CAL-00047 SP	4	
ULE90130-01-CAL-00046 SW		no IFA documents
ULE90130-01-CAL-00047 Sewer	4	
ULE90130-01-CAL-00048 BT	4	
ULE90130-01-CAL-00049 VM	4	

ULE90130-01-CAL-00050 C&W	4	
ULE90130-01-CAL-00051 Thus	4	

Section 1C Plates 32 – 38

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00032	3	
ULE90130-01-UTL-00132	3	
ULE90130-01-UTL-00232	4	
ULE90130-01-UTL-00332	3	
ULE90130-01-UTL-00432		awaiting sewer drawing
ULE90130-01-UTL-00532	3	
ULE90130-01-UTL-00732	3	
ULE90130-01-UTL-00832	3	
ULE90130-01-UTL-00932	3	
ULE90130-01-UTL-00033	3	
ULE90130-01-UTL-00133	3	
ULE90130-01-UTL-00233	4	
ULE90130-01-UTL-00333	3	
ULE90130-01-UTL-00433		awaiting sewer drawing
ULE90130-01-UTL-00533	3	
ULE90130-01-UTL-00733	3	
ULE90130-01-UTL-00833	3	
ULE90130-01-UTL-00933	3	
ULE90130-01-UTL-00034	3	
ULE90130-01-UTL-00134	3	
ULE90130-01-UTL-00234	4	

ULE90130-01-UTL-00334	3	
ULE90130-01-UTL-00434		awaiting sewer drawing
ULE90130-01-UTL-00534	3	
ULE90130-01-UTL-00734	3	
ULE90130-01-UTL-00834	3	
ULE90130-01-UTL-00934	3	
ULE90130-01-UTL-00035	3	
ULE90130-01-UTL-00135	3	
ULE90130-01-UTL-00235	4	
ULE90130-01-UTL-00335	3	
ULE90130-01-UTL-00435		awaiting sewer drawing
ULE90130-01-UTL-00535	3	
ULE90130-01-UTL-00735	3	
ULE90130-01-UTL-00835	3	
ULE90130-01-UTL-00935	3	
ULE90130-01-UTL-00036	3	
ULE90130-01-UTL-00136	3	
ULE90130-01-UTL-00236	4	
ULE90130-01-UTL-00336	3	
ULE90130-01-UTL-00436		awaiting sewer drawing
ULE90130-01-UTL-00536	3	
ULE90130-01-UTL-00736	3	
ULE90130-01-UTL-00836	3	
ULE90130-01-UTL-00936	3	
ULE90130-01-UTL-00037	3	
ULE90130-01-UTL-00137	3	
ULE90130-01-UTL-00237	4	

ULE90130-01-UTL-00337	3	
ULE90130-01-UTL-00437		awaiting sewer drawing
ULE90130-01-UTL-00537	3	
ULE90130-01-UTL-00737	3	
ULE90130-01-UTL-00837	3	
ULE90130-01-UTL-00937	3	
ULE90130-01-UTL-00038	3	
ULE90130-01-UTL-00138	3	
ULE90130-01-UTL-00238	4	
ULE90130-01-UTL-00338	3	
ULE90130-01-UTL-00438		awaiting sewer drawing
ULE90130-01-UTL-00538	3	
ULE90130-01-UTL-00738	3	
ULE90130-01-UTL-00838	3	
ULE90130-01-UTL-00938	3	
ULE90130-01-CAL-00052 SGN	4	
ULE90130-01-CAL-00053 SP	5	
ULE90130-01-CAL-00054 SW	5	
ULE90130-01-CAL-00056 BT	4	
ULE90130-01-CAL-00057 VM	4	
ULE90130-01-CAL-00058 C&W	3	
ULE90130-01-CAL-00059 Thus	4	
ULE90130-01-UTL-00093	3	
ULE90130-01-UTL-00094	3	

ULE90130-01-UTL-00095	2	
ULE90130-01-UTL-00096	2	
ULE90130-01-UTL-00097	2	
ULE90130-01-UTL-00098	2	

Section 1C Plates 39 – 41

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00039	3	
ULE90130-01-UTL-00139	3	
ULE90130-01-UTL-00239	3	
ULE90130-01-UTL-00339	3	
ULE90130-01-UTL-00439		awaiting sewer drawing
ULE90130-01-UTL-00539	3	
ULE90130-01-UTL-00739	3	
ULE90130-01-UTL-00839	3	
ULE90130-01-UTL-00939	3	
ULE90130-01-UTL-01639		no IFA documents
ULE90130-01-UTL-00040	3	
ULE90130-01-UTL-00140	3	
ULE90130-01-UTL-00240	3	
ULE90130-01-UTL-00340	3	
ULE90130-01-UTL-00440		awaiting sewer drawing
ULE90130-01-UTL-00540	3	
ULE90130-01-UTL-00740	3	
ULE90130-01-UTL-00840	3	
ULE90130-01-UTL-00940	3	
ULE90130-01-UTL-01640		no IFA documents

ULE90130-01-UTL-00041	3	
ULE90130-01-UTL-00141	3	
ULE90130-01-UTL-00241	3	
ULE90130-01-UTL-00341	3	
ULE90130-01-UTL-00441		awaiting sewer drawing
ULE90130-01-UTL-00541	3	
ULE90130-01-UTL-00741	3	
ULE90130-01-UTL-00841	3	
ULE90130-01-UTL-00941	3	
ULE90130-01-UTL-01641		no IFA documents
ULE90130-01-UTL-00959	1	new Thus diversion dwg
ULE90130-01-CAL-00060 SGN	3	
ULE90130-01-CAL-00061 SP	3	
ULE90130-01-CAL-00062 SW	3	
ULE90130-01-CAL-00064 BT	3	
ULE90130-01-CAL-00065 VM	3	
ULE90130-01-CAL-00066 C&W	3	
ULE90130-01-CAL-00067 Thus	3	
ULE90130-01-CAL-00121 Thus	1	new Thus diversion sch
ULE90130-01-DRA-00012		no IFA documents

Section 1C Plates 42 – 44

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00042		no IFA documents

ULE90130-01-UTL-00142	4	
ULE90130-01-UTL-00242	4	
ULE90130-01-UTL-00342	4	
ULE90130-01-UTL-00442		
ULE90130-01-UTL-00542	4	
ULE90130-01-UTL-00742	4	
ULE90130-01-UTL-00842	4	
ULE90130-01-UTL-00942	4	
ULE90130-01-UTL-01643		
ULE90130-01-UTL-00043		no IFA documents
ULE90130-01-UTL-00143	4	
ULE90130-01-UTL-00243	4	
ULE90130-01-UTL-00343	4	
ULE90130-01-UTL-00443		
ULE90130-01-UTL-00543	4	
ULE90130-01-UTL-00743	4	
ULE90130-01-UTL-00843	4	
ULE90130-01-UTL-00943	4	
ULE90130-01-UTL-01644		
ULE90130-01-UTL-00044		no IFA documents
ULE90130-01-UTL-00144	4	
ULE90130-01-UTL-00244	4	
ULE90130-01-UTL-00344	4	
ULE90130-01-UTL-00444		
ULE90130-01-UTL-00544	4	
ULE90130-01-UTL-00744	4	
ULE90130-01-UTL-00844	4	

ULE90130-01-UTL-00944	4	
ULE90130-01-UTL-01644		awaiting sewer drawing
ULE90130-01-CAL-00069 SGN	4	
ULE90130-01-CAL-00070 SP	4	
ULE90130-01-CAL-00071 SW	4	
ULE90130-01-CAL-00073 BT	4	
ULE90130-01-CAL-00074 VM	4	
ULE90130-01-CAL-00075 C&W	4	
ULE90130-01-CAL-00076 Thus	4	

Section 1C Plates 45 – 48

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00045	2	
ULE90130-01-UTL-00145	2	
ULE90130-01-UTL-00245	2	
ULE90130-01-UTL-00345	2	
ULE90130-01-UTL-00445		awaiting sewer drawing
ULE90130-01-UTL-00545	2	
ULE90130-01-UTL-00745	2	
ULE90130-01-UTL-00845	2	
ULE90130-01-UTL-00945	2	
ULE90130-01-UTL-01645		no IFA document
ULE90130-01-UTL-00046	2	
ULE90130-01-UTL-00146	2	

ULE90130-01-UTL-00246	2	
ULE90130-01-UTL-00346	2	
ULE90130-01-UTL-00446		awaiting sewer drawing
ULE90130-01-UTL-00546	2	
ULE90130-01-UTL-00746	2	
ULE90130-01-UTL-00846	2	
ULE90130-01-UTL-00946	2	
ULE90130-01-UTL-01646		no IFA document
ULE90130-01-UTL-00047	2	
ULE90130-01-UTL-00147	2	
ULE90130-01-UTL-00247	2	
ULE90130-01-UTL-00347	2	
ULE90130-01-UTL-00447		awaiting sewer drawing
ULE90130-01-UTL-00547	2	
ULE90130-01-UTL-00747	2	
ULE90130-01-UTL-00847	2	
ULE90130-01-UTL-00947	2	
ULE90130-01-UTL-01647		no IFA document
ULE90130-01-UTL-00048	2	
ULE90130-01-UTL-00148	2	
ULE90130-01-UTL-00248	2	
ULE90130-01-UTL-00348	2	
ULE90130-01-UTL-00448		awaiting sewer drawing
ULE90130-01-UTL-00548	2	
ULE90130-01-UTL-00748	2	
ULE90130-01-UTL-00848	2	
ULE90130-01-UTL-00948	2	

ULE90130-01-UTL-01648		no IFA document
ULE90130-01-CAL-00078 SGN	2	
ULE90130-01-CAL-00079 SP	2	
ULE90130-01-CAL-00080 SW	2	
sewer schedule		awaiting sewer schedule
ULE90130-01-CAL-00082 BT	2	
ULE90130-01-CAL-00083 VM	2	
ULE90130-01-CAL-00084 C&W	2	
ULE90130-01-CAL-00085 Thus	2	
ULE90130-01-DRA-00014		no IFA document

Section 1D Plates 49 – 51

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00049	3	
ULE90130-01-UTL-00149	3	
ULE90130-01-UTL-00249	3	
ULE90130-01-UTL-00349	3	
ULE90130-01-UTL-00449		awaiting sewer drawing
ULE90130-01-UTL-00549	3	
ULE90130-01-UTL-00749	3	
ULE90130-01-UTL-00849	3	
ULE90130-01-UTL-00949	3	
ULE90130-01-UTL-01649		no IFA documents
ULE90130-01-UTL-00050	3	

ULE90130-01-UTL-00150	3	
ULE90130-01-UTL-00250	3	
ULE90130-01-UTL-00350	3	
ULE90130-01-UTL-00450		awaiting sewer drawing
ULE90130-01-UTL-00550	3	
ULE90130-01-UTL-00750	3	
ULE90130-01-UTL-00850	3	
ULE90130-01-UTL-00950	3	
ULE90130-01-UTL-01650		no IFA documents
ULE90130-01-UTL-00051	3	
ULE90130-01-UTL-00151	3	
ULE90130-01-UTL-00251	3	
ULE90130-01-UTL-00351	3	
ULE90130-01-UTL-00451		awaiting sewer drawing
ULE90130-01-UTL-00551	3	
ULE90130-01-UTL-00751	3	
ULE90130-01-UTL-00851	3	
ULE90130-01-UTL-00951	3	
ULE90130-01-UTL-01651		no IFA documents
ULE90130-01-CAL-00086 SGN	3	
ULE90130-01-CAL-00087 SP	3	
ULE90130-01-CAL-00088 SW	3	
sewer schedule		awaiting sewer schedule
ULE90130-01-CAL-00090 BT	3	
ULE90130-01-CAL-00091 VM	3	

ULE90130-01-CAL-00092 C&W	3	
ULE90130-01-CAL-00093 Thus	3	

Section 1D Plates 52 – 56

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00052	3	
ULE90130-01-UTL-00152	3	
ULE90130-01-UTL-00252	3	
ULE90130-01-UTL-00352	3	
ULE90130-01-UTL-00452		awaiting sewer drawing
ULE90130-01-UTL-00552	3	
ULE90130-01-UTL-00752	3	
ULE90130-01-UTL-00852	3	
ULE90130-01-UTL-00952	3	
ULE90130-01-UTL-01652		no IFA documents
ULE90130-01-UTL-00053	3	
ULE90130-01-UTL-00153	3	
ULE90130-01-UTL-00253	3	
ULE90130-01-UTL-00353	3	
ULE90130-01-UTL-00453		awaiting sewer drawing
ULE90130-01-UTL-00553	3	
ULE90130-01-UTL-00753	3	
ULE90130-01-UTL-00853	3	
ULE90130-01-UTL-00953	3	
ULE90130-01-UTL-01653		no IFA documents
ULE90130-01-UTL-00054	3	

ULE90130-01-UTL-00154	3	
ULE90130-01-UTL-00254	3	
ULE90130-01-UTL-00354	3	
ULE90130-01-UTL-00454		awaiting sewer drawing
ULE90130-01-UTL-00554	3	
ULE90130-01-UTL-00754	3	
ULE90130-01-UTL-00854	3	
ULE90130-01-UTL-00954	3	
ULE90130-01-UTL-01654		no IFA documents
ULE90130-01-UTL-00055	3	
ULE90130-01-UTL-00155	3	
ULE90130-01-UTL-00255	3	
ULE90130-01-UTL-00355	3	
ULE90130-01-UTL-00455		awaiting sewer drawing
ULE90130-01-UTL-00555	3	
ULE90130-01-UTL-00755	3	
ULE90130-01-UTL-00855	3	
ULE90130-01-UTL-00955	3	
ULE90130-01-UTL-01655		no IFA documents
ULE90130-01-UTL-00056	3	
ULE90130-01-UTL-00156	3	
ULE90130-01-UTL-00256	3	
ULE90130-01-UTL-00356	3	
ULE90130-01-UTL-00456		awaiting sewer drawing
ULE90130-01-UTL-00556	3	
ULE90130-01-UTL-00756	3	
ULE90130-01-UTL-00856	3	

ULE90130-01-UTL-00956	3	
ULE90130-01-UTL-01656		no IFA documents
ULE90130-01-CAL-00101 SGN	3	
ULE90130-01-CAL-00094 SP	3	
ULE90130-01-CAL-00095 SW	3	
sewer schedule		awaiting sewer schedule
ULE90130-01-CAL-00097 BT	3	
ULE90130-01-CAL-00098 VM	3	
ULE90130-01-CAL-00099 C&W	3	
ULE90130-01-CAL-00100 Thus	3	

Section 5A Plates 1 – 3

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-05-UTL-00001		no IFA documents
ULE90130-05-UTL-00101	2	
ULE90130-05-UTL-00201	2	
ULE90130-05-UTL-00301	6	
ULE90130-05-UTL-00401		awaiting sewer drawing
ULE90130-05-UTL-00501		no IFA documents
ULE90130-05-UTL-00701	2	
ULE90130-05-UTL-00801	2	
ULE90130-05-UTL-00901		no IFA documents
ULE90130-05-UTL-01401		no IFA documents
ULE90130-05-UTL-00002		no IFA documents

ULE90130-05-UTL-00102	2	
ULE90130-05-UTL-00202	2	
ULE90130-05-UTL-00302	8	
ULE90130-05-UTL-00402		awaiting sewer drawing
ULE90130-05-UTL-00502		no IFA documents
ULE90130-05-UTL-00702	2	
ULE90130-05-UTL-00802	2	
ULE90130-05-UTL-00902		no IFA documents
ULE90130-05-UTL-01402		no IFA documents
ULE90130-05-UTL-00003		no IFA documents
ULE90130-05-UTL-00103	2	
ULE90130-05-UTL-00203	2	
ULE90130-05-UTL-00303	5	
ULE90130-05-UTL-00403		awaiting sewer drawing
ULE90130-05-UTL-00503		no IFA documents
ULE90130-05-UTL-00703	2	
ULE90130-05-UTL-00803	2	
ULE90130-05-UTL-00903		no IFA documents
ULE90130-05-UTL-01403		no IFA documents
ULE90130-05-UTL-00028		no IFA documents
ULE90130-05-UTL-00029		no IFA documents
ULE90130-05-UTL-00041		no IFA documents
ULE90130-05-UTL-00042		no IFA documents
ULE90130-05-UTL-00043		no IFA documents
Conflict Spreadsheet (1-3) SGN	2	
Conflict Spreadsheet (1-3) SP	2	
SW Clean schedule		no IFA documents

Sewer schedule		no IFA documents
Conflict Spreadsheet (1-3) BT	2	
Conflict Spreadsheet (1-3) VM	2	
Conflict Spreadsheet (1-3) C&W	2	
Thus schedule		no IFA documents

Section 5A Plates 4 – 5

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-05-UTL-00004		no IFA documents
ULE90130-05-UTL-00104		no IFA documents
ULE90130-05-UTL-00204		no IFA documents
ULE90130-05-UTL-00304	3	
ULE90130-05-UTL-00404		awaiting sewer drawing
ULE90130-05-UTL-00504		no IFA documents
ULE90130-05-UTL-00704		no IFA documents
ULE90130-05-UTL-00804		no IFA documents
ULE90130-05-UTL-00904		no IFA documents
ULE90130-05-UTL-00005		no IFA documents
ULE90130-05-UTL-00105		no IFA documents
ULE90130-05-UTL-00205		no IFA documents
ULE90130-05-UTL-00305	3	
ULE90130-05-UTL-00405		awaiting sewer drawing
ULE90130-05-UTL-00505		no IFA documents
ULE90130-05-UTL-00705		no IFA documents
ULE90130-05-UTL-00805		no IFA documents
ULE90130-05-UTL-00905		no IFA documents

SGN schedule		no IFA documents
ULE90130-05-CAL-00012 SW	1	
ULE90130-05-CAL-00017 SP		no IFA documents
Sewer schedule		awaiting sewer schedule
BT schedule		no IFA documents
VM sechedule		no IFA documents
C&W schedule		no IFA documents
Thus schedule		no IFA documents

Section 5B Plates 6 – 13

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-05-UTL-00006		no IFA documents
ULE90130-05-UTL-00106	2	
ULE90130-05-UTL-00206	2	
ULE90130-05-UTL-00306	2	
ULE90130-05-UTL-00406		awaiting sewer documents
ULE90130-05-UTL-00506		no IFA documents
ULE90130-05-UTL-00706		no IFA documents
ULE90130-05-UTL-00806	2	
ULE90130-05-UTL-00906		no IFA documents
ULE90130-05-UTL-00007		no IFA documents
ULE90130-05-UTL-00107	2	
ULE90130-05-UTL-00207	2	
ULE90130-05-UTL-00307	2	
ULE90130-05-UTL-00407		awaiting sewer documents
ULE90130-05-UTL-00507		no IFA documents
ULE90130-05-UTL-00707		no IFA documents

ULE90130-05-UTL-00807	2	
ULE90130-05-UTL-00907		no IFA documents
ULE90130-05-UTL-00008		no IFA documents
ULE90130-05-UTL-00108	2	
ULE90130-05-UTL-00208	2	
ULE90130-05-UTL-00308	2	
ULE90130-05-UTL-00408		awaiting sewer documents
ULE90130-05-UTL-00508		no IFA documents
ULE90130-05-UTL-00708		no IFA documents
ULE90130-05-UTL-00808	2	
ULE90130-05-UTL-00908		no IFA documents
ULE90130-05-UTL-00009		no IFA documents
ULE90130-05-UTL-00109	2	
ULE90130-05-UTL-00209	2	
ULE90130-05-UTL-00309	2	
ULE90130-05-UTL-00409		awaiting sewer documents
ULE90130-05-UTL-00509		no IFA documents
ULE90130-05-UTL-00709		no IFA documents
ULE90130-05-UTL-00809	2	
ULE90130-05-UTL-00909		no IFA documents
ULE90130-05-UTL-00010		no IFA documents
ULE90130-05-UTL-00110	2	
ULE90130-05-UTL-00210	2	
ULE90130-05-UTL-00310	2	
ULE90130-05-UTL-00410		awaiting sewer documents
ULE90130-05-UTL-00510		no IFA documents
ULE90130-05-UTL-00710		no IFA documents

ULE90130-05-UTL-00810	2	
ULE90130-05-UTL-00910		no IFA documents
ULE90130-05-UTL-00011		no IFA documents
ULE90130-05-UTL-00111	2	
ULE90130-05-UTL-00211	2	
ULE90130-05-UTL-00311	2	
ULE90130-05-UTL-00411		awaiting sewer documents
ULE90130-05-UTL-00511		no IFA documents
ULE90130-05-UTL-00711		no IFA documents
ULE90130-05-UTL-00811	2	
ULE90130-05-UTL-00911		no IFA documents
ULE90130-05-UTL-00012		no IFA documents
ULE90130-05-UTL-00112	2	
ULE90130-05-UTL-00212	2	
ULE90130-05-UTL-00312	2	
ULE90130-05-UTL-00412		awaiting sewer documents
ULE90130-05-UTL-00512		no IFA documents
ULE90130-05-UTL-00712		no IFA documents
ULE90130-05-UTL-00812	2	
ULE90130-05-UTL-00912		no IFA documents
ULE90130-05-UTL-00013		no IFA documents
ULE90130-05-UTL-00113	2	
ULE90130-05-UTL-00213	2	
ULE90130-05-UTL-00313	2	
ULE90130-05-UTL-00413		awaiting sewer documents
ULE90130-05-UTL-00513		no IFA documents
ULE90130-05-UTL-00713		no IFA documents

ULE90130-05-UTL-00813	2	
ULE90130-05-UTL-00913		no IFA documents
SGN schedule		no IFA documents
ULE90130-05-CAL-00014 SP		no IFA documents
SW Clean schedule		no IFA documents
Sewer schedule		awaiting sewer documents
BT schedule		no IFA documents
VM schedule		no IFA documents
ULE90130-05-CAL-00013 C&W		no IFA documents
Thus schedule		no IFA documents
ULE90130-05-UTL-00046		no IFA documents
ULE90130-05-UTL-00047		no IFA documents
ULE90130-05-UTL-00048		no IFA documents
ULE90130-05-UTL-00049		no IFA documents
ULE90130-05-UTL-00050		no IFA documents
ULE90130-05-UTL-00051		no IFA documents
ULE90130-05-UTL-00052		no IFA documents
ULE90130-05-UTL-00053		no IFA documents

Section 5B Plates 14 – 20

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-05-UTL-00014		no IFA documents
ULE90130-05-UTL-00114	3	
ULE90130-05-UTL-00214		no IFA documents
ULE90130-05-UTL-00314	3	
ULE90130-05-UTL-00414		awaiting sewer documents
ULE90130-05-UTL-00514	3	

ULE90130-05-UTL-00714	3	
ULE90130-05-UTL-00814	3	Reference Drawing
ULE90130-05-UTL-00914	2	
ULE90130-05-UTL-00015		no IFA documents
ULE90130-05-UTL-00115	3	
ULE90130-05-UTL-00215		no IFA documents
ULE90130-05-UTL-00315	7	
ULE90130-05-UTL-00415		awaiting sewer documents
ULE90130-05-UTL-00515	3	
ULE90130-05-UTL-00715	4	
ULE90130-05-UTL-00815	4	Reference Drawing
ULE90130-05-UTL-00915	3	
ULE90130-05-UTL-00016		no IFA documents
ULE90130-05-UTL-00116	2	
ULE90130-05-UTL-00216		no IFA documents
ULE90130-05-UTL-00316		no IFA documents
ULE90130-05-UTL-00416		awaiting sewer documents
ULE90130-05-UTL-00516	3	
ULE90130-05-UTL-00716	3	
ULE90130-05-UTL-00816	3	Reference Drawing
ULE90130-05-UTL-00916	2	
ULE90130-05-UTL-00017		no IFA documents
ULE90130-05-UTL-00117	2	
ULE90130-05-UTL-00217		no IFA documents
ULE90130-05-UTL-00317		no IFA documents
ULE90130-05-UTL-00417		awaiting sewer documents
ULE90130-05-UTL-00517	3	

ULE90130-05-UTL-00717	3	
ULE90130-05-UTL-00817	3	Reference Drawing
ULE90130-05-UTL-00917	2	
ULE90130-05-UTL-00018		no IFA documents
ULE90130-05-UTL-00118	3	
ULE90130-05-UTL-00218		no IFA documents
ULE90130-05-UTL-00318		no IFA documents
ULE90130-05-UTL-00418		awaiting sewer documents
ULE90130-05-UTL-00518	3	
ULE90130-05-UTL-00718	4	
ULE90130-05-UTL-00818	5	Reference Drawing
ULE90130-05-UTL-00918	3	
ULE90130-05-UTL-00019		no IFA documents
ULE90130-05-UTL-00119	3	
ULE90130-05-UTL-00219		no IFA documents
ULE90130-05-UTL-00319		no IFA documents
ULE90130-05-UTL-00419		awaiting sewer documents
ULE90130-05-UTL-00519	3	
ULE90130-05-UTL-00719	3	
ULE90130-05-UTL-00819	3	Reference Drawing
ULE90130-05-UTL-00919	2	
ULE90130-05-UTL-00020		no IFA documents
ULE90130-05-UTL-00120	2	
ULE90130-05-UTL-00220		no IFA documents
ULE90130-05-UTL-00320		no IFA documents
ULE90130-05-UTL-00420		awaiting sewer documents
ULE90130-05-UTL-00520	3	

ULE90130-05-UTL-00720	4	
ULE90130-05-UTL-00820	4	Reference Drawing
ULE90130-05-UTL-00920	3	
ULE90130-05-UTL-00054		no IFA documents
ULE90130-05-UTL-00055		no IFA documents
ULE90130-05-UTL-00056		no IFA documents
ULE90130-05-UTL-00057		no IFA documents
ULE90130-05-UTL-00058	2	
ULE90130-05-UTL-00060		no IFA documents
ULE90130-05-CAL-00009 (BT)		no IFA documents
ULE90130-05-CAL-00016 (VM)	1	
ULE90130-05-CAL-00015 (THUS)	1	
ULE90130-05-CAL-00018 (C & W)		no IFA documents
ULE90130-05-CAL-00019 (SW Clean)		no IFA documents
sewer schedule		awaiting sewer documents
ULE90130-05-CAL-00020 (SP)		no IFA documents
ULE90130-05-CAL-00023 (SGN)		no IFA documents
Diversion Schedule (C&W)	X	Reference Schedule
Diversion Schedule (SW Clean)	X	Reference Schedule
Diversion Schedule (SP)	X	Reference Schedule

Section 5C Plates 21 – 26

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
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ULE90130-05-UTL-00021	4	
ULE90130-05-UTL-00121	2	
ULE90130-05-UTL-00221	2	
ULE90130-05-UTL-00321	2	
ULE90130-05-UTL-00421		awaiting sewer documents
ULE90130-05-UTL-00521	2	
ULE90130-05-UTL-00721	3	
ULE90130-05-UTL-00821	4	
ULE90130-05-UTL-00921	2	
ULE90130-05-UTL-01021	1	
ULE90130-05-UTL-00022		no IFA documents
ULE90130-05-UTL-00122	3	
ULE90130-05-UTL-00222	3	
ULE90130-05-UTL-00322	4	
ULE90130-05-UTL-00422		awaiting sewer documents
ULE90130-05-UTL-00522	3	
ULE90130-05-UTL-00722	4	
ULE90130-05-UTL-00822	3	
ULE90130-05-UTL-00922	2	
ULE90130-05-UTL-01022	2	
ULE90130-05-UTL-00023		no IFA documents
ULE90130-05-UTL-00123	2	
ULE90130-05-UTL-00223	3	
ULE90130-05-UTL-00323	3	
ULE90130-05-UTL-00423		awaiting sewer documents
ULE90130-05-UTL-00523	2	
ULE90130-05-UTL-00723	3	

ULE90130-05-UTL-00823	4	
ULE90130-05-UTL-00923	4	
ULE90130-05-UTL-01023	3	
ULE90130-05-UTL-00024		no IFA documents
ULE90130-05-UTL-00124	3	
ULE90130-05-UTL-00224	4	
ULE90130-05-UTL-00324	4	
ULE90130-05-UTL-00424		awaiting sewer documents
ULE90130-05-UTL-00524	4	
ULE90130-05-UTL-00724	3	
ULE90130-05-UTL-00824	4	
ULE90130-05-UTL-00924	4	
ULE90130-05-UTL-01024	3	
ULE90130-05-UTL-00025	4	
ULE90130-05-UTL-00125	3	
ULE90130-05-UTL-00225	3	
ULE90130-05-UTL-00325	4	
ULE90130-05-UTL-00425		awaiting sewer documents
ULE90130-05-UTL-00525	3	
ULE90130-05-UTL-00725	3	
ULE90130-05-UTL-00825	4	
ULE90130-05-UTL-00925	3	
ULE90130-05-UTL-01025	2	
ULE90130-05-UTL-00026	4	
ULE90130-05-UTL-00126	3	
ULE90130-05-UTL-00226	2	
ULE90130-05-UTL-00326	4	

ULE90130-05-UTL-00426		awaiting sewer documents
ULE90130-05-UTL-00526	4	
ULE90130-05-UTL-00726	2	
ULE90130-05-UTL-00826	3	
ULE90130-05-UTL-00926	2	
ULE90130-05-UTL-01026	2	
ULE90130-05-UTL-00062	4	
ULE90130-05-UTL-00063	2	
ULE90130-05-UTL-00064	2	
ULE90130-05-UTL-00070	1	
ULE90130-05-UTL-00071	1	
ULE90130-05-UTL-00072	1	
ULE90130-05-CAL-00026 (EasyNET)	1	
ULE90130-05-CAL-00027 (SGN)	1	
ULE90130-05-CAL-00028 (SP)	1	
ULE90130-05-CAL-00029 (SWC)	1	
sewer schedule		awaiting sewer documents
ULE90130-05-CAL-00030 (BT)	1	
ULE90130-05-CAL-00031 (C & W)	1	
ULE90130-05-CAL-00032 (Thus)	1	
ULE90130-05-CAL-00033 (VM)	1	
ULE90130-05-CAL-00034 (Private Utilities)	1	

Section 6A Plates 1 – 2

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-06-UTL-00001	3	
ULE90130-06-UTL-00101		no IFA documents
ULE90130-06-UTL-00201	3	
ULE90130-06-UTL-00301	3	
ULE90130-06-UTL-00401		awaiting sewer documents
ULE90130-06-UTL-00501		no IFA documents
ULE90130-06-UTL-00601		no IFA documents
ULE90130-06-UTL-00701		no IFA documents
ULE90130-06-UTL-00801	6	
ULE90130-06-UTL-00901	3	
SGN schedule		no IFA documents
ULE90130-06-CAL-00001 (SP)	2	
ULE90130-06-CAL-00002 (Thus)	1	
ULE90130-06-CAL-00003 (C&W)	2	
ULE90130-06-CAL-00004 (SWC)	2	
sewer schedule		no IFA documents
BT schedule		no IFA documents
VM schedule		no IFA documents

Gogar 800mm

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-06-DRG-00006	2	
ULE90130-06-DRG-	2	

00007		
ULE90130-06-DRG-00008	1	Discussion drawing
ULE90130-06-DRG-00009	1	Discussion drawing
ULE90130-06-DRG-00010	2	
ULE90130-06-DRG-00011	2	
ULE90130-06-DRG-00626	2	
ULE90130-06-DRG-00627	1	
ULE90130-06-SCH-00002	x	Thrust Block Schedule
ULE90130-06-SPN-00003	x	Online Materials Specification Gogar Depot
NORWEST HOLST Report	1	on a Ground Investiagtion at Line 2

General – Standard Details

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTH-00015	X	Reference Drawing (received from Thus)
ULE90130-01-UTH-00025	x	Reference Drawing (received from Thus)
ULE90130-01-UTH-00006	X	Reference Drawing (received from Thus)
ULE90130-01-UTL-00033	3	Reference Drawing (received from Thus)
ULE90130-01-UTL-00035	3	Reference Drawing (received from Thus)
ULE90130-SW-UTL-00008		no IFA documents
ULE90130-SW-UTL-00009		no IFA documents

ULE90130-SW-UTL-00010		no IFA documents
ULE90130-SW-UTL-00016		no IFA documents
ULE90130-SW-UTL-00013	1	SW Foul - Standard Details, Jetting Eye
ULE90130-SW-UTL-00017	1	SW Foul - New Box Section Manhole
ULE90130-SW-UTL-00018	1	SW Foul - Box Section Manhole Intergration with Existing Manhole
DKE Coordinates 1B 22-27	x	
DKE Coordinates 1C 42-44	x	
DKE Coordinates 1D 49-56	x	
DKE Coordinates 5B 14-20	x	

IFC DOCUMENTATION

Section 1A Plates 6 – 10

No IFC documents have been received.

Section 1A Plates 13 – 15

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00013	5	
ULE90130-01-UTL-00113	5	
ULE90130-01-UTL-00213	5	
ULE90130-01-UTL-00313	5	
ULE90130-01-UTL-00413		no IFC documents yet
ULE90130-01-UTL-00513	5	
ULE90130-01-UTL-00713	5	
ULE90130-01-UTL-00813	5	
ULE90130-01-UTL-00913	5	

ULE90130-01-UTL-01613	3	
ULE90130-01-UTL-01713	5	
ULE90130-01-UTL-00014	5	
ULE90130-01-UTL-00114	5	
ULE90130-01-UTL-00214	5	
ULE90130-01-UTL-00314	5	
ULE90130-01-UTL-00414		no IFC documents yet
ULE90130-01-UTL-00514	5	
ULE90130-01-UTL-00714	5	
ULE90130-01-UTL-00814	5	
ULE90130-01-UTL-00914	5	
ULE90130-01-UTL-01614	3	
ULE90130-01-UTL-01714	5	
ULE90130-01-UTL-00015	5	
ULE90130-01-UTL-00115	5	
ULE90130-01-UTL-00215	5	
ULE90130-01-UTL-00315	5	
ULE90130-01-UTL-00415		no IFC documents yet
ULE90130-01-UTL-00515	5	
ULE90130-01-UTL-00715	5	
ULE90130-01-UTL-00815	5	
ULE90130-01-UTL-00915	5	
ULE90130-01-UTL-01615	3	
ULE90130-01-UTL-01715	5	
Conflict Spreadsheet (13-15) SGN	5	
Conflict Spreadsheet (13-15) SP	5	

Conflict Spreadsheet (13-15) SW Clean	5	
Conflict Spreadsheet (13-15) Sewer		no IFC documents yet
Conflict Spreadsheet (13-15) BT	5	
Conflict Spreadsheet (13-15) VM	5	
Conflict Spreadsheet (13-15) C&W	5	
Conflict Spreadsheet (13-15) Thus	5	
Conflict Spreadsheet (13-15) Fourth Ports	5	

Section 1A Plates 16 – 21

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00016	6	
ULE90130-01-UTL-00116	6	
ULE90130-01-UTL-00216	5	
ULE90130-01-UTL-00316	5	
ULE90130-01-UTL-00416		no IFC documents yet
ULE90130-01-UTL-00516	5	
ULE90130-01-UTL-00716	5	
ULE90130-01-UTL-00816	5	
ULE90130-01-UTL-00916	5	
ULE90130-01-UTL-01616	3	
ULE90130-01-UTL-00017	6	
ULE90130-01-UTL-00117	6	
ULE90130-01-UTL-00217	5	
ULE90130-01-UTL-00317	5	

ULE90130-01-UTL-00417		no IFC documents yet
ULE90130-01-UTL-00517	5	
ULE90130-01-UTL-00717	5	
ULE90130-01-UTL-00817	5	
ULE90130-01-UTL-00917	5	
ULE90130-01-UTL-01617	3	
ULE90130-01-UTL-00018	6	
ULE90130-01-UTL-00118	6	
ULE90130-01-UTL-00218	5	
ULE90130-01-UTL-00318	5	
ULE90130-01-UTL-00418		no IFC documents yet
ULE90130-01-UTL-00518	5	
ULE90130-01-UTL-00718	5	
ULE90130-01-UTL-00818	5	
ULE90130-01-UTL-00918	5	
ULE90130-01-UTL-01618	3	
ULE90130-01-UTL-00019	6	
ULE90130-01-UTL-00119	6	
ULE90130-01-UTL-00219	5	
ULE90130-01-UTL-00319	5	
ULE90130-01-UTL-00419		no IFC documents yet
ULE90130-01-UTL-00519	5	
ULE90130-01-UTL-00719	5	
ULE90130-01-UTL-00819	5	
ULE90130-01-UTL-00919	5	
ULE90130-01-UTL-01619	3	
ULE90130-01-UTL-00020	6	

ULE90130-01-UTL-00120	6	
ULE90130-01-UTL-00220	5	
ULE90130-01-UTL-00320	5	
ULE90130-01-UTL-00420		no IFC documents yet
ULE90130-01-UTL-00520	5	
ULE90130-01-UTL-00720	5	
ULE90130-01-UTL-00820	5	
ULE90130-01-UTL-00920	5	
ULE90130-01-UTL-01620	3	
ULE90130-01-UTL-00021	6	
ULE90130-01-UTL-00121	6	
ULE90130-01-UTL-00221	5	
ULE90130-01-UTL-00321	5	
ULE90130-01-UTL-00421		no IFC documents yet
ULE90130-01-UTL-00521	5	
ULE90130-01-UTL-00721	5	
ULE90130-01-UTL-00821	5	
ULE90130-01-UTL-00921	5	
ULE90130-01-UTL-01621	3	
ULE90130-01-CAL-00028 SGN	6	
ULE90130-01-CAL-00029 SP	5	
ULE90130-01-CAL-00030 SW Clean	5	
Conflict Spreadsheet Sewer		no IFC documents yet
ULE90130-01-CAL-00032 BT	4	
ULE90130-01-CAL-00033 VM	5	

ULE90130-01-CAL-00034 C&W	5	
ULE90130-01-CAL-00035 Thus	5	

Section 1B Plates 22 – 26

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00022	7	
ULE90130-01-UTL-00122	7	
ULE90130-01-UTL-00222	5	
ULE90130-01-UTL-00322	6	
ULE90130-01-UTL-00422		no IFC documents yet
ULE90130-01-UTL-00522	5	
ULE90130-01-UTL-00722	6	
ULE90130-01-UTL-00822	5	
ULE90130-01-UTL-00922	5	
ULE90130-01-UTL-01622	3	
ULE90130-01-UTL-00023	5	
ULE90130-01-UTL-00123	5	
ULE90130-01-UTL-00223	5	
ULE90130-01-UTL-00323	5	
ULE90130-01-UTL-00423		no IFC documents yet
ULE90130-01-UTL-00523	5	
ULE90130-01-UTL-00723	6	
ULE90130-01-UTL-00823	5	
ULE90130-01-UTL-00923	5	
ULE90130-01-UTL-01623	3	
ULE90130-01-UTL-00024	5	

ULE90130-01-UTL-00124	5	
ULE90130-01-UTL-00224	5	
ULE90130-01-UTL-00324	5	
ULE90130-01-UTL-00424		no IFC documents yet
ULE90130-01-UTL-00524	5	
ULE90130-01-UTL-00724	6	
ULE90130-01-UTL-00824	5	
ULE90130-01-UTL-00924	5	
ULE90130-01-UTL-01624	3	
ULE90130-01-UTL-00025	5	
ULE90130-01-UTL-00125	5	
ULE90130-01-UTL-00225	5	
ULE90130-01-UTL-00325	5	
ULE90130-01-UTL-00425		no IFC documents yet
ULE90130-01-UTL-00525	5	
ULE90130-01-UTL-00725	6	
ULE90130-01-UTL-00825	5	
ULE90130-01-UTL-00925	5	
ULE90130-01-UTL-01625	3	
ULE90130-01-UTL-00026	5	
ULE90130-01-UTL-00126	5	
ULE90130-01-UTL-00226	5	
ULE90130-01-UTL-00326	5	
ULE90130-01-UTL-00426		no IFC documents yet
ULE90130-01-UTL-00526	5	
ULE90130-01-UTL-00726	6	
ULE90130-01-UTL-00826	5	

ULE90130-01-UTL-00926	5	
ULE90130-01-UTL-01626	3	
ULE90130-01-UTL-02101		Cross Sections at Manholes requiring Diversios no IFC documents yet
ULE90130-01-UTL-02102		
ULE90130-01-UTL-02103		
ULE90130-01-UTL-02104		
ULE90130-01-UTL-02105		
ULE90130-01-UTL-02106		
ULE90130-01-CAL-00036 SGN	7	
ULE90130-01-CAL-00037 SP	5	
ULE90130-01-CAL-00038 SWClean	6	
ULE90130-01-CAL-00039 Sewer		no IFC documents yet
ULE90130-01-CAL-00040 BT	5	
ULE90130-01-CAL-00041 VM	6	
ULE90130-01-CAL-00042 C&W	5	
ULE90130-01-CAL-00043 Thus	5	

Section 1B Plates 27 – 31

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00027	8	
ULE90130-01-UTL-00127	8	
ULE90130-01-UTL-00227	5	
ULE90130-01-UTL-00327	10	
ULE90130-01-UTL-00427		no IFC documents yet

ULE90130-01-UTL-00527	5	
ULE90130-01-UTL-00727	5	
ULE90130-01-UTL-00827	5	
ULE90130-01-UTL-00927	5	
ULE90130-01-UTL-01627	3	
ULE90130-01-UTL-00028	8	
ULE90130-01-UTL-00128	8	
ULE90130-01-UTL-00228	5	
ULE90130-01-UTL-00328	10	
ULE90130-01-UTL-00428		no IFC documents yet
ULE90130-01-UTL-00528	5	
ULE90130-01-UTL-00728	5	
ULE90130-01-UTL-00828	5	
ULE90130-01-UTL-00928	5	
ULE90130-01-UTL-01628	3	
ULE90130-01-UTL-00029	8	
ULE90130-01-UTL-00129	8	
ULE90130-01-UTL-00229	5	
ULE90130-01-UTL-00329	10	
ULE90130-01-UTL-00429		no IFC documents yet
ULE90130-01-UTL-00529	5	
ULE90130-01-UTL-00729	5	
ULE90130-01-UTL-00829	5	
ULE90130-01-UTL-00929	5	
ULE90130-01-UTL-01629	3	
ULE90130-01-UTL-00030	8	
ULE90130-01-UTL-00130	8	

ULE90130-01-UTL-00230	5	
ULE90130-01-UTL-00330	10	
ULE90130-01-UTL-00430		no IFC documents yet
ULE90130-01-UTL-00530	5	
ULE90130-01-UTL-00730	5	
ULE90130-01-UTL-00830	5	
ULE90130-01-UTL-00930	5	
ULE90130-01-UTL-01630	3	
ULE90130-01-UTL-00031	8	
ULE90130-01-UTL-00131	8	
ULE90130-01-UTL-00231	5	
ULE90130-01-UTL-00331	10	
ULE90130-01-UTL-00431		no IFC documents yet
ULE90130-01-UTL-00531	5	
ULE90130-01-UTL-00731	5	
ULE90130-01-UTL-00831	5	
ULE90130-01-UTL-00931	5	
ULE90130-01-UTL-01631	3	
ULE90130-01-UTL-00082	2	
ULE90130-01-UTL-00259		no IFC documents yet
ULE90130-01-UTL-02107		no IFC documents yet
ULE90130-01-UTL-02108		no IFC documents yet
ULE90130-01-UTL-02109		no IFC documents yet
ULE90130-01-CAL-00044 SGN	8	
ULE90130-01-CAL-00047 SP	5	
ULE90130-01-CAL-00046 SW	10	

ULE90130-01-CAL-00047 Sewer		no IFC documents yet
ULE90130-01-CAL-00048 BT	5	
ULE90130-01-CAL-00049 VM	5	
ULE90130-01-CAL-00050 C&W	5	
ULE90130-01-CAL-00051 Thus	5	
ULE90130-01-DRA-00006	2	

Section 1C Plates 32 – 38

no information available

Section 1C Plates 39 – 41

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00039	4	
ULE90130-01-UTL-00139	4	
ULE90130-01-UTL-00239	5	
ULE90130-01-UTL-00339	5	
ULE90130-01-UTL-00439		no IFC documents yet
ULE90130-01-UTL-00539	4	
ULE90130-01-UTL-00739	4	
ULE90130-01-UTL-00839	4	
ULE90130-01-UTL-00939	4	
ULE90130-01-UTL-01639	3	
ULE90130-01-UTL-00040	4	
ULE90130-01-UTL-00140	4	
ULE90130-01-UTL-00240	4	

ULE90130-01-UTL-00340	5	
ULE90130-01-UTL-00440		no IFC documents yet
ULE90130-01-UTL-00540	4	
ULE90130-01-UTL-00740	4	
ULE90130-01-UTL-00840	4	
ULE90130-01-UTL-00940	4	
ULE90130-01-UTL-01640	3	
ULE90130-01-UTL-00041	4	
ULE90130-01-UTL-00141	4	
ULE90130-01-UTL-00241	5	
ULE90130-01-UTL-00341	5	
ULE90130-01-UTL-00441		no IFC documents yet
ULE90130-01-UTL-00541	4	
ULE90130-01-UTL-00741	4	
ULE90130-01-UTL-00841	4	
ULE90130-01-UTL-00941	4	
ULE90130-01-UTL-01641	3	
ULE90130-01-UTL-00959		no IFC documents yet
ULE90130-01-CAL-00060 SGN	4	
ULE90130-01-CAL-00061 SP	5	
ULE90130-01-CAL-00062 SW	5	
ULE90130-01-CAL-00064 BT	4	
ULE90130-01-CAL-00065 VM	4	
ULE90130-01-CAL-00066 C&W	4	
ULE90130-01-CAL-00067	4	

Thus		
ULE90130-01-CAL-00121 Thus		no IFC documents yet
ULE90130-01-DRA-00012	-	

Section 1C Plates 42 – 44

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00042	6	
ULE90130-01-UTL-00142	5	
ULE90130-01-UTL-00242	5	
ULE90130-01-UTL-00342	6	
ULE90130-01-UTL-00442		no IFC documents yet
ULE90130-01-UTL-00542	5	
ULE90130-01-UTL-00742	5	
ULE90130-01-UTL-00842	5	
ULE90130-01-UTL-00942	5	
ULE90130-01-UTL-01643	3	
ULE90130-01-UTL-00043	6	
ULE90130-01-UTL-00143	5	
ULE90130-01-UTL-00243	5	
ULE90130-01-UTL-00343	6	
ULE90130-01-UTL-00443		no IFC documents yet
ULE90130-01-UTL-00543	5	
ULE90130-01-UTL-00743	5	
ULE90130-01-UTL-00843	5	
ULE90130-01-UTL-00943	5	
ULE90130-01-UTL-01644	3	
ULE90130-01-UTL-00044	6	
ULE90130-01-UTL-00144	5	
ULE90130-01-UTL-00244	5	
ULE90130-01-UTL-00344	6	

ULE90130-01-UTL-00444		no IFC documents yet
ULE90130-01-UTL-00544	5	
ULE90130-01-UTL-00744	5	
ULE90130-01-UTL-00844	5	
ULE90130-01-UTL-00944	5	
ULE90130-01-UTL-01644	3	
ULE90130-01-CAL-00069 SGN	5	
ULE90130-01-CAL-00070 SP	5	
ULE90130-01-CAL-00071 SW	6	
ULE90130-01-CAL-00073 BT	5	
ULE90130-01-CAL-00074 VM	5	
ULE90130-01-CAL-00075 C&W	5	
ULE90130-01-CAL-00076 Thus	5	

Section 1C Plates 45 – 48

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00045	3	
ULE90130-01-UTL-00145	3	
ULE90130-01-UTL-00245	3	
ULE90130-01-UTL-00345	3	
ULE90130-01-UTL-00445		no IFC documents yet
ULE90130-01-UTL-00545	3	
ULE90130-01-UTL-00745	3	
ULE90130-01-UTL-00845	3	

ULE90130-01-UTL-00945	3	
ULE90130-01-UTL-01645	3	
ULE90130-01-UTL-00046	3	
ULE90130-01-UTL-00146	3	
ULE90130-01-UTL-00246	3	
ULE90130-01-UTL-00346	3	
ULE90130-01-UTL-00446		no IFC documents yet
ULE90130-01-UTL-00546	3	
ULE90130-01-UTL-00746	3	
ULE90130-01-UTL-00846	3	
ULE90130-01-UTL-00946	3	
ULE90130-01-UTL-01646	3	
ULE90130-01-UTL-00047	3	
ULE90130-01-UTL-00147	3	
ULE90130-01-UTL-00247	3	
ULE90130-01-UTL-00347	3	
ULE90130-01-UTL-00447		no IFC documents yet
ULE90130-01-UTL-00547	3	
ULE90130-01-UTL-00747	3	
ULE90130-01-UTL-00847	3	
ULE90130-01-UTL-00947	3	
ULE90130-01-UTL-01647	3	
ULE90130-01-UTL-00048	3	
ULE90130-01-UTL-00148	3	
ULE90130-01-UTL-00248	3	
ULE90130-01-UTL-00348	3	
ULE90130-01-UTL-00448		no IFC documents yet

ULE90130-01-UTL-00548	3	
ULE90130-01-UTL-00748	3	
ULE90130-01-UTL-00848	3	
ULE90130-01-UTL-00948	3	
ULE90130-01-UTL-01648	3	
ULE90130-01-CAL-00078 SGN	3	
ULE90130-01-CAL-00079 SP	3	
ULE90130-01-CAL-00080 SW	3	
sewer schedule		no IFC documents yet
ULE90130-01-CAL-00082 BT	3	
ULE90130-01-CAL-00083 VM	3	
ULE90130-01-CAL-00084 C&W	3	
ULE90130-01-CAL-00085 Thus	3	
ULE90130-01-DRA-00014	3	

Section 1D Plates 49 – 51

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00049	4	
ULE90130-01-UTL-00149	4	
ULE90130-01-UTL-00249	4	
ULE90130-01-UTL-00349	4	
ULE90130-01-UTL-00449		no IFC documents yet
ULE90130-01-UTL-00549	4	
ULE90130-01-UTL-00749	4	

ULE90130-01-UTL-00849	4	
ULE90130-01-UTL-00949	4	
ULE90130-01-UTL-01649	3	
ULE90130-01-UTL-00050	4	
ULE90130-01-UTL-00150	4	
ULE90130-01-UTL-00250	4	
ULE90130-01-UTL-00350	4	
ULE90130-01-UTL-00450		no IFC documents yet
ULE90130-01-UTL-00550	4	
ULE90130-01-UTL-00750	4	
ULE90130-01-UTL-00850	4	
ULE90130-01-UTL-00950	4	
ULE90130-01-UTL-01650	3	
ULE90130-01-UTL-00051	4	
ULE90130-01-UTL-00151	4	
ULE90130-01-UTL-00251	4	
ULE90130-01-UTL-00351	4	
ULE90130-01-UTL-00451		no IFC documents yet
ULE90130-01-UTL-00551	4	
ULE90130-01-UTL-00751	4	
ULE90130-01-UTL-00851	4	
ULE90130-01-UTL-00951	4	
ULE90130-01-UTL-01651	3	
ULE90130-01-CAL-00086 SGN	4	
ULE90130-01-CAL-00087 SP	4	
ULE90130-01-CAL-00088 SW	4	

sewer schedule		no IFC documents yet
ULE90130-01-CAL-00090 BT	4	
ULE90130-01-CAL-00091 VM	4	
ULE90130-01-CAL-00092 C&W	4	
ULE90130-01-CAL-00093 Thus	4	

Section 1D Plates 52 – 56

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTL-00052	4	
ULE90130-01-UTL-00152	5	
ULE90130-01-UTL-00252	4	
ULE90130-01-UTL-00352	4	
ULE90130-01-UTL-00452		no IFC documents yet
ULE90130-01-UTL-00552	4	
ULE90130-01-UTL-00752	4	
ULE90130-01-UTL-00852	4	
ULE90130-01-UTL-00952	4	
ULE90130-01-UTL-01652	3	
ULE90130-01-UTL-00053	4	
ULE90130-01-UTL-00153	5	
ULE90130-01-UTL-00253	4	
ULE90130-01-UTL-00353	4	
ULE90130-01-UTL-00453		no IFC documents yet
ULE90130-01-UTL-00553	4	
ULE90130-01-UTL-00753	4	
ULE90130-01-UTL-00853	4	
ULE90130-01-UTL-00953	4	
ULE90130-01-UTL-01653	3	
ULE90130-01-UTL-00054	4	
ULE90130-01-UTL-00154	5	
ULE90130-01-UTL-00254	4	
ULE90130-01-UTL-00354	4	

ULE90130-01-UTL-00454		no IFC documents yet
ULE90130-01-UTL-00554	4	
ULE90130-01-UTL-00754	4	
ULE90130-01-UTL-00854	4	
ULE90130-01-UTL-00954	4	
ULE90130-01-UTL-01654	3	
ULE90130-01-UTL-00055	4	
ULE90130-01-UTL-00155	6	
ULE90130-01-UTL-00255	4	
ULE90130-01-UTL-00355	4	
ULE90130-01-UTL-00455		no IFC documents yet
ULE90130-01-UTL-00555	4	
ULE90130-01-UTL-00755	4	
ULE90130-01-UTL-00855	4	
ULE90130-01-UTL-00955	4	
ULE90130-01-UTL-01655	3	
ULE90130-01-UTL-00056	4	
ULE90130-01-UTL-00156	5	
ULE90130-01-UTL-00256	4	
ULE90130-01-UTL-00356	4	
ULE90130-01-UTL-00456		no IFC documents yet
ULE90130-01-UTL-00556	4	
ULE90130-01-UTL-00756	4	
ULE90130-01-UTL-00856	4	
ULE90130-01-UTL-00956	4	
ULE90130-01-UTL-01656	3	
ULE90130-01-CAL-00101 SGN	5	

ULE90130-01-CAL-00094 SP	3	
ULE90130-01-CAL-00095 SW	3	
sewer schedule		no IFC documents yet
ULE90130-01-CAL-00097 BT	4	
ULE90130-01-CAL-00098 VM	4	
ULE90130-01-CAL-00099 C&W	4	
ULE90130-01-CAL-00100 Thus	4	

Section 5A Plates 1 – 3

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-05-UTL-00001		no IFC documents yet
ULE90130-05-UTL-00101	5	
ULE90130-05-UTL-00201	5	
ULE90130-05-UTL-00301	5	
ULE90130-05-UTL-00401		no IFC documents yet
ULE90130-05-UTL-00501	4	
ULE90130-05-UTL-00701	5	
ULE90130-05-UTL-00801	6	
ULE90130-05-UTL-00901		no IFC documents yet
ULE90130-05-UTL-01401		no IFC documents yet
ULE90130-05-UTL-00002		no IFC documents yet
ULE90130-05-UTL-00102	4	
ULE90130-05-UTL-00202	6	
ULE90130-05-UTL-00302	6	
ULE90130-05-UTL-00402		no IFC documents yet

ULE90130-05-UTL-00502	3	
ULE90130-05-UTL-00702	4	
ULE90130-05-UTL-00802	7	
ULE90130-05-UTL-00902		no IFC documents yet
ULE90130-05-UTL-01402		no IFC documents yet
ULE90130-05-UTL-00003		no IFC documents yet
ULE90130-05-UTL-00103	5	
ULE90130-05-UTL-00203	5	
ULE90130-05-UTL-00303	4	
ULE90130-05-UTL-00403		no IFC documents yet
ULE90130-05-UTL-00503	4	
ULE90130-05-UTL-00703	6	
ULE90130-05-UTL-00803	4	
ULE90130-05-UTL-00903		no IFC documents yet
ULE90130-05-UTL-01403		no IFC documents yet
ULE90130-05-UTL-00028	1	
ULE90130-05-UTL-00029	1	
ULE90130-05-UTL-00041	3	
ULE90130-05-UTL-00042	4	
ULE90130-05-UTL-00043	5	
Conflict Spreadsheet (1-3) SGN	X	
Conflict Spreadsheet (1-3) SP	X	
SW Clean schedule		no IFC documents yet
Sewer schedule		no IFC documents yet
Conflict Spreadsheet (1-3) BT	X	
Conflict Spreadsheet (1-3) VM	X	

Conflict Spreadsheet (1-3) C&W	X	
Thus schedule		no IFC documents yet

Section 5A Plates 4 – 5

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-05-UTL-00004		no IFC documents yet
ULE90130-05-UTL-00104		no IFC documents yet
ULE90130-05-UTL-00204	5	
ULE90130-05-UTL-00304		no IFC documents yet
ULE90130-05-UTL-00404		no IFC documents yet
ULE90130-05-UTL-00504		no IFC documents yet
ULE90130-05-UTL-00704		no IFC documents yet
ULE90130-05-UTL-00804		no IFC documents yet
ULE90130-05-UTL-00904		no IFC documents yet
ULE90130-05-UTL-00005		no IFC documents yet
ULE90130-05-UTL-00105		no IFC documents yet
ULE90130-05-UTL-00205	5	
ULE90130-05-UTL-00305		no IFC documents yet
ULE90130-05-UTL-00405		no IFC documents yet
ULE90130-05-UTL-00505		no IFC documents yet
ULE90130-05-UTL-00705		no IFC documents yet
ULE90130-05-UTL-00805		no IFC documents yet
ULE90130-05-UTL-00905		no IFC documents yet
SGN schedule		no IFC documents yet
ULE90130-05-CAL-00012 SW		no IFC documents yet
ULE90130-05-CAL-00017 SP	1	
Sewer schedule		no IFC documents yet
BT schedule		no IFC documents yet
VM sechedule		no IFC documents yet
C&W schedule		no IFC documents yet

Thus schedule		no IFC documents yet
ULE90130-05-UTL-00044	2	
ULE90130-05-UTL-00045	2	

Section 5B Plates 6 – 13

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-05-UTL-00006		no IFC documents yet
ULE90130-05-UTL-00106	3	
ULE90130-05-UTL-00206	5	
ULE90130-05-UTL-00306	4	
ULE90130-05-UTL-00406		no IFC documents yet
ULE90130-05-UTL-00506		no IFC documents yet
ULE90130-05-UTL-00706		no IFC documents yet
ULE90130-05-UTL-00806	5	
ULE90130-05-UTL-00906		no IFC documents yet
ULE90130-05-UTL-00007		no IFC documents yet
ULE90130-05-UTL-00107	3	
ULE90130-05-UTL-00207	5	
ULE90130-05-UTL-00307	4	
ULE90130-05-UTL-00407		no IFC documents yet
ULE90130-05-UTL-00507		no IFC documents yet
ULE90130-05-UTL-00707		no IFC documents yet
ULE90130-05-UTL-00807	4	
ULE90130-05-UTL-00907		no IFC documents yet
ULE90130-05-UTL-00008		no IFC documents yet
ULE90130-05-UTL-00108	3	
ULE90130-05-UTL-00208	5	

ULE90130-05-UTL-00308	4	
ULE90130-05-UTL-00408		no IFC documents yet
ULE90130-05-UTL-00508		no IFC documents yet
ULE90130-05-UTL-00708		no IFC documents yet
ULE90130-05-UTL-00808	4	
ULE90130-05-UTL-00908		no IFC documents yet
ULE90130-05-UTL-00009		no IFC documents yet
ULE90130-05-UTL-00109	3	
ULE90130-05-UTL-00209	7	
ULE90130-05-UTL-00309	4	
ULE90130-05-UTL-00409		no IFC documents yet
ULE90130-05-UTL-00509		no IFC documents yet
ULE90130-05-UTL-00709		no IFC documents yet
ULE90130-05-UTL-00809	7	
ULE90130-05-UTL-00909		no IFC documents yet
ULE90130-05-UTL-00010		no IFC documents yet
ULE90130-05-UTL-00110	3	
ULE90130-05-UTL-00210	7	
ULE90130-05-UTL-00310	4	
ULE90130-05-UTL-00410		no IFC documents yet
ULE90130-05-UTL-00510		no IFC documents yet
ULE90130-05-UTL-00710		no IFC documents yet
ULE90130-05-UTL-00810	4	
ULE90130-05-UTL-00910		no IFC documents yet
ULE90130-05-UTL-00011		no IFC documents yet
ULE90130-05-UTL-00111	4	
ULE90130-05-UTL-00211	6	

ULE90130-05-UTL-00311	4	
ULE90130-05-UTL-00411		no IFC documents yet
ULE90130-05-UTL-00511		no IFC documents yet
ULE90130-05-UTL-00711		no IFC documents yet
ULE90130-05-UTL-00811	4	
ULE90130-05-UTL-00911		no IFC documents yet
ULE90130-05-UTL-00012		no IFC documents yet
ULE90130-05-UTL-00112	3	
ULE90130-05-UTL-00212	5	
ULE90130-05-UTL-00312	4	
ULE90130-05-UTL-00412		no IFC documents yet
ULE90130-05-UTL-00512		no IFC documents yet
ULE90130-05-UTL-00712		no IFC documents yet
ULE90130-05-UTL-00812	4	
ULE90130-05-UTL-00912		no IFC documents yet
ULE90130-05-UTL-00013		no IFC documents yet
ULE90130-05-UTL-00113	3	
ULE90130-05-UTL-00213	7	
ULE90130-05-UTL-00313	4	
ULE90130-05-UTL-00413		no IFC documents yet
ULE90130-05-UTL-00513		no IFC documents yet
ULE90130-05-UTL-00713		no IFC documents yet
ULE90130-05-UTL-00813	4	
ULE90130-05-UTL-00913		no IFC documents yet
SGN schedule		no IFC documents yet
ULE90130-05-CAL-00014 SP	1	
SW Clean schedule		no IFC documents yet

Sewer schedule		no IFC documents yet
BT schedule		no IFC documents yet
VM schedule		no IFC documents yet
ULE90130-05-CAL-00013 C&W	1	
Thus schedule		no IFC documents yet
ULE90130-05-UTL-00046	4	Issue for information
ULE90130-05-UTL-00047	1	Issue for information
ULE90130-05-UTL-00048	4	Issue for information
ULE90130-05-UTL-00049	4	Issue for information
ULE90130-05-UTL-00050	4	Issue for information
ULE90130-05-UTL-00051	4	Issue for information
ULE90130-05-UTL-00052	1	Issue for information
ULE90130-05-UTL-00053	4	Issue for information

Section 5B Plates 14 – 20

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-05-UTL-00014		no IFC documents yet
ULE90130-05-UTL-00114		no IFC documents yet
ULE90130-05-UTL-00214	4	
ULE90130-05-UTL-00314	3	
ULE90130-05-UTL-00414		no IFC documents yet
ULE90130-05-UTL-00514		no IFC documents yet
ULE90130-05-UTL-00714		no IFC documents yet
ULE90130-05-UTL-00814		no IFC documents yet
ULE90130-05-UTL-00914		no IFC documents yet
ULE90130-05-UTL-00015		no IFC documents yet
ULE90130-05-UTL-00115		no IFC documents yet

ULE90130-05-UTL-00215	4	
ULE90130-05-UTL-00315	7	
ULE90130-05-UTL-00415		no IFC documents yet
ULE90130-05-UTL-00515	5	
ULE90130-05-UTL-00715	5	
ULE90130-05-UTL-00815	5	
ULE90130-05-UTL-00915	4	
ULE90130-05-UTL-00016		no IFC documents yet
ULE90130-05-UTL-00116		no IFC documents yet
ULE90130-05-UTL-00216	4	
ULE90130-05-UTL-00316	4	
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ULE90130-05-UTL-00060	2	
ULE90130-05-CAL-00009 (BT)	2	
ULE90130-05-CAL-00016 (VM)	2	
ULE90130-05-CAL-00015 (THUS)	3	
ULE90130-05-CAL-00018 (C & W)	1	
ULE90130-05-CAL-00019 (SW Clean)	1	
sewer schedule		
ULE90130-05-CAL-00020 (SP)	1	
ULE90130-05-CAL-00023 (SGN)	1	

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<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-05-UTL-00021	4	
ULE90130-05-UTL-00121	4	
ULE90130-05-UTL-00221	4	
ULE90130-05-UTL-00321	4	
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ULE90130-05-UTL-00126	5	
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ULE90130-05-CAL-00026 (EasyNET)	4	
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sewer schedule		no IFC documents yet
ULE90130-05-CAL-00030 (BT)	5	
ULE90130-05-CAL-00031 (C & W)	4	
ULE90130-05-CAL-00032 (Thus)	3	
ULE90130-05-CAL-00033 (VM)	4	
ULE90130-05-CAL-00034 (Private Utilities)		no IFC documents yet

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No IFC documents have been received.

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No IFC documents have been received.

General – Standard Details

<i>Document no.</i>	<i>Revision no.</i>	<i>Comments</i>
ULE90130-01-UTH-00015		Reference Drawing (received from Thus)
ULE90130-01-UTH-00025		Reference Drawing (received from Thus)

ULE90130-01-UTH-00006		Reference Drawing (received from Thus)
ULE90130-01-UTL-00033		Reference Drawing (received from Thus)
ULE90130-01-UTL-00035		Reference Drawing (received from Thus)
ULE90130-SW-UTL-00008	2	SW Standard Details
ULE90130-SW-UTL-00009	3	
ULE90130-SW-UTL-00010	2	
ULE90130-SW-UTL-00016	3	
ULE90130-SW-UTL-00013		
ULE90130-SW-UTL-00017		SW Foul - New Box Section Manhole
ULE90130-SW-UTL-00018		SW Foul - Box Section Manhole Intergration with Existing Manhole
DKE Coordinates 1B 22-27		
DKE Coordinates 1C 42-44		
DKE Coordinates 1D 49-56		
DKE Coordinates 5B 14-20		



**THIS IS SCHEDULE PART 42 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 42

DEVELOPMENT PARTNERING AND OPERATING FRANCHISE AGREEMENT



(1) TRANSPORT INITIATIVES EDINBURGH LIMITED

- and -

(2) TRANSDEV EDINBURGH TRAM LIMITED

**DEVELOPMENT
PARTNERING AND
OPERATING FRANCHISE
AGREEMENT
relating to the**

**EDINBURGH TRAM
NETWORK**

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DEVELOPMENT PARTNERING AND OPERATING FRANCHISE AGREEMENT

BETWEEN

- (1) **TRANSPORT INITIATIVES EDINBURGH LIMITED** a company incorporated in Scotland under number SC230949 and having its registered office at City Chambers, High Street, Edinburgh, EH1 1YJ ("**tie**"); and
- (2) **TRANSDEV EDINBURGH TRAM LIMITED** a company incorporated in Scotland under number SC267598 and having its registered office at Level 2, Saltire Court, 20 Castle Terrace, Edinburgh EH1 2ET (the "**Operator**").

WHEREAS

- A **tie** requires project development assistance and services for the subsequent commissioning and operation of a light rapid transit system in Edinburgh, known as the Edinburgh Tram Network .
- B Pursuant to a notice published in the Official Journal of the European Communities on 11 June 2003 with reference 2003/S 110-099040, **tie** invited expressions of interest from appropriately qualified parties for the development and subsequent operation of the System.
- C By competitive procurement process, conducted in accordance with law, **tie** has selected the Operator to support promotion of the Scottish Private Bills through the Scottish Parliament and to develop (under partnering arrangements with **tie**) and operate the System subject to the terms and conditions of this Agreement applicable to each phase of the Project.
- D It is acknowledged that this Agreement aims to achieve a project vision (the "Project Vision") for the Edinburgh Tram Network. This Project Vision involves the development of a System which will stand favourable comparison with the best in Europe. The quality of the System and the Transport Services provided will be appropriate to Edinburgh's status and role as a European capital city and its city centre's designation as a World Heritage Site. The System will integrate as far as possible with other transport modes to serve the existing fabric of the City of Edinburgh, and promote appropriate development and social inclusion.

It is intended that this goal be achieved in a spirit of partnership, utilising modern design methods and standards.

PART I - PRELIMINARY MATTERS

NOW THEREFORE IT IS AGREED AS FOLLOWS:

1. DEFINITIONS AND INTERPRETATION

Schedule 1 (*Definitions and Interpretation*) to this Agreement shall govern all matters concerning definitions and interpretation.

2. TERM OF AGREEMENT

2.1 This Agreement shall come into effect on the Effective Date and shall continue in effect until the earlier of:

2.1.1 the Expiry Date; and

2.1.2 the Termination Date.

2.2 **tie** may serve a notice on the Operator not less than 180 days before the fifteenth anniversary of the Effective Date requiring an extension of the Term of this Agreement for a period of up to five years commencing from the original Expiry Date. If **tie** serves such a notice under this Clause 2.2, the original Expiry Date shall be extended to such date as may be specified in such notice, and with effect from the day after the fifteenth anniversary of the Effective Date, in consideration of the continued grant to the Operator of the right to operate the Transport Services, the Operator shall continue to perform its obligations under the terms of this Agreement.

2.3 **tie** may serve a notice on the Operator not less than 90 days before the fifteenth anniversary of the Effective Date proposing an extension of the Term of this Agreement, on such terms, and until such date, as **tie** may specify in such notice. If **tie** serves such a notice under this Clause 2.3:

2.3.1 **tie** and the Operator will negotiate in good faith in relation to:

- (a) the terms of this Agreement to apply with effect from the day after the fifteenth anniversary of the Effective Date; and
- (b) the period of the extension to the Term of this Agreement; and

- 2.3.2 if **tie** and the Operator agree the matters referred to in Clause 2.3.1 prior to the date when this Agreement would otherwise have expired, the original Expiry Date shall be extended to such date as may be agreed between **tie** and the Operator, and with effect from the day after the fifteenth anniversary of the Effective Date, in consideration of the continued grant to the Operator of the right to operate the Transport Services, the Operator shall perform its obligations under the terms of this Agreement as amended pursuant to this Clause 2.3.
- 2.4 The date specified by **tie** in a notice under Clause 2.2 or the date agreed between the Operator and **tie** pursuant to Clause 2.3 shall not be less than 30 days after the date which was the original Expiry Date before service of such notice nor more than 20 years after the Effective Date.
- 2.5 It shall be a condition precedent to the effectiveness of this Agreement that **tie** shall have received written confirmation that the Scottish Executive has confirmed an appropriate level of funding.

PART II - DEVELOPMENT PHASE

3. PROJECT PARTNERING APPROACH

- 3.1 The Parties agree to work in mutual cooperation to fulfil their agreed roles and responsibilities and apply their expertise in relation to the Project to achieve the Project Development Objectives in accordance with the terms of this Agreement.
- 3.2 **tie** and the Operator shall procure that each **tie** Party and each Operator Party (as appropriate) shall work in accordance with the principles set out in Clause 3.1 above.
- 3.3 Subject to Clause 3.4 each Party ("**First Party**") undertakes to co-operate with the other ("**Second Party**") in order to facilitate the performance of this Agreement and in particular will:
- 3.3.1 approach all pricing, estimating and budgeting functions on a collaborative and Open Book Basis;
 - 3.3.2 use reasonable endeavours to avoid unnecessary complaints, disputes and claims against or with the Second Party;
 - 3.3.3 comply with the provisions of the Dispute Resolution Procedure in relation to any such complaints, disputes and claims with or against the Second Party;
 - 3.3.4 not interfere with the rights of the Second Party in performing its obligations under this Agreement, nor in any other way hinder or prevent the Second Party from performing those obligations or from enjoying the benefits of its rights; and
 - 3.3.5 take reasonable steps to mitigate any foreseeable losses and liabilities of the Second Party which are likely to arise out of any failure by the First Party to take any of the steps referred to in Clauses 3.3.2 to 3.3.4 (inclusive).
- 3.4 Nothing in Clause 3.3 shall:
- 3.4.1 interfere with the right of each of the Parties to arrange its affairs in whatever manner it considers fit (in compliance with Law) in order to exercise its rights and perform its obligations under this Agreement (in compliance with Law) and, in the case of **tie**, its duties and functions as a wholly owned subsidiary of CEC; or

- 3.4.2 relieve either Party from any obligation contained in this Agreement or from any obligation to pay any debt due and payable under this Agreement.
- 3.5 Senior representatives from the Parties shall meet on a quarterly basis (or as may be otherwise agreed by the Parties) to review:
- 3.5.1 any matters outwith the Operator's control and not caused by an Operator Default or other breach of the Agreement by the Operator which have adversely affected or may adversely affect:
- (a) the achievement of the Project Development Objectives;
 - (b) the performance of the System;
 - (c) the Operator's ability to perform its obligations in terms of the Agreement;
 - (d) the generation of revenue; and/or
 - (e) the maintenance of the Operator's costs within the Capped Fees, the Fixed Costs, the Target Costs for Project Phase C2 or the Target Operating Costs (as appropriate); and
- 3.5.2 any proposals from either Party to:
- (a) maximise revenue;
 - (b) minimise costs; and/or
 - (c) optimise the performance of the System.
- 3.6 Either Party may propose measures to address the matters set out in Clause 3.5.1 and a determination of what measures (if any) should be undertaken by the Operator and/or ~~tie~~ to address such matters shall be considered in accordance with and subject to each Party's existing rights, obligations and the existing contractual mechanisms under this Agreement including but not restricted to the rights, obligations and contractual mechanisms set out in Clause 22 (*Relief Events*), Clause 23 (*Performance and Financial Adjustments*), Clause 24 (*tie Changes*), Clause 25 (*Operator Changes*), Clause 26 (*Roads Changes*) and Clause 27 (*Qualifying Change in Law*) of the Operating Appendix.

- 3.7 Any proposal from either Party in terms of Clause 3.5.2 shall be reviewed in accordance with Clause 24 (*tie Changes*) or Clause 25 (*Operator Changes*) of the Operating Appendix (as appropriate).

4. THE PROJECT DEVELOPMENT SERVICES

- 4.1 The Operator shall assist **tie** with the promotion of the Project and the achievement of the Project Development Objectives by providing the Project Development Services during Project Phase A, Project Phase B and Project Phase C in relation to each Line in accordance with:

4.1.1 Schedule 2 (*Project Development Output Specification*); and

4.1.2 the requirements and directions of **tie** from time to time in accordance with the terms of this Agreement.

- 4.2 The Operator shall (each as a distinct and separate obligation) perform the Project Development Services and its other obligations under this Agreement:

4.2.1 in accordance with the terms of this Agreement;

4.2.2 in accordance with Good Industry Practice from time to time for the activity concerned;

4.2.3 in such manner so as not wilfully to detract from the image and reputation of **tie**, CEC or the Project;

4.2.4 in accordance with all applicable Law governing the provision of the Project Development Services and the element of the Project Development Objectives which those Project Development Services are directed towards achieving;

4.2.5 in a manner that is not likely to be injurious to persons or property;

4.2.6 in a manner consistent with the Project Development Objectives;

4.2.7 in a timely and efficient manner and in accordance with the Partnering Methodology and Programme, and Project Programme and otherwise as directed by **tie** in accordance with the terms of this Agreement; and

- 4.2.8 using the Key Personnel and such other Project Development Staff as may be approved by **tie** for that type of work; and
- 4.2.9 save as **tie** may have directed to the contrary.
- 4.3 The Operator shall, and shall procure that the Operator Parties shall, participate in such publicity, forums and meetings as are considered by **tie** to be reasonably required to garner support of all sections of the Edinburgh populace for the Project.
- 4.4 The Operator must comply at all times with Law, in particular the provisions of the Health & Safety At Work etc Act 1974 ("HS Act") and the CDM Regulations insofar as they affect the Operator's obligations under this Agreement and without prejudice to the generality of the foregoing:
- 4.4.1 where for the purposes of the Project, the Operator is a "designer" as defined in the CDM Regulations, the Operator shall comply with the obligations of a designer under the CDM Regulations;
- 4.4.2 the Operator shall co-operate fully with the planning supervisor and the principal contractor appointed under the CDM Regulations;
- 4.4.3 the Operator shall allocate adequate resources to enable it to comply with its obligations in this Agreement and the CDM Regulations;
- 4.4.4 the Operator shall co-operate with all other persons involved in the Project as designers to consider the prevention of risk and protection of persons who may be exposed to risks; and
- 4.4.5 the Operator must not by any act or omission do anything that would cause **tie** to be prosecuted under the HS Act.

5. PROJECT TEAM AND KEY PERSONNEL

- 5.1 The Operator and **tie** shall agree from time to time the structure of the joint team (comprising representatives of **tie**, the **tie** Advisers and the Project Development Staff) which shall be the forum for partnering, liaison, co-operation and coordination of the Project.

- 5.2 The Operator shall ensure that:
- 5.2.1 the Key Personnel shall be available for meetings in Edinburgh at such times as **tie** may, in its sole discretion, direct; and
 - 5.2.2 in addition to the Key Personnel, there shall at all times be a sufficient number of staff (including all relevant grades of supervisory staff) available for the provision of the Project Development Services in accordance with the Project Development Output Specification. This obligation shall include ensuring that there are sufficient Project Development Staff to cover periods of holiday, sickness and other absences and anticipated and actual peaks in servicing **tie**'s requirements for the Project Development Services.
- 5.3 The Operator shall locate Project Development Staff at such locations as the Operator considers convenient for the Project, provided that:
- 5.3.1 the Operator acknowledges that pursuant to Clause 15 (*Project Development Costs*), it will not be entitled to any reimbursement from **tie** during Project Phases A, B and C1 in excess of any sum included in the Core Staff Fixed Rates and/or the Non-Core Staff Fixed Rates of the Project in relation to the travel of any person to or from Edinburgh, or for the accommodation or subsistence of any person visiting Edinburgh;
 - 5.3.2 pursuant to Clause 5.2.1, **tie** will require the Operator to make the Key Personnel available for meetings in Edinburgh at such times as **tie** may, in its sole discretion, direct; and
 - 5.3.3 pursuant to Clause 6.8, the Operator Project Manager shall be required to be located in Edinburgh during Project Phase C2 and Project Phase D.
- 5.4 The Operator shall ensure that the Project Development Staff referred to in Clause 5.2.2 shall:
- 5.4.1 have the level of skill and experience appropriate (i) to the tasks and Project Development Objectives to which such staff are allocated and (ii) the standards to be achieved pursuant to this Agreement; and
 - 5.4.2 receive such training and supervision as is necessary to ensure the proper performance of this Agreement and compliance with all health and safety

rules, procedures and requirements. All training shall be in accordance with the Training Plan once that plan has been agreed between **tie** and the Operator pursuant to the Project Development Output Specification.

- 5.5 The Operator shall ensure that the Key Personnel have day to day responsibility for the implementation of the Project Development Services and that each of them performs the role in relation to the Project specified against his or her name in the Project Development and Operating Costs.
- 5.6 The Operator shall ensure that:
- 5.6.1 there are no changes to the Key Personnel without **tie's** prior written consent (such consent not to be unreasonably withheld or delayed in the case of a change necessitated by sickness or reasonable annual, maternity, paternity or compassionate leave or where one of the Key Personnel's employment ceases) and that any replacement persons shall be of at least equivalent status and ability to the person whom they replace; and
- 5.6.2 all other Project Development Staff shall be available in accordance with the requirements set out in the Partnering Methodology and Programme.
- 5.7 The Operator shall use all reasonable endeavours to ensure the continuity of the personnel assigned to perform the Project Development Services and shall select Key Personnel having careful regard to those persons' existing work load and other planned commitments.
- 5.8 If **tie** gives the Operator notice that any member of the Project Development Staff should be removed from involvement in the Project Development Services, the Operator shall immediately comply with such notice.
- 5.9 The Operator shall (and shall procure that the Operator Parties shall) comply with all relevant statutory health and safety requirements in respect of Project Development Staff, and any rules, regulations and any safety and security instructions from the **tie** Project Manager.
- 5.10 During Project Phases A, B and C1, **tie** shall provide office accommodation for the Project Development Staff within **tie's** own offices. If such accommodation is not available within **tie's** own offices, **tie** shall require the Operator to find alternative accommodation as soon as reasonably practicable and such requirement shall be

considered in accordance with Clause 24 (*tie Changes*) and Clause 23 (*Performance and Financial Adjustments*) of the Operating Appendix.

6. MANAGEMENT OF THE PROJECT

6.1 **tie** shall appoint a project manager ("**tie Project Manager**") by notice in writing to the Operator who (subject to Clause 6.12) will:

6.1.1 be responsible for managing the day to day conduct of the Project during Project Phases A, B, C and D;

6.1.2 be responsible for the day to day direction of the tasks to be performed by the Operator during Project Phases A, B, C and D;

6.1.3 exercise the functions and powers of **tie** in relation to the Project which are identified in this Agreement as functions or powers to be carried out by him/her (including during Project Phase D);

6.1.4 exercise such other functions and powers of **tie** under this Agreement as **tie** may notify to the Operator from time to time (including during Project Phase D); and

6.1.5 be the primary point of contact for the Operator with **tie** (including during Project Phase D);

and the Operator shall observe, and shall procure that the Project Development Staff observe, all reasonable directions of the **tie** Project Manager in relation to the Project.

6.2 The **tie** Project Manager shall be entitled at any time, by notice in writing to the Operator, to authorise any other persons to exercise the functions and powers of **tie** delegated to him pursuant to Clause 6.1, either generally or specifically. Until further notice from **tie**, any act of any such person shall, for the purposes of this Agreement, constitute an act of the **tie** Project Manager and all references to the "**tie** Project Manager" in this Agreement (apart from this Clause 6) shall be taken as references to such person so far as they concern matters within the scope of such person's authority.

6.3 **tie** may by notice in writing to the Operator change the identity of the **tie** Project Manager. **tie** shall (as far as reasonably practicable) consult with the Operator prior

to the appointment of any replacement for the **tie** Project Manager, taking account of the need for liaison and continuity in respect of the Project. Such change shall have effect on the date specified in the written notice.

- 6.4 During any period when a **tie** Project Manager has not been appointed (or when the **tie** Project Manager is unable through illness, incapacity or any other reason whatsoever to carry out or exercise his functions under this Agreement), **tie** shall carry out the functions which would otherwise be performed by the **tie** Project Manager.
- 6.5 No decision, act or omission of **tie**, the **tie** Project Manager or any **tie** Party shall, except as otherwise expressly provided in this Agreement:
- 6.5.1 in any way relieve or absolve the Operator from, modify, or act as a waiver or personal bar of, any liability, responsibility, obligation or duty under this Agreement;
- 6.5.2 in the absence of an express written instruction or authorisation issued by **tie** under Clause 24 (***tie** Changes*) of the Operating Appendix, constitute or authorise a **tie** Change; or
- 6.5.3 be construed as restricting or binding **tie** in any way save with regard to the specific project matters to which it relates.
- 6.6 Except as previously notified in writing before such act or omission by **tie** to the Operator, the Operator and the Operator Project Manager shall be entitled to treat any act or omission of the **tie** Project Manager which is authorised by this Agreement as being expressly authorised by **tie** and the Operator and the Operator Project Manager shall not be required to determine whether an express authority has in fact been given.
- 6.7 The Operator shall appoint a project manager ("**Operator Project Manager**") who shall:
- 6.7.1 act as the principal point of contact for **tie**, the **tie** Project Manager and the **tie** Advisers in relation to all matters related to the Project;
- 6.7.2 have full authority to act on behalf of the Operator for all purposes of this Agreement;

- 6.7.3 manage and co-ordinate the provision of the Project Development Services by the Project Development Staff and the integration of provision of the Project Development Services with the tasks being performed by **tie's** internal team and the **tie** Advisers; and
- 6.7.4 liaise with the **tie** Project Manager in relation to the matters referred to in Clause 6.12 including, without limitation, the scope of the Project Development Services to be carried out from time to time.
- 6.8 During Project Phase C2 and Project Phase D, the Operator Project Manager shall be:
- 6.8.1 located in Edinburgh; and
- 6.8.2 engaged on the Project full time.
- 6.9 Except as previously notified in writing before such act or omission by the Operator to **tie**, **tie** and the **tie** Project Manager shall be entitled to treat any act or omission of the Operator Project Manager in connection with this Agreement as being expressly authorised by the Operator, and **tie** and the **tie** Project Manager shall not be required to determine whether any express authority has in fact been given.
- 6.10 The Operator may by written notice to **tie** change the identity of the Operator Project Manager. Where the Operator wishes to do so it shall by written notice to **tie** propose a substitute for approval, taking account of the need for liaison and continuity in respect of the Project and the Project Phase when the change is proposed. Such appointment shall be subject to the prior written approval of **tie** (not to be unreasonably withheld or delayed).
- 6.11 The Operator shall also nominate a deputy to the Operator Project Manager. During any period when the Operator Project Manager is unable through illness, incapacity or any other reason whatsoever to carry out or exercise his functions under this Agreement, such deputy shall carry out the functions which would otherwise be performed by the Operator Project Manager.
- 6.12 Major decisions in relation to the Project Development Objectives during all Project Phases, will be taken by **tie**, such decisions to include:
- 6.12.1 the terms on which all Necessary Consents are applied for and the manner in which any proceedings necessary to obtain such Necessary Consents are

conducted (including the terms of all applications and notices and evidence to be presented in support of such applications and of any commitments and undertakings to be given in the course of such proceedings), always provided that this Clause 6.12.1 shall not apply to any Operator Necessary Consent. In relation to the Operator Necessary Consents, the Operator shall be solely responsible for determining the terms on which such Operator Necessary Consents are applied for and the manner in which any proceedings necessary to obtain such Operator Necessary Consents are conducted;

6.12.2 the terms on which public sector funding and local contributions for the Project (or any part of it) are applied for or agreed and the manner in which any proceedings necessary to obtain such funding are conducted;

6.12.3 the terms offered, or to be agreed with regard to all third party agreements, commitments and undertakings proposed to be entered into in respect of any Line before the Service Commencement Date in respect of the Line to which such agreement or undertaking relates;

6.12.4 the land or rights over land to be acquired for the purposes of the Project (other than offices or temporary work sites required by the Operator) and the manner and terms of such acquisition;

6.12.5 any application or representation or agreement or arrangement with any public authority, roads authority or highway authority, including CEC, Network Rail, statutory undertakers or other public or regulatory body in relation to the Project;

6.12.6 any change to the Partnering Methodology and Programme, Project Programme, Affordability Limits or Operating Appendix; and

6.12.7 the scope of the Project Development Services to be provided by the Operator from time to time, and all other matters specified in Clause 15 (*Project Development Costs*).

6.13 Save as directed in writing by **tie** or the **tie** Project Manager, the Operator shall not, and shall procure that the Operator Parties shall not, have any discussions or dealings with any person:

- 6.13.1 from whom any Necessary Consent (other than any Operator Necessary Consents) or public sector funding is sought, in relation to such Necessary Consent or funding or otherwise relating to any aspect of the Project which is not in the public domain;
- 6.13.2 whose land is or may be required for the purposes of the Project, in relation to such land or otherwise relating to any aspect of the Project which is not in the public domain;
- 6.13.3 who has objected to the Project or a proposed Scottish Private Bill, in relation to the undertakings or commitments which might be offered to him/her, or any other matter relating to any aspect of the Project which is not in the public domain; or
- 6.13.4 with or to whom any commitment or undertaking may need to be given or agreement entered into to facilitate the Project, in relation to any such commitment or undertaking, or otherwise relating to any aspect of the Project which is not in the public domain;
- 6.13.5 who may seek compensation in respect of nuisance, injurious affection, use of his/her land, loss of benefit from his/her land in relation to such compensation or otherwise relating to any aspects of the Project which are not in the public domain; or
- 6.13.6 who is a member of CEC or any employee of **tie** who is not part of a project team referred to in Clause 5.1, in relation to any aspect of the Project not in the public domain; or
- 6.13.7 who is involved in any venture or undertaking similar to the Project which may be in competition with the Project as regards resourcing capacity or funding availability.

7. QUALITY ASSURANCE

- 7.1 The Operator shall procure that all aspects of the Project Development Services are the subject of quality management systems at all times.
- 7.2 The quality management systems referred to in Clause 7.1 above shall be reflected in appropriate quality plans which shall:

- 7.2.1 for the period from the Effective Date until the agreement of the Quality Management Plan between **tie** and the Operator during Project Phase B (pursuant to Schedule 2 (*Project Development Output Specification*)), reflect the Operator's outline quality management plan set out in the Inception Report;
 - 7.2.2 be set out in the Quality Management Plan when agreed between the Operator and **tie**; and
 - 7.2.3 in any event, be consistent with BS EN ISO 9001:2000 or any equivalent standard which is generally recognised as having replaced it.
- 7.3 The Operator shall appoint (or shall procure the appointment of) a Quality Manager as soon as reasonably practicable following the Effective Date. The identity of the Quality Manager (and any replacement) shall be subject to the approval of the **tie** Project Manager (such approval not to be unreasonably withheld or delayed).
- 7.4 During Project Phases A to C, the Quality Manager may (without limitation) be the Operator Project Manager or one of the Key Personnel. During Project Phase D in respect of any Line, the identity of the Quality Manager shall comply with the requirements of Clause 14 (*Quality Assurance*) of the Operating Appendix.
- 7.5 During all Project Phases, the Quality Manager shall:
- 7.5.1 ensure the effective operation of the quality systems described in this Clause 7 (*Quality Assurance*) or Clause 14 (*Quality Assurance*) of the Operating Appendix (as appropriate);
 - 7.5.2 audit the quality systems at regular intervals and report the findings of such audit to the **tie** Project Manager;
 - 7.5.3 review all quality systems at intervals agreed with the **tie** Project Manager to ensure their continued suitability and effectiveness;
 - 7.5.4 liaise with the **tie** Project Manager on all matters relating to quality management; and
 - 7.5.5 report to the Operator in relation to the matters mentioned in Clauses 7.5.1 to 7.5.4 (inclusive).

8. OPERATOR'S PERFORMANCE SECURITY

- 8.1 Not less than 7 days after the Operator requests the issue of the first Certificate of Service Commencement by **tie** pursuant to Clause 3.1 (*Satisfaction of Requirements for Service Commencement*) of the Operating Appendix the Operator shall provide to **tie** a Performance Bond in the form of Schedule 14 (*Performance Bond*) to this Agreement and issued by a surety acceptable to **tie**.
- 8.2 The performance bond shall be for an amount of £5,000,000 (Five Millions Pounds Sterling) and shall be callable by **tie** on demand. The parties shall review the amount secured by the Performance Bond (i) at the commencement of Phase C2 for each subsequent Line or Network Expansion following the first Line in operation; and (ii) on the third anniversary of Full Service Commencement and annually thereafter. Any amendment required by **tie** to the amount secured by the Performance Bond shall be considered in accordance with Clause 24 (*tie Changes*) and Clause 23 (*Performance and Financial Adjustments*) of the Operating Appendix.
- 8.3 In the event the credit rating of the surety is downgraded to A- or a lower rating by Standard & Poors, **tie** shall be entitled to request the Operator to procure a substitute performance bond on identical terms from a surety acceptable to **tie**.
- 8.4 In the event that **tie** has made a demand on the Performance Bond and the costs, expenses, liabilities, loss of profits and damages incurred by **tie** as a result of:
- 8.4.1 the circumstances in respect of which the Performance Bond was called;
 - 8.4.2 the procurement of a replacement operator;
 - 8.4.3 **tie** operating the System at greater cost than the operation of the System by the Operator; and
 - 8.4.4 the costs of maintaining the Performance Bond in previous years which have already been reimbursed to the Operator;
- are less than the amount called under the Performance Bond and paid to **tie**, **tie** shall reimburse the Operator such amount as **tie** determines by reconciliation represents any surplus. Any such reconciliation shall be carried out by **tie** no earlier than 6 months and no later than 2 years from the date of payment under the Performance

Bond. For the avoidance of doubt, **tie** shall not be liable to the Operator for any interest in respect of surplus reimbursed, subject to Clause 8.5 below.

8.5 **tie** shall notify the Operator when the reconciliation has been carried out pursuant to Clause 8.4 and **tie** shall pay any surplus to the Operator within 30 days of such notification. The Parties agree that **tie's** calculation of the Bonded Costs shall be binding and not subject to challenge or dispute by the Operator under any circumstances. Reimbursement of the surplus under this Clause 8.5 shall carry interest at the Default Interest Rate from the due date of payment until payment occurs.

9. SPECIAL EVENTS

To the extent that there are any Special Events during Project Phase C2 in respect of any Line that may affect the performance of the Project Development Services, **tie** and the Operator shall comply with the provisions of Clause 8 (*Special Events*) of the Operating Appendix.

10. AMENDMENTS TO THE OPERATING APPENDIX, THE OPERATOR FINANCIAL MODEL AND THE OPERATING OUTPUT SPECIFICATION, AND THE SETTING OF FIXED COSTS AND RATES

10.1 **tie** acknowledges that the Operator has agreed:

10.1.1 the Operator Financial Model as at the Effective Date; and

10.1.2 the terms of the Operating Appendix;

on the basis of the Base Case Assumptions and the Law as at the Effective Date;

10.2 Subject to Clause 10.6, in accordance with the Project Development Output Specification, during Project Phase A and B in respect of a Line, **tie** and the Operator shall review and agree any appropriate amendments to the Operating Appendix and/or the Operator Financial Model and/or the Operating Output Specification as a result of any Base Case Assumptions becoming Inappropriate Base Case Assumptions, or as a result of a Change in Law.

10.3 If pursuant to Clause 10.2, amendments are requested by the Operator to the Operating Appendix, the Base Case Assumptions, the Financial Proposals, the Operator Financial Model, the Project Development and Operating Costs and/or the

Operating Output Specification during Project Phases A or B, the Operator and **tie** shall discuss, and seek to agree the relevant changes which will leave the Operator in No Better and No Worse a position than it would have been in had (i) the relevant Base Case Assumption not become an Inappropriate Base Case Assumption or (ii) the relevant Change in Law not occurred.

10.4 To the extent that there are any further developments to the Project during Project Phase C and/or Project Phase D which either the Operator or **tie** consider require amendment to the Base Case Assumptions, the Financial Proposals, the Operator Financial Model, the Project Development and Operating Costs, the terms of the Operating Appendix, and/or the Operating Output Specification such amendments shall be considered by the Operator and **tie** in accordance with Clause 23 (*Performance and Financial Adjustments*) and Clause 24 (*tie Changes*) or Clause 25 (*Operator Changes*) in the Operating Appendix.

10.5 If **tie** and the Operator are unable to agree:

10.5.1 whether any of the Base Case Assumptions is an Inappropriate Base Case Assumption; or

10.5.2 whether a Change in Law has occurred; or

10.5.3 what amendments to the Operating Appendix, the Base Case Assumptions, the Financial Proposals, the Operator Financial Model, the Project Development and Operating Costs and/or the Operating Output Specification pursuant to Clause 10.3 would leave the Operator in No Better and No Worse a position,

then either Party may refer the disagreement to the Dispute Resolution Procedure.

10.6 The Category One Fixed Costs, the Category Five Fixed Costs, the Core Staff Fixed Rates and the Non-Core Staff Fixed Rates are set as at the Effective Date and shall not be subject to adjustment pursuant to Clause 10.2 except in relation to any Changes in Law.

10.7 The unit cost in respect of any Category Two Fixed Costs shall be set as at the Effective Date and the total cost of any Category Two Fixed Costs shall be set by reference to the Base Case Assumptions by the end of Project Phase B in accordance with this Clause 10 (*Amendments to the Operating Appendix, the Operator Financial*

Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates) in the same way as the Target Operating Costs shall be set at the end of Project Phase B.

- 10.8 The Category Three Fixed Costs shall be set by agreement between **tie** and the Operator by the end of Project Phase C1 in accordance with the procedure set out in Part A of Schedule 17 (*Setting of Fixed Costs*).
- 10.9 The Category Four Fixed Costs shall be set by agreement between **tie** and the Operator by the end of Project Phase C2 in accordance with the procedure set out in Part B of Schedule 17 (*Setting of Fixed Costs*).
- 10.10 **tie** and the Operator may agree from time to time to treat other costs or rates payable in accordance with this Agreement as fixed costs or fixed rates. These additional fixed costs or fixed rates may be treated as fixed costs or fixed rates within one of the already defined categories of costs or rates, and set accordingly, or may be treated otherwise and set in a manner agreed by **tie** and the Operator.
- 10.11 Fixed Costs shall not be treated as Target Operating Costs or Target Costs for Project Phase C2, and if the actual costs for an item which is a Fixed Cost exceed the amount stated in the Project Development and Operating Costs (as Indexed), then **tie** shall not be liable to make payment to the Operator in respect of any excess above the Fixed Costs in accordance with this Agreement. Notwithstanding the actual costs for an item which is a Fixed Cost may be less than the amount stated in the Project Development and Operating Costs, **tie** shall be liable to pay the relevant Fixed Cost to the Operator in accordance with this Agreement.
- 10.12 All information on the actual costs associated with any Fixed Costs or Fixed Rates shall be made available to **tie** on an Open Book Basis.
- 10.13 All Fixed Costs and Fixed Rates which are applicable during Project Phase D (except for the Category Five Fixed Costs and any costs which the Parties agree are to be paid by **tie** to the Operator on a one-off basis) shall be subject to reset in accordance with Clause 21 (*Reset of the Fixed Costs, the Target Operating Costs and the Target Revenue*) of the Operating Appendix.
- 10.14 At the start of each Year, **tie** and the Operator shall agree a profile for the payment of Fixed Costs, Profit Element and Target Operating Costs, and the payment of any

Fixed Costs, Profit Element and any Target Operating Costs shall be made by **tie** to the Operator in accordance with the agreed profile. The agreed profile shall take account of the following matters (where relevant):

10.14.1 one-off annual payments:

10.14.2 amounts spread evenly over set periods;

10.14.3 amounts which will vary seasonally or otherwise;

10.14.4 fluctuations in service levels including bank holidays;

10.14.5 one-off payments; and

10.14.6 any methodology to be agreed by the Parties.

10.15 Either Party may refer any Dispute about the categorisation or setting of Fixed Costs or Fixed Rates to the Dispute Resolution Procedure.

10.16 The Operator shall update the Operator Financial Model in the following circumstances:

10.16.1 after the Target Costs for Project Phase C2, the Target Operating Costs and the Category Two Fixed Costs have been set in accordance with this Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*);

10.16.2 after the Category Three Fixed Costs have been set in accordance with this Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*);

10.16.3 after the Category Four Fixed Costs have been set in accordance with this Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*);

- 10.16.4 on each Reset Decision Date or following agreement or determination of reset pursuant to Clause 21 (*Reset of the Fixed Costs, the Target Operating Costs and the Target Revenue*) ;
- 10.16.5 after the setting or adjustment of Target Revenues by the Joint Revenue Committee;
- 10.16.6 after any financial adjustment pursuant to Clause 20 (*Adjustment of Fixed Costs, Target Operating Costs and Target Revenues*) of the Operating Appendix; and
- 10.16.7 as may be otherwise agreed by **tie** and the Operator.
- 10.17 When the Operator Financial Model is updated in the circumstances set out in Clause 10.16, any update shall be subject to **tie's** approval (such approval not to be unreasonably withheld). The updating of the Operator Financial Model shall be done on an Open Book Basis, and the Operator shall also respond as soon as reasonably practicable to any reasonable request from **tie** to provide any information associated with the Operator Financial Model on an Open Book Basis. If required, the Operator shall also update the Financial Proposals and the Project Development and Operating Costs at the same time as updating the Operator Financial Model.
- 10.18 The Operator shall supply to **tie** an electronic copy of any updated Base Case Assumptions, Operator Financial Model, Financial Proposals and Project Development and Operating Costs within 10 Business Days of **tie's** approval in accordance with Clause 10.17.
- 10.19 During Project Phases A to C1, when the Operator Financial Model is updated in the circumstances set out in Clause 10.16, the costs of such updating by the Operator shall be paid by **tie** to the Operator on the basis of the Non-Core Staff Fixed Rates and in accordance with Clause 15 (*Project Development Costs*). During Project Phases C2 to D, when the Operator Financial Model is updated in the circumstances set out in Clause 10.16, the costs of such updating by the Operator shall be paid by **tie** to the Operator on the basis of actual costs agreed on the basis of an estimate provided by the Operator to **tie**. During each Project Phase, the Operator shall minimise as far as reasonably practicable, the costs associated with the updating of the Operator Financial Model.

11. NETWORK EXPANSIONS

- 11.1 **tie** and the Operator will keep opportunities for Network Expansion under review throughout the Term, consistent with the objectives of the Integrated Transport Initiative and any other relevant public transport initiatives of CEC or **tie** from time to time.
- 11.2 From time to time during the Term, **tie** may propose to the Operator a Network Expansion for development. To the extent that **tie** requests assistance from the Operator in relation to the development of such Network Expansion:
- 11.2.1 the Operator will provide Project Development Services during the development of that Network Expansion, and the provisions of this Agreement and the Project Development Output Specification shall apply to the development of that Network Expansion as if it were a Line; and
- 11.2.2 the terms of payment for the Network Expansion in respect of Project Development Services and Project Operations shall be the same as those set out in this Agreement. Following **tie's** request pursuant to Clause 11.2 above, the Operator shall present for **tie's** approval its proposals for capped fees for the Development Phase for the Network Expansion and the relevant workstreams in the Project Development Output Specification.
- 11.3 If **tie** and the Operator are unable to agree the fees for the Project Development Services in respect of any Network Expansion pursuant to Clause 11.2.2, **tie** may withdraw its request for the Operator to provide the Project Development Services and **tie** may continue with the development of such Network Expansion, either by itself or in conjunction with third parties.
- 11.4 Whether or not **tie** requests the Operator to provide Project Development Services in relation to a proposed Network Expansion:
- 11.4.1 the Operator shall provide access to such information, documents and records as may be reasonably requested by **tie** or the **tie** Advisers in relation to the development of the proposed Network Expansion, and the provisions of Clause 48 (*Information and Audit Access*) shall apply (*mutatis mutandis*) to such access;
- 11.4.2 **tie** and the Operator will negotiate in good faith in relation to agreeing:

- (i) the Target Costs for Project Phase C2 (*Testing and Commissioning*) and any Fixed Costs relative to Project Phase C2 for the Network Expansion;
- (ii) the Interim Target Operating Costs, Interim Fixed Costs and the Interim Target Revenues for the System including such Network Expansion (if it is proposed that there be a time interval between the Service Commencement Date and the Full Service Commencement Date for such Network Expansion);
- (iii) the Target Operating Costs, the Target Revenues and any Fixed Costs for the System including such Network Expansion;
- (iv) amendments to the Operating Output Specification, the Operating Method Statements (and the Operating Appendix to the extent necessary) to take effect from the Service Commencement Date of the Network Expansion; and
- (v) any other amendments to this Agreement that are necessary in respect of the Network Expansion,

on the basis that the Operator should be in a No Better and No Worse position following the implementation and Service Commencement of the Network Expansion. **tie** and the Operator shall have regard to, but not be bound by, the costing assumptions prepared by the Operator which are set out in Schedule 19 (*Additional Costing Assumptions*).

11.5 To the extent that **tie** and the Operator are unable to agree the matters listed in Clause 11.4.2 by the end of Project Phase B for the Network Expansion (or the equivalent stage of development if the Operator is not providing the Project Development Services), **tie** shall be entitled to terminate this Agreement pursuant to Clause 31.5.

PART III - OPERATIONS PHASE

12. TRANSITION TO PROJECT PHASE D

- 12.1 The Operating Appendix shall come into effect in accordance with its terms and this Agreement (including such Operating Appendix) will govern the performance of the Project Operations for each of the Lines and/or any Network Expansion.
- 12.2 The Service Commencement Date (and the Full Service Commencement Date, if different) for each Line or Network Expansion shall be determined in accordance with the Project Programme, the terms of the Project Development Output Specification and the Operating Output Specification.

13. EDINBURGH TRAM NETWORK INTEGRATION

- 13.1 The Operator shall be responsible for maintaining and implementing the System Integration Plan, and shall liaise with the Infrastructure Provider(s) accordingly.
- 13.2 The Operator shall exercise such management authority (in respect of the performance of the System Integration Plan) pursuant to **tie**'s rights under the Infrastructure Delivery Agreements as **tie** may direct from time to time in accordance with Clause 11 (*Operation and Maintenance Procedures*) of the Operating Appendix.
- 13.3 During the Term, the Operator shall remain responsible for maintaining and implementing the Service Integration Plan, including maintaining arrangements with other local transport providers which ensure the integration of the Edinburgh Tram Network with other local public transport for the benefit of passengers and the realisation of the objectives of the Integrated Transport Initiative, the Project Vision and **tie**'s other transportation objectives. This responsibility extends to any adjustment to arrangements required to respond to incremental expansion of the Core Network, including regulatory approvals.
- 13.4 In the event that the Operator is unable to sustain the arrangements put in place to achieve integration in relation to the Core Network in accordance with the Service Integration Plan, the Operator shall report the reasons to **tie** and the Parties shall consult in order to explore solutions. If no solution is available to the Operator after a period of 60 days, **tie** may terminate this Agreement pursuant to Clause 37.1.1.

14. PERSONNEL ISSUES

14.1 The Operator shall at all times during the Term (including the Development Phase):

- 14.1.1 follow recruitment good practice to ensure that appropriately high quality staff are engaged, suitable for the posts to be filled, taking into account the level of responsibility involved;
- 14.1.2 procure that there are set up and maintained by the Operator and all contractors with whom the Operator contracts in respect of the Project, personnel policies and procedures covering all relevant matters (including discipline, grievance, benefits, equal opportunities and health and safety). The Operator shall procure that the terms and the implementation of such policies and procedures comply with Law (which for the purposes of this Clause 14.1.2 shall exclude Guidance which only **tie** or a public sector body and not the Operator is bound to comply with) and Good Industry Practice, and that such policies and procedures are approved by the relevant authorised party within the Operator and are published in appropriate media and that copies of such policies and procedures (and any revisions and amendments to them) are issued to **tie** as soon as reasonably practicable after production;
- 14.1.3 provide, and shall procure that all contractors with whom the Operator contracts in respect of the Project provide, to **tie** upon request written details of their respective management organisations;
- 14.1.4 not (and the Operator shall insert a clause to this effect in each contract with contractors with whom the Operator contracts in respect of the Project) unlawfully discriminate within the meaning and scope of the provisions of the Equal Pay Act 1970, the Sex Discrimination Act 1975, the Race Relations Act 1976, the Disability Discrimination Act 1995, the Employment Equality (Sexual Orientation) Regulations 2003 and the Employment Equality (Religion or Belief) Regulations 2003; and
- 14.1.5 have in place and implement appropriate equal opportunities and equality policies and comply with all applicable Law (which for the purposes of this Clause 14.1.5 shall exclude Guidance which only **tie** or a public sector body and not the Operator is bound to comply with) regarding employment of or recruitment of the Operator's employees.

- 14.2 The Operator shall during Project Phase C2 and Project Phase D:
- 14.2.1 comply with paragraph 7 of Schedule 4 (*Operating Output Specification*) to the Operating Appendix in relation to personnel issues; and
 - 14.2.2 comply with the Training Plan.
- 14.3 In accordance with Clause 5.4.2, the Operator shall comply with the Training Plan during Project Phase B once that plan has been agreed between **tie** and the Operator pursuant to the Project Development Output Specification.
- 14.4 During Project Phase C2 or Project Phase D, the **tie** Project Manager (acting properly and reasonably) may notify the Operator in writing if any employee of the Operator or any Operator Party (in accordance with the terms and conditions of employment of the employee concerned) misconducts himself or is incompetent or negligent in his duties or whose conduct in relation to the Project Operations is considered by the **tie** Project Manager to be undesirable and/or not in accordance with the Operator's obligations under this Agreement. **tie** shall co-operate with any disciplinary proceedings instigated by the Operator and shall be advised in writing by the Operator of the outcome in respect of such notification.
- 14.5 During Project Phase C2 or Project Phase D, if **tie**, acting fairly and having reasonable grounds to believe that a member of the Project Operations Staff:
- 14.5.1 has been or is under the influence of alcohol or drugs whilst performing any duties in connection with the Project Operations; or
 - 14.5.2 has been convicted of any offence concerning sexual offences on children, theft, corruption or fraud; or
 - 14.5.3 has, in the case of a Tram driver, been convicted of any offence involving alcohol or drugs,

requires the Operator (by notice in writing) to do so, the Operator shall (or shall procure that the relevant Operator Party shall) at the Operator's cost, immediately remove such employee from the Project Operations. Such employee may only be returned to the Project Operations if the matter or matters referred to in Clauses 14.5.1, 14.5.2 and/or 14.5.3 which is/are the subject of **tie's** reasonable grounds is/are established to be incorrect.

PART IV - FINANCIAL PROVISIONS

15A. INDEXATION

15A.1 Indexation shall be applied on an annual basis on 1 April of each year to the costs set out in Clauses 15A.2 and 15A.3 below.

15A.2 The following costs shall be Indexed:

15A.2.1 Target Costs for Project Phase C2;

15A.2.2 Target Operating Costs;

15A.2.3 Interim Target Costs;

15A.2.4 Profit Element;

15A.2.5 any amount which is expressed to be "Indexed" in this Agreement; and

15A.2.6 any other amount which is agreed by the Parties to be Indexed.

15A.3 The following costs shall be Indexed at Premium:

15A.3.1 Fixed Costs;

15A.3.2 Interim Fixed Costs;

15A.3.3 Fixed Rates;

15A.3.4 any amount which is expressed to be "Indexed at Premium" in this Agreement; and

15A.3.5 any other amount which is agreed by the Parties to be Indexed at Premium.

15. PROJECT DEVELOPMENT COSTS

15.1 During the Development Phase of this Agreement, the **tie** Project Manager and the Operator Project Manager shall meet:

- (a) no later than 7 days before the end of each Quarter during Project Phases A, B and C1 to agree the provision of Project Development Services by the Operator's Core Team for the forthcoming Quarter; and
- (b) no later than 7 days before the end of each month during Project Phases A, B and C1 to agree the provision of Project Development Services by the Operator's Non-Core Staff , and
- (c) no later than 7 days before the end of each month during Project Phase C2 to agree the provision of Project Development Services during Project Phase C2

to:

- 15.1.1 review the partnering tasks required in the next Quarter or (as appropriate) month ;
- 15.1.2 specify the Project Development Services required from the Operator which will be provided by the Operator's Core Team to perform or assist in the performance of those partnering tasks. **tie** shall determine whether or not such Project Development Services fall outwith the Project Development Services to be provided by the Operator's Core Team within the relevant Capped Fee. If it is agreed that such Project Development Services would fall outwith this Capped Fee, then if **tie** still require these Project Development Services, **tie** shall require the Operator's Core Team to perform these additional Project Development Services as if these Project Development Services were being provided by the Operator's Non-Core Staff. Any additional Project Development Services required on this basis shall be specified in accordance with Clause 15.1.3 and budgeted on a monthly basis in accordance with Clause 15.1.5;
- 15.1.3 specify the Project Development Services required from the Operator which will be provided by the Operator's Non-Core Staff to perform or assist in the performance of those partnering tasks;
- 15.1.4 agree amendments to the Partnering Methodology and Programme setting out the plan and timetable for the performance of those tasks;
- 15.1.5 agree a forward budget for such month or Quarter (as appropriate) in respect of the services specified by **tie** pursuant to Clauses 15.1.2 and 15.1.3 for the

Project Development Costs to be incurred by the Operator in performing those tasks, and such budget shall also include any agreed Profiled Fixed Costs and any agreed Profiled Profit Element (where appropriate); and

- 15.1.6 review progress on delivery of Project Development Services against programme and agreed budget during the immediately preceding month or Quarter (as appropriate) .

provided that:

- 15.1.7 if any of the matters referred to in Clauses 15.1.1 to 15.1.5 cannot be so agreed, either Party may refer the matter to the Dispute Resolution Procedure;
- 15.1.8 **tie** shall not be required to reimburse the Operator at more than the Core Staff Fixed Rates and the Non-Core Staff Fixed Rates in respect of the Operator's Core Team and the Operator's Non-Core Staff for the services to be provided pursuant to Clauses 15.1.2 and 15.1.3, notwithstanding that any Operator Party who makes Operator's Non-Core Staff available to the Operator for the purpose of the Project may make a greater charge to the Operator and, for the avoidance of doubt, no such greater charge shall be included within the Project Development Costs;
- 15.1.9 **tie** shall not be required to make any reimbursement for Project Development Costs in excess of that provided for in a budget agreed pursuant to Clause 15.1.5 unless and until (and to the extent only that) any such excess is approved by the **tie** Project Manager;
- 15.1.10 during Project Phases A, B and C1, **tie** shall not be required to reimburse the Operator for the travel of any person to or from Edinburgh, or for the accommodation or subsistence of any person visiting Edinburgh in excess of any sum included in the Core Staff Fixed Rates or the Non-Core Staff Fixed Rates ;
- 15.1.11 **tie** shall not be required to reimburse the Operator for any costs or expenses incurred or time spent by the Operator or any Operator Party in relation to the negotiation or the procurement, preparation or negotiation of contracts or arrangements with third parties engaged by the Operator and, for the

avoidance of doubt, no such charge shall be included within the Project Development Costs; and

15.1.12 any specific Project Development Services to be provided by the Operator in relation to the support for the parliamentary process relating to the Scottish Private Bills shall be agreed on the basis of the Fixed Non-Core Staff Rates, budgeted, invoiced (quarterly) and paid for in accordance with this Clause 15 (*Project Development Costs*).

15.2 In accordance with **tie's** requirements pursuant to Clause 15.1.3, the Operator shall supply the Operator's Non-Core Staff provided that the Operator shall be obliged to provide Operator's Non-Core Staff who are employed by an Operator Party only if the required Operator's Non-Core Staff are available and can perform the required Project Development Services in accordance with the Partnering Methodology and Programme or otherwise in accordance with any timescale required by **tie** and/or the **tie** Project Manager.

15.3 The Operator shall submit to the **tie** Project Manager no later than 14 days after the end of each Quarter in respect of Project Development Services provided by the Operator's Core Team or no later than 14 days after the end of each month in respect of Project Development Services provided by the Operator's Non-Core Staff an application for payment in respect of the Project Development Costs and the Fixed Costs claimed for that Quarter or month (as appropriate) . Such application for payment shall set out the following details:

15.3.1 the total Project Development Costs incurred by the Operator and/or budgeted for that Quarter or month (as appropriate) in accordance with Clause 15.1.5;

15.3.2 a breakdown of those Project Development Costs by activity and by Line (where practicable);

15.3.3 a breakdown of those Project Development Costs between Project Development Costs relative to the Operator's Core Team and Project Development Costs relative to the Operator's Non-Core Staff;

- 15.3.4 the timesheets of each member of the Operator's Non-Core Staff engaged in performing the Project Development Services, certified as true and accurate by that person; and
- 15.3.5 a breakdown of the Fixed Costs claimed by the Operator together with a breakdown of the actual costs of any Fixed Costs incurred.
- 15.4 **tie** shall procure that the **tie** Project Manager shall, subject to any clarifications as are in **tie's** opinion (acting properly and reasonably) necessary and subject to Clauses 10.11, 15.1.8, 15.1.9, 15.1.10, 15.1.11 and 15.13, certify by notice in writing to the Operator that part of the Project Development Costs and the Fixed Costs claimed in the application for payment approved by **tie** which approval shall include the sums stated in the budget for the relevant month or Quarter agreed in accordance with Clause 15.1.5 and give reasons why any part of the Project Development Costs and the Fixed Costs claimed in the application for payment has not been so approved and certified no later than 30 days after the date on which such application for payment is received by **tie** (the "Due Date for Payment"). **tie** shall not be liable to pay to the Operator any Project Development Costs contained in any budget agreed in accordance with Clause 15.1.5 to the extent that the Operator has not provided any of the Project Development Services. **tie** shall pay to the Operator the Project Development Costs contained in any budget agreed in accordance with Clause 15.1.5 where and to the extent **tie** instruct the Operator not to provide such Project Development Services.
- 15.5 Within 5 Business Days of receiving a notice from **tie** pursuant to Clause 15.4 certifying part or all of the Project Development Costs and the Fixed Costs claimed in the relevant application for payment, the Operator shall issue an invoice (substantially in the form of Schedule 13 (*Form of Operator's Invoice*)) to **tie** for ninety percent (90%) of such certified Project Development Costs and Fixed Costs . **tie** shall retain ten percent (10%) of such certified Project Development Costs (the "Retention").
- 15.6 **tie** shall pay any invoice submitted in accordance with Clause 15.5 within 30 days of the Due Date for Payment calculated in accordance with Clause 15.4 (the "Final Date for Payment").

- 15.7 Within 5 Business Days of the issue of a PPCN by **tie** (in respect of the relevant Project Phase for the relevant Line), the Operator shall submit to the **tie** Project Manager the final application for payment in respect of the Project Development Costs and the Fixed Costs claimed for the relevant Project Phase for the relevant Line. Such application for payment shall set out details listed in Clauses 15.3.1 to 15.3.4.
- 15.8 **tie** shall procure that the **tie** Project Manager shall, subject to any clarifications as are in **tie's** opinion (acting properly and reasonably) necessary and subject to Clauses 10.11, 15.1.8, 15.1.9, 15.1.10, 15.1.11 and 15.13, certify by notice in writing to the Operator that part of the Project Development Costs and the Fixed Costs claimed in the final application for payment approved by **tie** which certification shall include the budget for the relevant month or Quarter agreed in accordance with Clause 15.1.5 in respect of the Project Development Services required from the Operator which were to be provided by the Operator's Core Team and give reasons why any part of the Project Development Costs and the Fixed Costs claimed in the final application for payment has not been so approved and certified no later than 30 days after the date on which such application for payment is received by **tie** (the "Due Date for Payment").
- 15.9 Within 5 Business Days of receiving a notice from **tie** pursuant to Clause 15.8 certifying part or all of the Project Developments Costs and the Fixed Costs claimed in the final application for payment, the Operator shall issue an invoice to **tie** for one hundred percent (100%) of such certified Project Development Costs and Fixed Costs and, subject to Clause 15.11, for one hundred percent (100%) of each Retention retained in accordance with Clause 15.5.
- 15.10 **tie** shall pay the invoice submitted in accordance with Clause 15.9 within 30 days of the Due Date for Payment calculated in accordance with Clause 15.8 (the "Final Date for Payment").
- 15.11 In respect of Project Phase A, if **tie** issues a PPCN at a time when the Royal Assent to the Scottish Private Bill for the relevant Line has not yet been obtained, the Retention in respect of any specific Project Development Services provided pursuant to Clause 15.1.12 shall not be invoiced by the Operator until following the date of the giving of Royal Assent to the Scottish Private Bill for the relevant Line. **tie** shall pay the invoice submitted in accordance with this Clause 15.11 within 30 days of its receipt by **tie**.

- 15.12 The Operator may refer any Dispute about Project Development Costs and/or Fixed Costs which have not been certified by **tie** to the Dispute Resolution Procedure. If it is determined pursuant to the Dispute Resolution Procedure that the whole or part of any disputed amount should be paid by **tie** to the Operator, the Operator shall raise an invoice in respect of such determined amount and payment shall be made by **tie** to the Operator not less than 7 days from the date of receipt of such invoice by **tie** or the date which, apart from the Dispute would have been the Final Date for Payment calculated in accordance with Clause 15.6 or Clause 15.8 (as appropriate), whichever date is later.
- 15.13 Fees payable in respect of the Project Development Services provided by the Operator's Core Team during Project Phases A, B and C1 are Capped Fees subject to the following provisions of this Clause 15.13. Under no circumstances (absent **tie**'s express agreement) shall **tie** be liable to pay the Operator any amount with respect to any Project Phase for the Project Development Services provided by the Operator's Core Team, in excess of the amount of the relevant Capped Fee notwithstanding that tasks may remain outstanding in order for completion of Project Development Services in any Project Phase to be achieved to **tie**'s satisfaction provided always that if Project Phases A, B or C1 are extended beyond the dates set out in the Project Programme and/or the Partnering Methodology and Programme, and this extension is not due to the Operator's breach of this Agreement, the **tie** Project Manager shall meet with the Operator Project Manager to agree a budget for any further Project Development Services which are required from the Operator and which will be provided by the members of the Operator's Core Team and/or the Operator's Non-Core Staff, as if all members of the Operator's Core Team and the Operator's Non-Core Staff were Operator's Non-Core Staff.. The provisions of this Clause 15 shall apply to these Project Development Services as if the Project Development Services had been specified in accordance with Clause 15.1.3.
- 15.14 The Operator shall notify **tie** immediately if the Operator believes that the Operator's Core Team cannot carry out the Project Development Services in accordance with the timescales set out in the Partnering Methodology and Programme or otherwise in accordance with any requirements of **tie** or the **tie** Project Manager.
- 15.15 The Parties may agree to suspend provision of the Project Development Services at any time for any period up to a maximum of 12 months or such longer period as the Parties may agree. In the event of any such suspension, the Parties shall agree the

reasonable costs of such suspension, the terms for payment of such costs and the procedure for recommencement of the provision of the Project Development Services at the end of any agreed period of any suspension.

16. PAYMENTS FOR THE PROJECT DEVELOPMENT SERVICES

16.1 In consideration of the performance by the Operator of the Project Development Services in accordance with the terms of this Agreement, **tie**:

16.1.1 shall make the payments to the Operator specified in Clause 15 (*Project Development Costs*) and Clause 17 (*Payment during Project Phase C2*); and

16.1.2 subject to the terms of this Agreement, grants to the Operator, with effect from the Service Commencement Date in respect of each Line, the exclusive right to operate such Line in accordance with the terms and for the period set out in the Operating Appendix.

16.2 The Operator's only entitlement to payment from **tie** in respect of the performance of the Project Development Services shall be as expressly provided in this Agreement.

17. PAYMENT DURING PROJECT PHASE C2

17.1 The Operator shall submit to the **tie** Project Manager an application for payment no later than 7 days after the end of each month in respect of the Fixed Costs for the month just ended, the actual costs for any Target Costs for Project Phase C2 for the month just ended, any other actual costs agreed with **tie** and the Profit Element claimed for that month in respect of the Project Development Services carried out in Project Phase C2 for the relevant Line. Each application for payment shall set out the full detail of expenditure incurred and the monthly budget forecast agreed pursuant to Clause 15.1.5. The application for payment shall also include a breakdown of the Fixed Costs claimed by the Operator together with a breakdown of the actual costs of any Fixed Costs incurred.

17.2 **tie** shall procure that the **tie** Project Manager shall, subject to any clarifications as are in **tie**'s opinion (acting properly and reasonably) necessary and subject to Clauses 10.11, 17.10 and 17.11, certify by notice in writing to the Operator that part of the Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with **tie** and Profit Element claimed in the application for payment which is approved by **tie** by reference to the agreed budget and give reasons

why any part of the Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with **tie** and Profit Element has not been so approved and certified no later than 30 days after the date on which such application for payment is received by **tie** (the "Due Date for Payment").

- 17.3 Within 5 Business Days of receiving a notice from **tie** pursuant to Clause 17.2 certifying part or all of the Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with **tie** and the Profit Element claimed in the relevant application for payment, the Operator shall issue an invoice to **tie** for ninety percent (90%) of such certified Fixed Costs, the actual costs for any Target Costs for Project Phase C2, and any other actual costs agreed with **tie** and ninety percent (90%) of the certified Profit Element. **tie** shall retain ten percent (10%) of the certified Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with **tie** and ten percent (10%) of the certified Profit Element (the "Retention").
- 17.4 **tie** shall pay any invoice submitted in accordance with Clause 17.3 within 30 days of the Due Date for Payment calculated in accordance with Clause 17.2 (the "Final Date for Payment"); and
- 17.5 Within 5 Business Days of the issue by **tie** of a PPCN in respect of the Project Phase C2 for the relevant Line, the Operator shall submit to the **tie** Project Manager the final application for payment in respect of the Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with **tie** and Profit Element claimed for Project Phase C2. Such application for payment shall set out the information required in Clause 17.1.
- 17.6 **tie** shall procure that the **tie** Project Manager shall, subject to any clarifications as are in **tie**'s opinion (acting properly and reasonably) necessary and subject to Clauses 10.11, 17.10 and 17.11, certify by notice in writing to the Operator that part of the Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with **tie** and Profit Element claimed in the final application for payment which is approved by **tie** and give reasons why any part of the Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with **tie** and Profit Element claimed in the final application for payment has not been so approved and certified no later than 30 days after the date on which such application for payment is received by **tie** (the "Due Date for Payment"). The final

amount certified by **tie** shall take into account a reconciliation of cost overrun or savings, as the case may be, calculated in accordance with Clause 17.11.

- 17.7 Within 5 Business Days of receiving a notice from **tie** pursuant to Clause 17.6 certifying part or all of the Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with **tie** and Profit Element claimed in the final application for payment, the Operator shall issue an invoice to **tie** for one hundred percent (100%) of such certified Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with **tie** and Profit Element and for one hundred percent (100%) of each Retention retained in accordance with Clause 17.3.
- 17.8 **tie** shall pay the invoice submitted in accordance with Clause 17.7 within 30 days of the Due Date for Payment calculated in accordance with Clause 17.6 (the "Final Date for Payment").
- 17.9 The Operator may refer any Dispute about the Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with **tie** and/or Profit Element which have not been certified to the Dispute Resolution Procedure. If it is determined pursuant to the Dispute Resolution Procedure that the whole or part of any disputed amount should be paid by **tie** to the Operator, the Operator shall raise an invoice in respect of the determined amount and payment shall be made by **tie** to the Operator not less than 7 days from the date of receipt of such invoice by **tie** or the date which, apart from the Dispute would have been the Final Date for Payment calculated in accordance with Clause 17.4 or Clause 17.8 (as appropriate), whichever date is later.
- 17.10 **tie** shall not be required to reimburse the Operator for any amount not agreed in the relevant monthly budget for Project Phase C2.
- 17.11 To the extent that the Operator's actual costs, in respect of which Target Costs for Project Phase C2 have been allocated, for Project Development Services carried out during Project Phase C2 (i) exceed the Target Costs for Project Phase C2, **tie** shall certify (subject to a 10% retention to be released upon issue of the PPCN for Project Phase C2) a contribution of twenty percent (20%) of the undisputed amount of any such excess, up to a ceiling for such excess of ten percent (10%) of the Target Costs for Project Phase C2; or (ii) represents a saving against the Target Costs for Project

Phase C2, the Operator shall be entitled to a share of fifty percent (50%) of any such saving.

17.12 In the event that the Operator becomes aware of circumstances that may involve the completion of Project Phase C2 either being delayed or requiring expenditure in excess of Target Costs for Project Phase C2 and the Fixed Costs (excluding the Category Five Fixed Costs) claimed for Project Phase C2, the Operator shall notify **tie** forthwith.

18. PAYMENT DURING THE SERVICE PERIOD

18.1 The payment provisions at Clause 19 (*Payments to the Operator*) in the Operating Appendix will apply to payments during the Service Period.

19. METHOD AND CURRENCY OF PAYMENT

19.1 Subject to Clauses 19.3 and 19.4, all payments under this Agreement shall be made in pounds sterling by electronic transfer of funds to the bank account of the recipient (located in the United Kingdom) specified in the relevant invoice, quoting the invoice number against which payment is made, provided that in respect of payments pursuant to Clause 18.2 of the Operating Appendix (as regards Operating Revenues collected or received by the Operator):

19.1.1 all such Operating Revenues shall be paid directly into the bank account nominated by **tie**; and

19.1.2 the Operator shall supply statements summarising such payments in accordance with Clause 18 (*Payment of Operating Revenue to tie*) of the Operating Appendix

19.2 If either Party (acting in good faith) disputes the amount of all or any part of a payment due under this Agreement, the undisputed amount of such payment shall be paid in accordance with Clause 19.1 and the provisions of this Clause 19.2 shall apply in respect of the disputed part only. The Parties shall resolve the Dispute in accordance with Clause 42 (*Dispute Resolution Procedure*). Following resolution of the Dispute, any amount agreed or determined to have been payable shall be paid forthwith together with interest on such amount calculated in accordance with Clause 20 (*Interest*).

- 19.3 If the United Kingdom becomes a Participating Member State and to the extent that EMU Legislation provides that an amount denominated in the National Currency Unit of a Participating Member State and payable within that Participating Member State may be paid either in the Euro unit or in that National Currency Unit, each Party shall be entitled to pay any such amount either in the equivalent Euro unit (at the prevailing rate of exchange given by the Bank of England on the last Business Day prior to the due date pursuant to this Agreement for such payment) or in pounds sterling during such period as the relevant EMU Legislation permits.
- 19.4 On expiry of such period as referred to in Clause 19.3 above, the Parties shall discharge their payment obligations to one another by payment in Euros and all liabilities, amounts (whether outstanding or payable in the future) and calculations expressed in pounds sterling in this Agreement shall be converted or amended (as the case may be) automatically to the equivalent amount in Euros at the exchange rate provided pursuant to the relevant EMU Legislation.

20. INTEREST

- 20.1 Each Party shall be entitled, without prejudice to any other right or remedy (excluding any right under the Late Payment of Commercial Debts (Interest) Act 1998), to receive interest on any payment not duly made pursuant to the terms of this Agreement on the due date calculated from day to day at a rate per annum equal to the Default Interest Rate from the day after the date on which payment was due up to and including the date of payment. The Parties agree that the entitlement to interest pursuant to this Clause 20 (*Interest*) constitutes a "substantial remedy" for the purposes of section 9 of the Late Payment of Commercial Debts (Interest) Act 1998.

21. SET-OFF

- 21.1 The Operator shall not be entitled to retain or set off any amount owed to it by **tie** against any amount due to **tie** by it.
- 21.2 **tie** may retain or set off any amount owed to it by the Operator which has fallen due and payable against any amount due from **tie** to the Operator by specifying the amount(s) to be set off or retained and the ground(s) for set off or retention in the notice in writing to be issued by **tie** to the Operator on or before any Due Date for Payment or by **tie** issuing to the Operator a Notice of Intention to Withhold Payment not less than five Business Days before any Final Date for Payment.

21.3 If the retention or set-off of any amount referred to in Clause 21.1 is disputed, then any undisputed part of that amount shall be retained or set off and the following provisions of this Clause 21.3 shall apply in respect of the disputed part only. The Parties shall use all reasonable endeavours to resolve the dispute in question but, if they fail so to resolve it, either Party may refer the matter to the Disputes Resolution Procedure. Following resolution of the dispute, any amount agreed or determined to have been payable shall be paid not later than 7 days from the date of resolution of the Dispute or the date which, apart from the Dispute would have been the final date for payment (whichever is earlier), together with interest on such amount calculated in accordance with Clause 20 (*Interest*).

22. VAT

22.1 All amounts specified in this Agreement are exclusive of VAT.

22.2 If any supply made under this Agreement is or becomes chargeable to VAT then the person receiving the supply ("**Recipient**") shall in addition pay the person making the supply ("**Supplier**") the amount of that VAT against receipt by the Recipient from the Supplier of a valid and correct VAT invoice in respect of that supply.

22.3 Where, under this Agreement, any amount is calculated by reference to any sum which has been or will be incurred by any person, the amount shall include any VAT in respect of that sum only to the extent that such VAT is not and will not be recoverable as input tax by that person, save where such VAT is irrecoverable by reason of that person's negligence, error or omission.

22.4 The Operator shall provide to **tie** any information reasonably requested (including pursuant to Clause 48 (*Information and audit access*)) in connection with the amount of VAT chargeable in relation to any supply made, payment made or reimbursed in accordance with this Agreement and payable by the Operator. To the extent **tie** suffers any Losses through irrecoverable VAT as a consequence of inaccurate or inadequate VAT related documentation provided by the Operator or a delay in the provision of such documentation, the Operator shall reimburse **tie** in respect of any such Losses.

22.5 **tie** shall not be liable to pay the Operator any irrecoverable VAT incurred by the Operator through his own oversight or omission, in particular with regard to VAT assessment of payments made pursuant to the Pain Gain Share Mechanism (set out at

paragraphs 18 to 21 of Schedule 3 to the Operating Appendix), the KPI Regime or VAI calculation.

- 22.6 For the avoidance of doubt, a change in the rates of VAT during the Term shall not be treated as a Qualifying Change in Law but VAT shall be applied to any invoice submitted in accordance with this Agreement and shall be payable at the rate which is current as at the date of any such invoice.

23. TAXATION

- 23.1 Subject to Clause 22 (*VAT*) and Clauses 23.2 to 23.4 below, the Operator shall pay all Tax whatsoever whether parliamentary, local or otherwise which are payable in respect of (i) any rights or interests enjoyed by the Operator under this Agreement during any Project Phase and (ii) the income (other than the Patronage Revenue collected by the Operator as agent for **tie** and remitted to **tie** pursuant to Clause 18 (*Payment of Operating Revenue to tie*) of the Operating Appendix) or profits generated by the Project Operations or the Tram Business. With the exception of rates in respect of the business use or occupation of premises to perform its obligations under this Agreement (which the Operator shall be entitled to include in the Operating Costs), all other payments made as described under this provision shall be for the Operator's account.
- 23.2 In the event the Operator is notified or otherwise becomes aware of the first Rateable Value to be assigned to the System (or of any subsequent re-evaluation) it shall promptly notify **tie**. If **tie** wishes to appeal, **tie** shall notify the Operator of its intention and the Operator shall co-operate with and provide all reasonable assistance in the prosecution of the appeal, including the provision of relevant documentation, accounts and financial and technical information, the availability of relevant managers and other material evidence reasonably required by **tie**.
- 23.3 **tie** shall indemnify the Operator against any demand made in respect of the Rateable Value of the System and the Operator shall be entitled to 30% of the financial benefit of any reduction in the Rateable Value of the System resulting from any appeal made under Clause 23.2 above. The Operator shall indemnify **tie** in relation to any failure to retain, keep or produce proper and complete records which adversely affects **tie's** ability to pursue such appeal.

- 23.4 For the avoidance of doubt, no amount shall be included in the Target Operating Costs or the Fixed Costs in respect of the Rateable Value of the System, and any payment by **tie** pursuant to the indemnity in Clause 23.3 shall be made separately from the Payment Mechanism.
- 23.5 To the extent that an Infrastructure Provider is assessed as liable in respect of the Rateable Value of the System and **tie** wishes to appeal, **tie** shall notify the Operator of its intention and the Operator shall co-operate with such appeal in accordance with Clause 23.2.

24. MITIGATION AND COST MANAGEMENT

- 24.1 The Operator shall (and shall procure that each Operator Party shall) take all reasonable steps to manage, minimise and mitigate:
- 24.1.1 all Project Development Costs during Project Phases A, B and C1, and actual costs for the Project Development Services carried out during Project Phase C2 ; and
- 24.1.2 the adverse effects of any Base Case Assumption proving to be an Inappropriate Base Case Assumption.
- 24.2 At all times during the Term, each Party shall take all reasonable steps to minimise and mitigate any loss for which that Party is entitled to bring a claim against the other Party pursuant to this Agreement.
- 24.3 Without prejudice to Clause 24.2, the Operator shall (and shall procure that its Operator Parties shall) take all reasonable steps to minimise the adverse effects of any Relief Event (including by seeking damages from third parties or other remedies where proceedings would have a reasonable chance of success and would not be economically imprudent having regard to the likely level of damages or the nature of the remedies and the estimated cost or duration of the proceedings).

PART V - WARRANTIES, INDEMNITIES AND LIABILITY

25. WARRANTIES

25.1 The Operator hereby represents, warrants and undertakes to **tie** that:

25.1.1 none of the Operator, the Operator Parties or any of their respective representatives or Affiliates or professional advisers or employees or anyone acting on behalf of any of them have committed any Prohibited Act;

25.1.2 all information which has been given by any of the Operator, the Operator Parties or any of their respective representatives or Affiliates or advisers or employees or anyone acting on behalf of any of them to any member, officer, employee or adviser of **tie** was, when given true, complete and accurate in all material respects and there is no fact or matter not disclosed in writing to **tie** which:

25.1.2.1 renders any such information untrue, inaccurate or misleading; or

25.1.2.2 might, if disclosed, adversely affect the decision of anyone considering whether or not to contract with the Operator;

25.1.3 the Operator:

25.1.3.1 is duly incorporated under the law of Scotland and has the power to own its own assets and carry on its own business; and

25.1.3.2 has full power and authority to enter into and perform this Agreement which constitutes a valid and binding obligation on the Operator in accordance with its terms; and

25.1.3.3 will not, by performing its obligations under this Agreement, be in breach of any undertaking to any third party or of any applicable law so as to have a material adverse effect on its ability to discharge its obligations under this Agreement;

25.1.4 the Operator, the Operator's immediate parent company and TRANSDEV plc is not involved in any dispute with HM Inland Revenue, HM Customs & Excise, the European Commission, the OFT, or any other fiscal or regulatory

- authority in any jurisdiction concerning any matter which could materially and adversely affect the business of the Operator or the Project in any way;
- 25.1.5 the Operator does not use any processes and is not engaged in any activities which involve the misuse of any confidential or proprietary information belonging to any third party;
- 25.1.6 no claim is presently being assessed and no litigation, arbitration or proceeding is in progress or, to the best of the knowledge and belief of the Operator pending or threatened, against the Operator or any of its management or assets which might have an adverse effect on the ability of the Operator to perform the obligations in this Agreement or the Operating Appendix;
- 25.1.7 the Operator's use and the use by **tie** of the Project Development Services and any materials provided to it as part of the Project Development Services has not infringed and shall not infringe any third party's Intellectual Property Rights;
- 25.1.8 there has been no material adverse change to the financial condition the Operator's immediate parent company and TRANSDEV plc since the audited accounts for the financial year 2003 including any matter resulting in a downgrade of the Operator's immediate parent company's and TRANSDEV plc's credit rating with any commercially acknowledged independent rating agency reporting the transport sector; and
- 25.1.9 the performance of the Project Development Services does not create any situation in which a conflict of interest arises for the Operator.
- 25.2 Each of the warranties, representations and undertakings given under Clauses 25.1.1 to 25.1.9 shall be construed as a separate and independent warranty, representation and undertaking and shall not be limited or restricted by reference to or inference from any other terms of this Agreement.
- 25.3 The Operator shall immediately disclose in writing to **tie** any event or circumstance which may arise or become known to it after the Effective Date which is materially inconsistent with any of the warranties, representations or undertakings given under

Clauses 25.1.1 to 25.1.9 or which has or is likely to have a material adverse effect on the Project.

25.4 The warranties, representations or undertakings given under Clauses 25.1.1 to 25.1.9 shall be repeated by the Operator (save that Clause 25.1.8 shall apply to the Operator and to the Operator's immediate parent company and TRANSDEV plc the reference in Clause 25.1.8 to audited accounts shall refer to the latest set of the audited accounts issued by the Operator, the Operator's immediate parent company and TRANSDEV plc) at the commencement of Project Phase C2 for each Line or Network Expansion.

25.5 **tie** does not give any warranty or undertaking as to the completeness, currency, accuracy or fitness for any purpose of any of the Background Information and, subject to the express provisions of this Agreement, neither **tie**, the **tie** Advisers nor any of its or their employees shall be liable to the Operator in contract, delict (including breach of statutory duty), or otherwise as a result of:

25.5.1 any inaccuracy, omission, unfitness for any purpose or inadequacy of any kind whatsoever in the Background Information; nor

25.5.2 any failure to make available to the Operator any materials, documents, drawings, plans or other information relating to the Project;

provided that nothing in this Clause 25.5 shall exclude any liability in respect of any statements made or information provided fraudulently.

26. REQUIRED INSURANCES

26.1 The Operator shall, at its own cost, procure that each of the Required Insurances is taken out and comes into effect on the earlier of:

26.1.1 the relevant date specified in each "Period of Insurance" set out in Schedule 10 (*Required Insurances*); and

26.1.2 the date on which the Operator is first required by Law to have in place such insurance in connection with the Project Development Services and the Project Operations,

and shall maintain the Required Insurances in full force and effect until the later of:

- 26.1.3 the relevant date specified in each "Period of Insurance" set out in Schedule 10 (*Required Insurances*); and
 - 26.1.4 the last date on which the Operator is required by Law to have in place such insurance in connection with the Project Development Services and the Project Operations.
- 26.2 The Operator shall procure that all Required Insurances shall:
- 26.2.1 be maintained in accordance with Schedule 10 (*Required Insurances*); and
 - 26.2.2 be placed at all times with insurers confirmed in writing as acceptable by **tie** (such written acceptance not to be unreasonably withheld or delayed).
- 26.3 **tie** may ask the Operator to take out and maintain any insurance from time to time in the joint names of **tie**, the Operator and, if required, any other party agreed between the Parties or become a joint named insured (the "Joint Names Insurance"). If Joint Names Insurance is required, the terms of this Clause 26 including the provisions which are stated to apply to the "Required Insurances" shall apply with any appropriate adjustment to be agreed between the Parties as a **tie** Change. The Operator shall procure that any Joint Names Insurance shall:
- 26.3.1 contain a provision that **tie** is named as a co-insured party;
 - 26.3.2 provide that any Joint Names Insurance shall continue in effect and unaltered for the benefit of the insured parties for at least 90 days after written notice by registered mail of any cancellation (including non-renewal), change, modification or lapse for any reason;
 - 26.3.3 contain a provision that requires the insurer to send copies of all notices of cancellation or alteration or suspension or any other notices given under or in relation to the policy to **tie** promptly upon receiving any notices of cancellation or alteration or suspension or any other notices;
 - 26.3.4 contain a provision that a notice of a claim given to the insurer by **tie** or the Operator under the policy shall, in the absence of manifest error, be accepted by the insurer as valid notification of a claim in respect of the interests of all insured parties;

- 26.3.5 contain a provision to the effect (on the basis of non-vitiation/severability) that all the provisions of any the Joint Names Insurance shall operate as if there were a separate policy in effect (save in respect of the sums insured, limits of liability and excesses/deductibles which shall be at the levels stated) for each named insured and that non-compliance with any policy term, condition or warranty and/or misrepresentation of material information by the Operator or any other co-insured will not affect the rights and/or interests of **tie** under any policies effected as Joint Names Insurance;
- 26.4 The Operator shall ensure that each of its insurance brokers (who shall be approved by **tie**, such approval not to be unreasonably withheld or delayed) gives **tie** as soon as reasonably practicable after any policy of Required Insurance is taken out, replaced or renewed, a letter of undertaking in the form set out in Part 2 of Schedule 10 (*Required Insurances*).
- 26.5 The Operator shall:
- 26.5.1 procure that the professional indemnity insurance and the third party liability insurance which is to be maintained by the Operator in accordance with Schedule 10 (*Required Insurances*) contains a waiver of subrogation against **tie** as required in Schedule 10 (*Required Insurances*) save in respect of fraud or deliberate non-disclosure; and
- 26.5.2 where the Operator is obliged to effect any Required Insurances, not bring any claim or action against **tie** (or any **tie** Party) in respect of any loss or damage in circumstances where and to the extent that the Operator could recover such loss or damage under such insurance (whether or not such insurance has in fact been effected or, if effected, has been vitiated as a result of any act or omission of the Operator (or any Operator Party), including but not limited to non-disclosure or under-insurance), provided that, to avoid doubt, this Clause 26.5.2 shall not by itself prevent the Operator from claiming against **tie** (or any **tie** Party) in respect of a breach of this Agreement by **tie** or any **tie** Party for any loss or damage not covered because of the level of deductibles under such insurance permitted by this Agreement or to the extent such loss or damage exceeds the greater of the insurance placed or the maximum of such insurance required under Schedule 10 (*Required Insurances*).

- 26.6 The Operator shall not take any action or fail to take any reasonable action or (insofar as it is reasonably within its power) permit or allow others to take or fail to take any action (including failure to disclose any fact) as a result of which any of the Required Insurances may be rendered void, voidable, unenforceable or suspended or impaired in whole or in part or which may otherwise render any sum paid out under any relevant policy repayable in whole or in part.
- 26.7 Not less than 30 days prior to the expiry or amendment of any of the Required Insurances, the Operator shall submit to **tie** a request for approval from **tie** of the insurer and the principal terms and conditions of such insurance policy in respect of any material change or revision to such terms and conditions or change in identity of such insurer, such approval not to be unreasonably withheld or delayed.
- 26.8 The Operator shall supply **tie** with copies of every policy document, insurance certificate and renewal certificate relating to any Joint Names Insurance (or such other evidence of insurances as may be reasonably required by **tie**) and documentary evidence to the effect that the Required Insurances (other than any Joint Third Names Insurance) have been taken out and are being maintained as soon as it is available but in any event no later than 7 days (in respect of certificates) and 60 days (in respect of policies) after the inception of the relevant policies, together with evidence of payment of the premiums and any periodic renewal certificates. If the Operator defaults in insuring or continuing to maintain the Required Insurances subject to Clause 27 (*Uninsurable Risks*), **tie** may insure against any risk in respect of which such default has occurred and recover any premiums from the Operator as a debt immediately due and payable.
- 26.9 The supply to **tie** of any insurance policy or insurance certificate or renewal certificate or other evidence of compliance with this Clause 26 (*Required Insurances*) shall not imply, or be taken as, acceptance by **tie** that:
- 26.9.1 the extent of insurance cover is sufficient and its terms are satisfactory; or
- 26.9.2 in respect of any risks not insured against, insurable interests or parties not insured, an acceptance by **tie** that the same were Uninsurable.
- 26.10 Neither failure to comply nor full compliance with the provisions of this Clause 26 (*Required Insurances*) and Clause 27 (*Uninsurable Risks*) shall relieve the Operator of its liabilities and obligations under this Agreement.

- 26.11 The Operator shall apply any proceeds of any policies of insurance maintained in accordance with Schedule 10 (*Required Insurances*) in satisfaction of the claim, demand, proceeding or liability in respect of which such proceeds are payable (unless already paid direct to the third party or employee by the insurer).
- 26.12 The Operator shall inform **tie** in writing as soon as reasonably practicable after it receives a claim or becomes aware of the occurrence of any event that may give rise to a claim under any Joint Names Insurance and will ensure that **tie** is kept fully informed of subsequent action and developments concerning the claim; such written information shall not be required in relation to any claim of less than £50,000 (Indexed). The Operator shall take such steps as are necessary or appropriate to ensure that each Operator Party, in respect of any event or claim of a like nature arising out of or relating to the operation or responsibility of the Operator Party, takes in relation to the Operator like action to that which the Operator is required to take under this Clause 26.12 in relation to **tie**, and shall inform **tie** promptly of information thus received from any Operator Party.
- 26.13 Notwithstanding, and without prejudice to, any other provision hereof (but subject always to Clause 28 (*Indemnity*)), the Operator undertakes to the extent it has the right to do so under the relevant policy that it will not (and that each of the Operator Parties to the extent each respectively has the right to do so under the relevant policy will not) settle any Joint Names Insurance claim above £50,000 (Indexed) without the prior written agreement of **tie** (such agreement not to be unreasonably withheld or delayed).
- 26.14 The Operator undertakes with **tie** in relation to the Required Insurances:
- 26.14.1 to comply with all requirements of the insurers; and
- 26.14.2 to give notice to **tie** immediately upon the happening of any event which will adversely affect any policy of insurance effected in accordance with this Clause 26 (*Required Insurances*), including the downgrading of the credit rating to A- by Standard & Poors of any party providing any of the Required Insurances.
- 26.15 In the event that the Operator considers that the requirements of Clause 26.14.1, or 26.15.2 may conflict with any other Clause herein, the Operator shall immediately notify **tie** in writing.

- 26.16 The Required Insurances shall be reviewed before the commencement of a new Project Phase, and/or on an annual basis and/or as otherwise agreed between **tie** and the Operator by **tie** , with the support and assistance of the Operator, to ensure that the Required Insurances continue to offer value for money to **tie**. **tie** retains the right to require the Operator to amend the Required Insurances throughout the Term as it may reasonably require to reflect changes in the circumstances surrounding this Agreement or to effect changes which will offer better value for money to **tie**. Any such amendment shall be considered in accordance with Clause 24 (*tie changes*) and Clause 23 (*Performance and Financial Adjustments*).
- 26.17 Following expiry or termination of this Agreement, **tie** shall continue to pay the Operator the agreed amount for any Required Insurances which the Operator is required in terms of this Agreement to maintain beyond the date of expiry or termination of this Agreement. **tie** shall notify the Operator if **tie** does not want the Operator to continue maintaining any such Required Insurances following expiry or termination of this Agreement.
- 26.18 The Operator shall having regard to the knowledge skill and care of a competent operator, if required by **tie**, advise **tie** with regard to the selection of appropriate insurances for Project Phase C and Project Phase D.
- 26.19 **tie** shall take out or procure that such insurances as **tie** considers to be appropriate in relation to the construction, maintenance and operation of the System are taken out and maintained during Project Phase C and Project Phase D. The Operator agrees that the Operator shall take out any such insurances if required to do so by **tie**, and any such requirement on the Operator shall be considered in accordance with Clause 24 (*tie Changes*) and Clause 23 (*Performance and Financial Adjustments*) .
- 26.20 The Parties agree that appropriate amendments shall be made to this Agreement to reflect the insurances which are taken out or not taken out in terms of Clause 26.19.
- 26.21 The Operator shall be liable for claims made under the third party insurance to be taken out as a Joint Names Insurance or otherwise in respect of the Project Operations during Project Phase D, which are less than the level of stated deductibles in Schedule 10 (*Required Insurances*) as at the Effective Date relative to such insurance.

27. UNINSURABLE RISKS

27.1 Nothing in this Agreement shall oblige the Operator to take out insurance in respect of a risk or matter which is Uninsurable.

27.2 Immediately after the Operator becomes aware that a Compliance Critical Risk is Uninsurable, then:

27.2.1 the Operator shall notify **tie**; and

27.2.2 if both Parties agree or it is determined in accordance with the Dispute Resolution Procedure (on the referral of either Party) that the risk or matter is Uninsurable and that its being Uninsurable is not caused by the actions or omissions of the Operator or an Operator Party;

then the Parties shall meet to discuss the means by which the risk or matter should be managed, mitigated or controlled (including considering the use of self-insurance by either Party and/or insurance through a captive insurer in any jurisdiction).

27.3 At the meeting referred in Clause 27.2, either Party may propose:

27.3.1 any necessary change in the Project Development Services or Project Operations;

27.3.2 whether any amendments are required to the terms of the Agreement including any required adjustment to the Capped Fees, Fixed Costs (excluding the Category Five Fixed Costs) , Target Costs for Project Phase C2, Target Operating Costs or the Target Revenue; and

27.3.3 whether relief from compliance with obligations is required, as a result of the risk or matter becoming Uninsurable.

27.4 If the requirements of Clause 27.2 are satisfied but the Parties cannot agree as to how to manage, mitigate or control the risk or matter then, for the period during which the relevant Compliance Critical Risk is Uninsurable:

27.4.1 to the extent that the Operator is prevented or otherwise hindered from performing the Project Development Services or the Project Operations in the manner required by this Agreement:

27.4.1.1 the Operator shall be relieved from such performance and shall not be liable to **tie** for failure so to perform provided it continues to perform the remainder of the Project Development Services or the Project Operations as best as it is reasonably able to; and

27.4.1.2 during Project Phase C2 and Project Phase D, the Target Costs for Project Phase C2 or Target Operating Costs or the Fixed Costs (excluding the Category Five Fixed Costs) as the case may be shall be reduced by an amount which reflects the net cost savings made as a result of restricted Project Development Services or restricted Project Operations and Target Revenues shall be adjusted to reflect the impact of restricted Project Operations on Patronage Revenue. If the Operator determines not to reduce its operating establishment or cost base to reflect restricted Project Operations but to maintain this at the level necessary for normal Project Operations, **tie** shall not be obliged to pay the marginal Fixed Costs or Operating Costs relating to such establishment or cost base.

27.4.2 **tie** shall have the option to be exercised by notice in writing at any time in the period during which such Compliance Critical Risk is Uninsurable (provided that **tie** shall, if such period continues for more than 180 days, be deemed to have exercised such option on the 181st day) to terminate this Agreement forthwith.

28. INDEMNITY

28.1 The Operator shall, subject to Clause 28.2, indemnify **tie** and keep **tie** indemnified on demand at all times from and against all Indemnified Liabilities which arise out of, or in consequence of, or in connection with any breach of this Agreement by the Operator, any non-performance or delay in performance of the Operator's obligations under this Agreement or any breach of statutory duty by the Operator (or any Operator Party).

28.2 The Operator's liability to indemnify **tie** under Clause 28.1 does not extend to any Indemnified Liabilities to the extent that:

28.2.1 they are caused by the negligent acts or negligent omissions of **tie** or any **tie** Party; or

28.2.2 they are caused by the breach by **tie** of its obligations under this Agreement (save where and to the extent such breach occurs by reason of the Operator's or any Operator Party's breach or negligence); or

28.2.3 they arise as a direct result of the Operator acting on specific written instructions issued by **tie** or the **tie** Project Manager (excluding any instruction to comply with the terms of this Agreement (or any part of it)) provided that, prior to acting on such instruction, the Operator:

28.2.3.1 notifies the **tie** Project Manager of the risk of the relevant Indemnified Liability occurring as a result of acting on the instruction; and

28.2.3.2 does not then act on the instruction until it receives written confirmation from the **tie** Project Manager that it should do so.

For the avoidance of doubt neither instructions issued pursuant to Clause 24 (*tie Changes*) of the Operating Appendix and Clause 25 (*Operator Changes*) of the Operating Appendix shall constitute specific written instructions for the purposes of this provision.

28.3 Any amount paid by the Operator to **tie** pursuant to this Clause 28 (*Indemnity*) shall be excluded from the calculation of the Operating Costs.

29. CONDUCT OF CLAIMS

Subject always to the requirements of the Required Insurances:

29.1 If **tie** receives any notice, demand, letter or other document concerning any claim from which it appears that **tie** is or may become entitled to indemnification under this Agreement ("Claim"), **tie** shall notify the Operator as soon as reasonably practicable and shall supply a copy of the relevant Claim to the Operator.

- 29.2 Where it appears that **tie** is, or may become, entitled to indemnification from the Operator in respect of the liability arising out of the act or omission which is the subject of the Claim, the Operator shall take conduct of any defence, dispute, compromise or appeal of the Claim and of any incidental negotiations and shall be entitled to resist the Claim in the name of **tie** and **tie** will give the Operator all reasonable co-operation, access and assistance for the purposes of considering and resisting such Claim.
- 29.3 In relation to any Claim subject to Clause 29.2:
- 29.3.1 the Operator shall keep **tie** fully informed and consult with it about material elements of the conduct of the Claim;
- 29.3.2 the Operator shall not bring the name of **tie** into disrepute; and
- 29.3.3 the Operator shall not pay or settle such Claims without the prior written consent of **tie**, such consent not to be unreasonably withheld or delayed.
- 29.4 **tie** shall be free to take steps in the proceedings, pay or settle any Claim on such terms as it thinks fit (and without prejudice to its rights and remedies under this Agreement) if the Operator fails to notify **tie** of its intention to conduct the relevant Claim within 20 Business Days of the notice from **tie** under Clause 29.1 above or the Operator notifies **tie** that it does not intend to take conduct of the Claim.
- 29.5 **tie** shall be free at any time to give notice to the Operator that it is retaining or taking over (as the case may be) the conduct of any defence, dispute, compromise or appeal of any Claim (or of any incidental negotiations) to which Clause 29.2 applies. On receipt of such notice the Operator shall promptly take all steps necessary to transfer the conduct of such claim to **tie** and shall provide to **tie** all reasonable co-operation, access and assistance for the purposes of considering and resisting such Claim. If **tie** gives any notice pursuant to this Clause 29.5, then the Operator shall be released from any liability under the relevant indemnity in respect of such Claim. **tie** shall keep the Operator reasonably informed as to the progress and status of any such Claim until such Claim is settled, withdrawn, discontinued or otherwise disposed of.
- 29.6 If, in controlling and contesting any Claim, **tie** takes or fails to take any action in relation to such Claim which it might reasonably be expected to take or not take (as the case may be) which terminates or reduces any entitlement of the Operator to

recover any part of the Claim from any insurer under any of the Required Insurances, the liability of the Operator to indemnify **tie** in respect of such Claim shall be reduced by an amount equal to such part or as the case may be the amount of the reduction thereof (except in the case where **tie** could not reasonably have been expected to have known that the Operator's entitlement could be so terminated or reduced).

29.7 If the Operator pays to **tie** an amount in respect of an indemnity and **tie** subsequently recovers (whether by payment, discount, credit, saving, relief, other benefit or otherwise) a sum which is directly referable to the fact, matter, event or circumstances giving rise to the Claim, **tie** shall forthwith repay to the Operator whichever is the lesser of:

29.7.1 an amount equal to the sum recovered (or the value of the saving or benefit obtained) less any out-of-pocket costs and expenses properly incurred by **tie** in recovering the same; and

29.7.2 the amount paid to **tie** by the Operator in respect of the Claim under the relevant indemnity;

provided that there shall be no obligation on **tie** to pursue such recovery and that the Operator is repaid only to the extent that the amount of such recovery aggregated with any sum recovered from the Operator exceeds any loss sustained by **tie** in respect of the Claim.

30. LIABILITY AND SOLE REMEDY

30.1 Subject to Clause 30.3, the Parties acknowledge and agree that the only rights available to them to terminate this Agreement are those expressly set out in this Agreement and that neither Party shall be entitled to exercise a right to terminate or rescind or accept the repudiation of this Agreement under any other right whether arising in common law or statute or otherwise howsoever (other than for fraud or a fraudulent misrepresentation).

30.2 The Parties further acknowledge and agree that the express rights provided in this Agreement in relation to termination and the calculation and payment of amounts due following such termination are exclusive and are in place of (and not cumulative with) any other rights or remedies which might arise as a consequence of such termination. The Parties hereby waive all other rights and remedies arising from such

termination, whether express or implied, arising by common law (including in delict), by statute or otherwise howsoever provided that nothing in this Clause 30.2 shall exclude the right of the Parties to claim remedies expressly conferred on them by this Agreement.

30.3 Nothing in this Agreement shall exclude or limit the liability:

30.3.1 of either Party for:

30.3.1.1 death or personal injury caused by that Party's negligence or the negligence of anyone for whom that Party is vicariously liable;

30.3.1.2 fraud or fraudulent misrepresentation; or

30.3.1.3 any breach of warranty given as to valid and marketable title, freedom from unduly onerous burdens and conditions or entitlement to possession by action of prescription; or

30.3.2 of the Operator, for any breach of this Agreement or any delict (including negligence) or other liability arising prior to termination of this Agreement;

provided that nothing in this Clause 30.3 shall confer on either Party rights or remedies that they would not otherwise have.

30.4 Subject to Clause 30.3, neither party shall be entitled to claim damages for breach of this Agreement, in delict (including negligence), breach of statutory duty or on any other basis whatsoever to the extent that such damages claimed by that Party are for Indirect Losses suffered by that Party provided that for the avoidance of doubt, nothing in this Clause 30.4 shall affect either Party's liability to the other Party, whether under any indemnity, under Clause 29.6 or otherwise, in respect of any claim, action, proceedings or demand against such other Party by a third party in connection with Indirect Loss suffered.

30.5 The Operator shall not be relieved or excused of any responsibility, liability or obligation under this Agreement by the appointment of any Operator Party. The Operator shall, as between itself and **tie**, be responsible for the selection, pricing, performance, acts, defaults, omissions, breaches, delict and offences of all the Operator Parties. All references in this Agreement to any act, default, omission,

breach, delict or offence of the Operator shall be construed to include any such act, default, omission, breach or delict of any Operator Party.

PART VI - TERMINATION

31. TERMINATION DURING DEVELOPMENT PHASE

31.1 During Project Phase A, Project Phase B and Project Phase C1 in respect of any Line, **tie** may terminate this Agreement, either:

31.1.1 in whole, if no Line has reached Project Phase C2 or Project Phase D at the time of such termination;

31.1.2 in part, for such Lines where project development is still in Project Phase A, Project Phase B or Project Phase C1; or

31.1.3 in part, if the Scottish Private Bill in respect of a Line is not enacted;

such termination to be by way of **tie** providing at least 30 days notice in writing to the Operator at any time.

31.2 During Project Phase A and Project Phase B in respect of Line 1 or Line 2, **tie** may terminate this Agreement in whole or in part, if there is a material increase or alteration to the costs of the Project or the liabilities and risks to **tie** beyond those which **tie** considers (i) can be managed within Affordability Limits or (ii) are reasonable and prudent to retain, such termination to be by way of **tie** providing at least 30 days notice in writing to the Operator at any time.

31.3 If **tie** serves notice to terminate this Agreement in respect of one or more Lines ("**Terminated Lines**") pursuant to Clause 31.1.2, and **tie** chooses to continue development of any of such Terminated Lines, either by itself or in conjunction with any third party, **tie** shall discuss with the Operator in good faith, at the stage of development of such Terminated Line equivalent to Project Phase B:

31.3.1 the Target Costs for Project Phase C2 for such Terminated Line;

31.3.2 the Interim Target Operating Costs, Interim Fixed Costs and the Interim Target Revenues for the System including such Terminated Line (if it is proposed that there be a time interval between the Service Commencement Date and the Full Service Commencement Date for such Terminated Line);

31.3.3 the Target Operating Costs, any adjustments to the Fixed Costs (excluding the Category Five Fixed Costs) and the Target Revenues for the System including such Terminated Line;

31.3.4 amendments to the Operating Output Specification, the Operating Method Statements (and the Operating Appendix to the extent necessary) to take effect from the Service Commencement Date of such Terminated Line; and

31.3.5 any other aspect of the terms of this Agreement to be amended to reflect the Operator's rights and obligations in respect of such Terminated Line (or the System including such Terminated Line);

on the basis that the Operator should be in a No Better and No Worse position following the implementation and Service Commencement of the Terminated Line provided that **tie** shall not be liable to pay the Operator any sum which the Operator has included in its Profit Element with respect to such Terminated Line.

31.4 If **tie** and the Operator are unable to agree on the matters referred to in Clause 31.3, then the termination rights in Clause 31.5 will apply.

31.5 Notwithstanding that one or more Lines may be in Project Phase C2 or Project Phase D, if **tie** and the Operator are unable to agree:

31.5.1 the Fixed Costs and/or the Target Costs for Project Phase C2 for any proposed new Line or Network Expansion;

31.5.2 Interim Target Operating Costs, Interim Fixed Costs and Interim Target Revenues for the System including any proposed new Line or Network Expansion;

31.5.3 the Target Revenues and Target Operating Costs and/or Fixed Costs for Project Phase D for the System including any proposed new Line or Network Expansion;

31.5.4 amendments to the Operating Output Specification, the Operating Method Statements (and the Operating Appendix to the extent necessary) to take effect from the Service Commencement Date of any proposed new Line or Network Expansion; or

31.5.5 any other aspect of the contractual terms to apply in respect of Project Phase C2 or Project Phase D in respect of such Line or Network Expansion (or the System including such proposed new Line)

then **tie** shall be entitled to serve notice on the Operator to terminate this Agreement as a whole, such notice to take effect:

- (a) at the commencement of Project Phase C2 for such proposed new Line; or
- (b) at such other time as **tie** may specify prior to the expiry of the Term, being not less than 30 days after the date of the notice.

31.6 In the event that in **tie**'s opinion delay in completion of Project Phase C2 for any Line (irrespective of the reason) indicates that there is no reasonable prospect of Project Phase D commencing within six months of the Planned Service Commencement Date, **tie** shall be entitled to terminate this Agreement in respect of such Line by serving notice which shall take effect after 30 days.

32. TERMINATION ON TIE DEFAULT OR AT OPERATOR OPTION

32.1 If a **tie** Default has occurred and the Operator wishes to terminate this Agreement, the Operator must serve a Termination Notice on **tie** within 30 days of becoming aware of the **tie** Default. Failure to do so shall be a waiver of the right to terminate.

32.2 The Operator shall specify in the Termination Notice the type of **tie** Default which has occurred entitling the Operator to terminate.

32.3 Provided the Operator has complied with Clauses 32.1 and 32.2, this Agreement will terminate on the day falling 60 days after the date on which **tie** receives the Termination Notice, unless **tie** rectifies the **tie** Default within 45 days of receipt of the Termination Notice.

32.4 The Operator shall not be entitled to, and shall not purport to, terminate this Agreement or accept any repudiation of this Agreement, except as expressly provided in this Clause 32 (*Termination on tie Default or at Operator Option*).

33. PERSISTENT BREACH

33.1 If a breach by the Operator of any of its obligations under this Agreement has occurred more than once then **tie** may serve a notice ("**Persistent Breach Notice**") on the Operator:

33.1.1 specifying that it is a Persistent Breach Notice;

33.1.2 giving reasonable details of the breach; and

33.1.3 stating that such breach is a breach which, if it recurs frequently or continues, may result in a termination of this Agreement.

33.2 If, following service of such a Persistent Breach Notice, the breach specified has continued or occurred more than once after the date falling 30 days after the date of service of the Persistent Breach Notice and before the date falling 365 days after the date of service of such notice, then **tie** may serve another notice ("**Final Persistent Breach Notice**") on the Operator:

33.2.1 specifying that it is a Final Persistent Breach Notice;

33.2.2 stating that the breach specified has been the subject of a prior Persistent Breach Notice within the period of 365 days prior to the date of service of the Final Persistent Breach Notice; and

33.2.3 stating that if such failure is not remedied within 7 days or is remedied and occurs once or more within the 180 day period after the date of service of the Final Persistent Breach Notice, this Agreement may be terminated.

34. TERMINATION ON OPERATOR DEFAULT

34.1 If an Operator Default has occurred and **tie** wishes to terminate this Agreement, it must serve a Termination Notice on the Operator.

34.2 Such Termination Notice must specify:

34.2.1 the type and nature of Operator Default that has occurred, giving reasonable details; and

- 34.2.2 that this Agreement will terminate on the day falling 60 days after the date on which the Operator receives the Termination Notice, unless, if (in the opinion of **tie**) the Operator Default is remediable, and the Operator puts forward a rectification programme acceptable to **tie** within 30 days or rectifies the Operator Default no later than 15 days before the 60 days above elapses.
- 34.3 If the Operator either rectifies the Operator Default (if remediable) within the time period specified in such Termination Notice or implements in accordance with its terms, the rectification programme approved in writing by **tie**, the Termination Notice will be deemed to be revoked and this Agreement will continue.
- 34.4 If the Operator fails to rectify the Operator Default within the time period specified in such Termination Notice, this Agreement will terminate on the date falling 60 days after the date of service of the Termination Notice pursuant to Clause 34.1.
- 34.5 If the Operator fails to implement, in accordance with its terms, any rectification programme approved in writing by **tie**, this Agreement will terminate on the date of such failure.
- 34.6 The Operator shall reimburse **tie** for all reasonable costs incurred by **tie** in exercising any of its rights under this Clause 34 (*Termination on Operator Default*) (including any relevant increased administrative expenses), and, for the avoidance of doubt, any such costs reimbursed shall be excluded from the calculation of Operating Costs for the purposes of any calculation pursuant to Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) to the Operating Appendix.
- 34.7 **tie** shall not exercise, or purport to exercise, any right to terminate this Agreement except as expressly set out in this Agreement. The rights of **tie** (to terminate or otherwise) under this Clause 34 (*Termination on Operator Default*) are in addition (and without prejudice) to any other right which **tie** may have to claim the amount of loss or damage suffered by **tie** on account of the acts or omissions of the Operator (or to take any action, including seeking an order for specific implement, other than termination of this Agreement).
- 34.8 The Operator shall immediately notify **tie** of

34.8.1 any resolution or decision by the board of directors of the Operator or a decision by any director of the Operator to seek legal or financial advice pertaining to the solvency of the Operator; and

34.8.2 any presentation of any petition for the purpose of winding up the Operator or any petition for an administration order.

35. TERMINATION BY REASON OF FORCE MAJEURE

35.1 Neither Party shall be entitled to bring a claim for a breach of obligations under this Agreement by the other Party or incur any liability to the other Party for any losses or damages incurred by that other Party or create grounds for termination of the whole or a part of this Agreement (save in so far as expressly provided by Clause 35.5) to the extent that a Force Majeure Event occurs and such party is directly prevented from carrying out such obligations by that Force Majeure Event or the direct consequences thereof.

35.2 If a Force Majeure Event occurs as described in Clause 35.1 the Operator shall be relieved from deductions under the KPI Regime to the extent that the Force Majeure Event or the direct consequences thereof adversely affect the performance by the Operator of its obligations under this Agreement and the parties shall in good faith seek to agree equitable adjustments of a permanent or temporary nature to the Payment Mechanism and provisions regarding Target Costs for Project Phase C2 or Target Operating Costs or Fixed Costs (excluding the Category Five Fixed Costs) or Target Revenues to the extent that the Force Majeure Event or the direct consequences thereof adversely affect the performance by the Operator of its obligations under this Agreement .

35.3 On the occurrence of a Force Majeure Event, the Affected Party shall notify the other Party as soon as reasonably practicable, specifying details of the Force Majeure Event and providing evidence of its effect on the obligations of the Affected Party and any action proposed to remove or mitigate its effect.

35.4 The Parties shall at all times following the occurrence of a Force Majeure Event use all reasonable endeavours to prevent and mitigate the effects of any delay to the Project or interruption of Transport Services and the Operator shall at all times during which a Force Majeure Event is subsisting take all steps in accordance with Good Industry Practice to overcome or minimise the consequences of the Force Majeure

Event. **tie** shall continue to meet the Project Development Costs and/or the Operating Costs (adjusted to take account of any disrupted, extended or restricted Project Operations) for the System for a period of 30 days following notification of a Force Majeure Event or such longer period as **tie** may agree.

35.5 If the terms or measures to remove the effect of the Force Majeure Event cannot be agreed on or before the date falling 30 days after the date of the commencement of the Force Majeure Event or by the end of such longer period as **tie** may have agreed in accordance with Clause 35.4 or otherwise, or such Force Majeure Event is continuing or its consequence remains such that the Affected Party is unable to comply with all or a material part of its obligations under this Agreement for a period of more than 30 days after the date of the commencement of the Force Majeure Event or by the end of such longer period as **tie** may have agreed in accordance with Clause 35.4 or otherwise, either Party shall have the option to terminate this Agreement by written notice to the other.

35.6 The Affected Party shall notify the other Party as soon as reasonably practicable after the Force Majeure Event ceases and/or no longer causes the Affected Party to be unable to comply with its obligations under this Agreement. Following such notification, unless otherwise agreed by **tie**, this Agreement shall continue to be performed on the terms existing immediately prior to the occurrence of the Force Majeure Event.

36. TERMINATION FOR CORRUPT GIFTS AND FRAUD

36.1 If the Operator, or any Operator Party or any of their respective representatives, or Affiliates or professional advisers or employees or anyone acting on behalf of any of them, commits any Prohibited Act, then **tie** shall be entitled to act in accordance with Clauses 36.2 to 36.7.

36.2 If a Prohibited Act is committed by the Operator or by an employee of the Operator or any Affiliate not acting independently of the Operator, then **tie** may terminate this Agreement by giving notice to the Operator.

36.3 If a Prohibited Act is committed by an employee of the Operator acting independently of the Operator, then **tie** may give notice to the Operator of termination and this Agreement will terminate, unless within 30 days of receipt of such notice the Operator terminates the employee's employment and (if necessary)

procures the performance of the relevant part of the Project Operations or the Project Development Services by another person.

- 36.4 If a Prohibited Act is committed by an Operator Party not acting independently of the Operator, then **tie** may give notice to the Operator of termination and this Agreement will terminate, unless within 30 days of receipt of such notice the Operator terminates the relevant Operator Party and procures the performance of the relevant part of the Project Operations or the Project Development Services by another person.
- 36.5 If a Prohibited Act is committed by an Operator Party acting independently of the Operator, then **tie** may give notice to the Operator of termination and this Agreement will terminate, unless within 30 days of receipt of such notice the Operator terminates the Operator Party's employment and (if necessary) procures the performance of the relevant part of the Project Operations or the Project Development Services by another person.
- 36.6 If a Prohibited Act is committed by any other person specified in Clause 36.1 but not specified in Clauses 36.2 to 36.4, then **tie** may give notice to the Operator of termination and this Agreement will terminate unless within 30 days of receipt of such notice, the Operator procures the termination of such person's employment and of the appointment of their employer in relation to the Project (where not employed by the Operator or an Operator Party) and (if necessary) procures the performance of the relevant part of the Project Operations or Project Development Services by another person.
- 36.7 Any notice of termination under this Clause 36 (*Termination for Corrupt Gifts and Fraud*) shall specify:
- 36.7.1 the nature of the Prohibited Act;
- 36.7.2 the identity of the person whom **tie** believe has committed the Prohibited Act; and
- 36.7.3 the date on which this Agreement will terminate, in accordance with the applicable provision of this Clause 36 (*Termination for Corrupt Gifts and Fraud*).

37. VOLUNTARY TERMINATION BY TIE

37.1 **tie** may terminate this Agreement upon 60 days written notice to the Operator and without liability for any termination payment (but without prejudice to the provisions of Clause 39 (*Compensation on Termination*)) at the following stages of the Project:

37.1.1 at any time if the circumstances in Clause 13.4 have arisen;

37.1.2 except in the first three years of operation following the issue of the first Certificate of Service Commencement, at any other time during the Service Period if there is an Operating Deficit in 6 Reporting Periods out of any rolling period of 12 months;

37.1.3 during Project Phase D, notwithstanding any referral to or decision in terms of the Dispute Resolution Procedure, in the event that the Parties are unable to agree adjustments to the Fixed Costs, Target Operating Costs and Target Revenues or other elements of Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of the Operating Appendix sought by **tie** following reset carried out pursuant to Clause 21 (*Reset of the Fixed Costs, the Target Operating Costs and the Target Revenue*) of the Operating Appendix.

37.2 This Agreement will terminate on the date falling 60 days after the date of service of the notice referred to in Clause 37.1.

38. EXPIRY

38.1 Subject to Clause 2 (*Term of Agreement*), this Agreement shall terminate automatically on the expiry of the Term unless it shall have been terminated earlier in accordance with the provisions of this Agreement. The Operator shall not be entitled to any compensation for termination of this Agreement on expiry of the Term and shall make arrangements for the orderly transfer and release to **tie** or its designated agent of all assets, rights and benefits used for the Project Operations by the Operator so as to safeguard efficient and continuous provision of the Transport Services during transition.

39. COMPENSATION ON TERMINATION

39.1 No compensation shall be payable by **tie** to the Operator for termination of this Agreement whether under contract, delict (including negligence), breach of (or compliance with) statutory duty, restitution or otherwise but without prejudice to:

39.1.1 any antecedent liability of **tie** that arose prior to the Termination Date (but not from the termination itself except if pursuant to Clause 32 (*Termination on tie Default or at Operator Option*));

39.1.2 any liability arising in respect of any breach by **tie** of its obligations under Clause 40 (*Effect of Termination*) which arises or continues after the Termination Date;

39.1.3 any entitlement of the Operator to Vision Achievement Incentive payment in the event of a termination (a) for **tie** Default; or (b) for failure to agree matters resulting in termination pursuant to Clause 31.5; or (c) a termination for Force Majeure, or (d) Clause 37 (*Voluntary Termination by tie*) (except for Clause 37.1.1); or

39.1.4 payment by **tie** to the Operator of any demobilisation costs which have been demonstrably and reasonably incurred by the Operator in the event of a termination in respect of:

- (a) failure to agree Network Expansion pursuant to Clause 11.5;
- (b) Uninsurable Risk occurring pursuant to Clause 27.4;
- (c) Clauses 31.1, 31.2, 31.4 or 31.5;
- (d) **tie** Default pursuant to Clause 32 (*Termination on tie Default or at Operator option*);or
- (e) voluntary termination pursuant to Clause 37 (*Voluntary Termination by tie*).

The Operator shall use all reasonable endeavours to minimise and mitigate any such demobilisation costs and **tie** shall not be liable to pay the Operator for such demobilisation costs to the extent that the Operator has failed to minimise or mitigate such demobilisation costs or to the extent that such

demobilisation costs have arisen out of the Operator's breach of this Agreement or any negligent act or omission by the Operator.

39.2 Subject to Clause 39.1, the Operator shall not have any other right or remedy against **tie** on termination or expiry of this Agreement.

40. EFFECT OF TERMINATION

40.1 Notwithstanding any provision of this Agreement, on service of a Termination Notice, this Agreement shall only terminate in accordance with the provisions of this Clause 40 (*Effect of Termination*).

40.2 Subject to any exercise by **tie** of its rights to perform, or to procure a third party to perform, the obligations of the Operator, the Parties shall continue to perform their obligations under this Agreement, notwithstanding the giving of any notice of default or breach or Termination Notice, until the termination of this Agreement becomes effective.

40.3 To the extent that the termination of this Agreement occurs during Project Phase C2 or Project Phase D, the provisions of Clause 28 (*Transition on termination or expiry*) of the Operating Appendix shall apply.

40.4 To the extent that the termination of this Agreement occurs during Project Phase A, Project Phase B, or Project Phase C1, the provisions of Clause 28 (*Transition on termination or expiry*) of the Operating Appendix shall apply to the extent relevant.

40.5 Within 60 days of termination of this Agreement, **tie** shall pay to the Operator:

40.5.1 any undisputed sums due from **tie** to the Operator pursuant to Clause 15 (*Project Development Costs*), Clause 17 (*Payment During Project Phase C2*) and/or Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) subject to any appropriate pain/gain share reconciliation;

40.5.2 any entitlement of the Operator to Vision Achievement Incentive payment pursuant to Clause 39.1.3 calculated in accordance with Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*); and

40.5.3 any entitlement to demobilisation costs pursuant to Clause 39.1.4.

- 40.6 Within 60 days of termination of this Agreement, the Operator shall pay to **tie** any sums due from the Operator to **tie** pursuant to this Agreement including any sum due to **tie** following any appropriate pain/gain share reconciliation or any sums due pursuant to Clause 34.6.
- 40.7 Either Party may refer any Dispute about disputed sums pursuant to Clause 15 (*Project Development Costs*), Clause 17 (*Payment during Project Phase C2*) and/or Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) to the Dispute Resolution Procedure. If it is determined pursuant to the Dispute Resolution Procedure that the whole or part of any disputed amount is due to either **tie** or the Operator, **tie** or the Operator (as appropriate) shall raise an invoice in respect of such determined amount and payment shall be made by the relevant Party within 60 days of the receipt of such invoice.
- 40.8 The following Clauses shall survive termination of this Agreement:
- 40.8.1 Clauses 1 (*Definitions and Interpretation*), 8 (*Operator's Performance Security*), 19 (*Method and Currency of Payment*), 20 (*Interest*), 21 (*Set-off*), 22 (*VAT*), 23 (*Taxation*), 24 (*Mitigation and Cost Management*), 26 (*Required Insurances*), 28 (*Indemnity*), 29 (*Conduct of Claims*), 30 (*Liability and Sole Remedy*), 38 (*Expiry*), 39 (*Compensation on termination or expiry*) and Clauses 40 (*Effect of termination*) to 59 (*Maladministration Complaints*) inclusive and Schedule 7 (*Dispute Resolution Procedure*), and such other provisions as are expressed to survive termination of this Agreement; and
- 40.8.2 in the Operating Appendix, Clause 28 (*Transition on Termination or Expiry*), and such other provisions as are expressed to survive termination of this Agreement.
- 40.8.3 For the avoidance of doubt, upon expiry of the Term or any termination of this Agreement (for whatever cause) any accrued rights or obligations to which **tie** may be entitled or be subject to before such date shall remain in full force and effect.

41. PERSONNEL ISSUES ON TERMINATION

- 41.1 In the event that TUPE and/or the Acquired Rights Directive or any other Legislation governing the rights and obligations of employees or their employers or any person to

whom they are to transfer their employment applies or will apply on the Expiry Date or the Termination Date such that the contracts of employment of the Project Operations Staff and or/ Project Development Staff engaged at such date ("**Transferring Project Staff**"), or any of them, shall be transferred from the Operator or a relevant Operator Party to **tie** or a Successor Operator to perform some or all of the Project Development Services or Project Operations or any activities equivalent to a relevant part of the Project Operations, the provisions of Clauses 41.2 to 41.8 shall apply.

- 41.2 The Parties shall comply with their respective obligations under TUPE and the Acquired Rights Directive or as otherwise may be required by Law in respect of the transfer of the Transferring Project Staff on the Expiry Date or Termination Date (as the case may be) ("**Transfer Date**").
- 41.3 The Operator shall (and shall procure that each relevant Operator Party shall) indemnify **tie** and keep **tie** indemnified on demand at all times from and against all Employment Liabilities which **tie** may suffer or incur which relate to or arise in respect of (whether directly or indirectly):
- 41.3.1 any Transferring Project Staff in respect of or in any way relating to any period up to and including the Transfer Date; and
- 41.3.2 any person employed or engaged, or formerly employed or engaged, by the Operator or any Operator Party (other than any Transferring Project Staff) for which it may be alleged that **tie** are liable by virtue of the operation of this Agreement and/or TUPE and/or the Acquired Rights Directive.
- 41.4 The Operator shall (and shall procure that each relevant Operator Party shall) indemnify the Successor Operator and keep the Successor Operator indemnified on demand at all times from and against all Employment Liabilities which the Successor Operator may suffer or incur which relate to or arise in respect of (whether directly or indirectly):
- 41.4.1 any Transferring Project Staff in respect of or in any way relating to any period up to and including the Transfer Date; and
- 41.4.2 any person employed or engaged, or formerly employed or engaged, by the Operator or any Operator Party (other than any Transferring Project Staff)

for which it may be alleged that the Successor Operator is liable by virtue of the operation of this Agreement and/or TUPE and/or the Acquired Rights Directive.

- 41.5 The Parties acknowledge that it is their intention that the benefit of Clauses 41.4, 41.7, 41.8 and 41.9 (inclusive) shall be assigned to the Successor Operator at the absolute discretion of **tie** and the Operator shall do, and agrees to procure that each relevant Operator Party shall do, all acts and things that **tie** deems reasonably necessary to give effect to such assignment including execution of all documents required.
- 41.6 **tie** shall procure that the Successor Operator shall assume the outstanding obligations of the Operator and/or each relevant Operator Party in respect of the untaken holiday entitlements and unpaid holiday remuneration of the Transferring Project Staff accrued up to the Transfer Date and, in consideration, the Operator shall pay, or shall procure that each relevant Operator Party shall pay, to the Successor Operator within 30 days of the Transfer Date (as the case may be), the full amount necessary to enable the Successor Operator to meet the costs of providing such accrued holiday entitlements and remuneration as at Transfer Date.
- 41.7 The Operator shall, and the Operator shall procure that each relevant Operator Party shall, prior to the transfer of the employment of any Transferring Project Staff pursuant to TUPE and the Acquired Rights Directive, comply with all of their respective obligations to inform and consult with appropriate representatives (as such term is defined in regulation 10 of TUPE) of affected Project Operations Staff and Project Development Staff and shall carry out such provision of information to, or consultation with, such representatives as is required of them by Law.
- 41.8 The Operator shall, and the Operator shall procure that each relevant Operator Party shall, indemnify and keep **tie** and the Successor Operator indemnified on demand at all times in respect of all Employment Liabilities arising out of any failure of the Operator and/or any Operator Party to comply fully with their respective obligations pursuant to Clause 41.7, save where, and to the extent only that, failure to do so is attributable to the default or failure on the part of **tie** or a Successor Operator to provide relevant information to the Operator or the relevant Operator Party (as the case may be) as is required of **tie** or the Successor Operator by Law.

- 41.9 Following the service of a Termination Notice or at any time in the 365 days before the Expiry Date, the Operator shall not, and shall procure that each Operator Party shall not, without the prior written consent of **tie** (which consent shall not be unreasonably withheld or delayed), carry out any of the following:
- 41.9.1 the termination of the employment or engagement of any Project Operations Staff or Project Development Staff;
 - 41.9.2 the alteration or change (or the making of any promise to alter or change) in any way any terms and conditions of employment, or terms of engagement, of any Project Operations Staff or Project Development Staff (whether with or without the consent of any such Project Operations Staff or Project Development Staff (as appropriate)) other than in order to give effect to wage or salary awards which are in line with those offered generally for similar status individuals within the relevant employer's workforce or as is required by Law;
 - 41.9.3 the recruitment of any employees, self-employed consultants or other personnel to perform any of the Project Operations or Project Development Services (except as a replacement for any Project Operations Staff or Project Development Staff whose employment is terminated and where the replacement is recruited on terms which are not materially better than the terms of the Project Operations Staff or Project Development Staff member being replaced); and
 - 41.9.4 the re-assignment of any of the Project Operations Staff or Project Development Staff to or from duties connected with the Project Operations or the Project Development Services.
- 41.10 Following the service of a Termination Notice or at any time in the 730 days before the Expiry Date, within 30 days of a written request from **tie**, the Operator shall, or the Operator shall procure that each Operator Party shall, provide to **tie** such information concerning the Project Operations Staff and Project Development Staff as **tie** shall reasonably stipulate ("**Staffing Information**") including:
- 41.10.1 the number of Project Operations Staff and Project Development Staff;

- 41.10.2 their status as employees, self-employment contractors, agency workers or otherwise;
 - 41.10.3 their ages, dates of commencement of employment or engagement and gender;
 - 41.10.4 their relevant contractual notice periods and any other terms relating to termination of employment, including redundancy procedures and contractual redundancy payment schemes;
 - 41.10.5 the wages, salaries, profit sharing, incentive and bonus arrangements applicable to them;
 - 41.10.6 details of other employment related benefits, including (without limitation) medical insurance, life assurance, pension or other retirement benefit schemes, share option schemes and company car schemes applicable to them;
 - 41.10.7 any outstanding or potential contractual, statutory or other liabilities in respect of such individuals (including in respect of personal injury claims);
 - 41.10.8 details of any such individuals on long-term sickness absence, maternity or parental leave; and
 - 41.10.9 copies of all relevant documents and materials relating to such information, including copies of relevant contracts of employment.
- 41.11 The Operator expressly consents, and shall procure that each Operator Party and all Project Operations Staff and Project Development Staff shall consent, to any Staffing Information being provided to third parties, including a Successor Operator or any prospective Successor Operator, subject to such third party agreeing to respect the confidentiality of the Staffing Information, and only to use such Staffing Information for the purposes for which it was provided.

PART VII - MISCELLANEOUS PROVISIONS

42. DISPUTE RESOLUTION PROCEDURE

The Parties agree that Schedule 7 (*Dispute Resolution Procedure*) shall have effect for the resolution of any differences or disputes between the Parties arising under, out of or in relation to, this Agreement, save for matters expressly reserved to some other jurisdiction pursuant to any provision of the Scottish Private Bills.

43. ASSIGNATION, SUB-CONTRACTING AND CHANGES IN CONTROL

43.1 The Operator shall not, without the prior written consent of **tie**,

43.1.1 assign, transfer or otherwise dispose of any interest in, or right or obligation under, this Agreement; or

43.1.2 sub-contract any of its obligations under this Agreement without the prior written consent of **tie** (such consent not to be unreasonably withheld or delayed).

43.2 **tie** shall not assign or otherwise dispose of any interest in, or rights or obligations under this Agreement in whole or in part to any person, save:

43.2.1 to the Scottish Ministers or any local authority or other body with no worse financial standing than that of **tie** who, as a result of any Change in Law, takes over all or substantially all the functions of **tie**; or

43.2.2 to any other person whose obligations under this Agreement are unconditionally and irrevocably guaranteed (in a form reasonably acceptable to the Operator) by **tie** or a person falling within Clause 43.2.1; or

43.2.3 with the prior written consent of the Operator (such consent not to be unreasonably withheld or delayed).

43.3 **tie** shall be entitled to novate the entirety of this Agreement to any nominee which is an entity established by CEC and/or established in accordance with Legislation for the purposes of managing the implementation of service integration between tram operations and publicly owned bus operations in Edinburgh. If the Agreement is to be novated pursuant to this Clause 43.3, **tie** and the Operator shall agree a

shareholder's agreement confirming **tie**'s (or its relevant nominee's) participation in the Operator together with associated rights.

43.4 Subject to Clause 43.5 prior to the expiry of thirty six (36) months following the Service Commencement Date for the first Line to become operational, the Operator shall procure that no Change of Control of the Operator (or any company of which the Operator is a subsidiary) shall take place without the prior written approval of **tie**.

43.5 If applicable, Clause 43.4 shall not apply to a Change of Control resulting from the sale of any shares in the Operator held by any Third Party Shareholder.

43.6 The Operator shall inform the **tie** Project Manager as soon as reasonably practicable and, in any event, within five Business Days of any Change of Control of the Operator.

44. SECURITY INTERESTS

44.1 The Operator shall not create or agree to create any Security Interest over the System or any part of the System or over this Agreement.

44.2 The Operator shall not dispose of any right in respect of or interest in any asset used in the Project Operations or relating to the System if to do so would have a material adverse effect upon either the Project or the position of **tie** under this Agreement, whether or not this Agreement has terminated or expired provided always that restrictions in this Clause shall not apply in the case of:

44.2.1 disposals of redundant or obsolete assets not required for the operation of the System; or

44.2.2 disposals of property or assets where such property or assets are replaced by other property or assets comparable or superior as to type and function.

45. INFORMATION AND CONFIDENTIALITY

45.1 The Parties shall keep confidential all matters relating to this Agreement and the Project and, save as provided in Clause 45.3, shall not disclose any such matters to any third parties.

45.2 Each Party shall use all reasonable endeavours to procure that their respective employees and any other person to whom they disclose information pursuant to

Clauses 45.3.1, 45.3.3, 45.3.6 and 45.3.7 shall comply with this Clause 45 (*Information and Confidentiality*) as if they were parties to this Agreement.

45.3 Clause 45.1 shall not apply to:

45.3.1 any disclosure of information that is reasonably required by the Parties in order to carry out the Project Development Objectives and perform their obligations and exercise their rights under this Agreement;

45.3.2 any matter which a Party can demonstrate is already generally available and in the public domain otherwise than as a result of a breach of this Clause 45 (*Information and Confidentiality*);

45.3.3 disclosure to enable a determination to be made under the Dispute Resolution Procedure, subject always to that disclosure being restricted to parties directly involved in the process ;

45.3.4 any disclosure which is required by any Law, any parliamentary obligation or the rules of any stock exchange or governmental or regulatory authority having the force of law;

45.3.5 any disclosure of information which is already lawfully in the possession of the receiving party, prior to its disclosure by the disclosing party;

45.3.6 any provision of information to the professional advisers or insurance advisers of either Party;

45.3.7 where it is proposed that a person should or may provide funds (whether directly or indirectly and whether by loan, equity participation or otherwise) to the Operator to enable it to carry out its obligations under the Agreement, any provision of information to that person but only to the extent reasonably necessary to enable a decision to be taken on the proposal;

45.3.8 any disclosure by **tie** of information relating to the design, construction, operation and maintenance of the System and such other information as may be reasonably required for the purpose of conducting a due diligence exercise to any proposed Successor Operator, its advisers, should **tie** decide to retender the Project Operations or any part of them;

45.3.9 any registration of information in respect of the Necessary Consents and any property registration required;

45.3.10 any disclosure of information by **tie** to CEC, Partnerships UK Limited, any department, office or agency of the Scottish Executive or the UK government;

45.3.11 any disclosure by **tie** of any document related to this Agreement and which the Operator has agreed with **tie** contains no Commercially Sensitive Information (such agreement not to be unreasonably withheld or delayed);

45.3.12 any disclosure for the purpose of:

45.3.12.1 the examination and certification of **tie**'s or the Operator's accounts; or

45.3.12.2 any examination (pursuant to applicable Law) of the economy, efficiency and effectiveness with which **tie** has used their resources or funding made available for the Project; and

45.3.13 any disclosure by **tie** of any information (except for information which has been designated as Commercially Sensitive Information) as may be reasonably required for the purpose of appointing and working with any Infrastructure Provider;

45.4 Any public relations material, press releases, public presentations or conference engagements in relation to the Project planned by the Operator require **tie**'s prior written approval during the Term.

46. INTELLECTUAL PROPERTY RIGHTS

46.1 All Operator IPR shall continue to be owned by the Operator.

46.2 The Operator hereby:

46.2.1 assigns by way of future assignment to **tie** with full title guarantee the Project IPR which is created by it and shall procure that Project IPR created by any Operator Party is also so assigned, for all the residue of the term of such

rights and all renewals or extensions thereof and together with all accrued causes of action in respect thereof;

46.2.2 grants to **tie** a non-exclusive perpetual irrevocable royalty free licence to use such Operator IPR as may be necessary for **tie** to use solely in relation to the Project and any Network Expansion and for no other purpose;

46.2.3 grants to **tie** the right to grant non-exclusive non-assignable sub-licences to third party contractors for such lengths of time as **tie** may reasonably require and otherwise on the same terms as the licence granted to **tie** pursuant to Clause 46.2.2 above, to use the Operator IPR referred to in that Clause in so far as is necessary or desirable for such third party contractor to use such Operator IPR solely in relation to work connected with the Project and any Network Expansion.

46.3 For the avoidance of doubt, the persons to whom **tie** may grant sub-licences pursuant to Clause 46.2.3 above shall include:

46.3.1 any Infrastructure Provider and its contractors for purposes connected with the performance of any Infrastructure Delivery Agreement;

46.3.2 any party other than the Operator providing support to **tie** in relation to the development of any Network Expansion;

46.3.3 any party other than the Operator engaged in the provision of Transport Services on the System; and

46.3.4 any assignee or transferee under this Agreement.

46.4 **tie** hereby:

46.4.1 grants to the Operator a non-exclusive revocable royalty free licence for the Term to use such Project IPR as is owned by it as may be necessary for the Operator to use solely and exclusively for the purpose of meeting its obligations under this Agreement (including the Operating Appendix and for no other purpose); and

46.4.2 grants to the Operator the right to grant non-exclusive non-assignable sub-licences to the Operator Parties on the same terms as the licence granted to

the Operator pursuant to Clause 46.4.1 above to use the Project IPR referred to in that Clause in so far as is necessary or desirable for such Operator Parties to use such Project IPR, solely and exclusively for the purpose of performing their obligations in relation to the Project.

- 46.5 The Operator shall at any time and from time to time hereafter at the request of **tie** execute all such documents and do all such further acts as may be required in order to vest the rights referred to in Clause 46.2.1 in **tie**.
- 46.6 The Operator waives any and all moral rights held or to be held by the Operator in the Project Data and the Project IPR and shall procure that all of the Operator Parties who are authors of the whole or any part of the Project Data or the Project IPR waive and abandon in writing all moral rights.
- 46.7 The Operator agrees that all rights in the Project IPR shall remain the property of **tie** and the Operator shall retain no rights in the Project IPR beyond the licence granted in Clause 46.4.1 above. The Operator shall be entitled to use such Project IPR only on the terms set out herein and solely for the purpose of the Project. In particular, otherwise as permitted in this Agreement herein, the Operator shall not (and shall procure that its sub-licensees pursuant to Clause 46.4.2 shall not) disclose, assign, sub-licence, lease, rent or otherwise dispose of the Project IPR.
- 46.8 To the extent that any of the Project Data are generated by or maintained on a computer or similar system, the Operator shall use all reasonable endeavours to procure for the benefit of **tie**, at no charge or at the lowest reasonable fee, the grant of a licence or sub-licence for any relevant Third Party Software on the same terms as the Operator Software is licensed to **tie**, to enable **tie** or its nominee to access and otherwise use (subject to the payment by **tie** of the relevant fee, if any) such Project Data in connection with the Project. As an alternative, the Operator may provide such Project Data in a format which may be read by software generally available at reasonable prices in the market at the relevant time or in hard copy format.
- 46.9 The Operator shall, within thirty (30) days of any upgrade or update to the Operator Software and/or Specially Written Software and/or Third Party Software, for the Term:

- 46.9.1 deposit a copy of the Operator Software and/or Specially Written Software with the Escrow Agent under the terms and conditions of the Escrow Agreement; and
- 46.9.2 use all reasonable endeavours to procure the deposit of a copy of all the Third Party Software with the Escrow Agent and under the terms and conditions of the Escrow Agreement, or with another person under terms that are materially the same as the Escrow Agreement, and in either case for the benefit of **tie**.
- 46.10 The Operator shall comply with the terms of the Escrow Agreement, or any other like agreement in respect of the Third Party Software under Clause 46.9.2 for the duration of this Agreement.
- 46.11 Any costs relating to the Escrow Agreement, including any costs relating to the registration of any Operator Software, Specially Written Software and Third Party Software, and any renewal costs charged from time to time by the Escrow Agent, shall be the sole responsibility of the Operator.
- 46.12 The Operator shall ensure the back-up and storage in safe custody of the Project Data in accordance with Good Industry Practice. Without prejudice to this obligation, the Operator shall submit to the **tie** Project Manager for approval its proposals for the back-up and storage in safe custody of the Project Data and **tie** shall be entitled to object if the same is not in accordance with Good Industry Practice. The Operator shall comply, and shall cause all the Operator Parties to comply, with all such proposals to which the **tie** Project Manager has given his or her approval. The Operator may vary its procedures for such back-up and storage subject to submitting its proposals for change to the **tie** Project Manager, who shall be entitled to object on the basis set out above.
- 46.13 Where a claim or proceeding is made or brought against **tie** or its permitted licensees which arises out of the infringement of any Intellectual Property Rights in any Project Data or other materials provided by the Operator or any Operator Party to **tie** then, unless such infringement has arisen out of the use of any Intellectual Property Rights by **tie** in breach of this Agreement, the Operator shall indemnify and keep **tie** indemnified on demand at all times from and against all Indemnified Liabilities arising in connection with such claim or proceedings.

46.14 For the purposes of this Clause 46 (*Intellectual Property Rights*), "use" shall include the acts of copying, modifying, adapting and translating the material in question and/or incorporating them with other materials and the term "the right to use" shall be construed accordingly.

46.15 The provisions of this Clause 46 (*Intellectual Property Rights*) shall apply during the continuance of this Agreement and after its termination howsoever arising, and immediately following termination howsoever arising, the Operator shall provide **tie** with:

46.15.1 a copy of the object code for the Third Party Software and the Operator Software on media that is reasonably acceptable to **tie**;

46.15.2 a copy of the source code for the Specially Written Software on media that is reasonably acceptable to **tie**; and

46.15.3 a copy of all documentation, manuals and other technical information relating to the Third Party Software, the Specially Written Software and the Operator Software that is reasonably required by **tie** to operate, manage and support the Third Party Software, the Specially Written Software and the Operator Software.

47. DATA PROTECTION

47.1 For the purpose of the following Clauses, the term "personal data" shall have the meaning given to it in the Data Protection Act 1998.

47.2 The Operator shall, in relation to any personal data in respect of which it is either the "data controller" or the "data processor" for the purposes of the Data Protection Act 1998, comply with the obligations of a "data controller" under the provisions of the seventh data protection principle as set out in Schedule 1 of that Act. In addition, the Operator:

47.2.1 shall have at all material times (and shall use its best endeavours to procure that all Operator Parties have or will have at all material times) the appropriate technical and organisational measures in place against unauthorised or unlawful processing of personal data and against accidental loss or destruction of, or damage to, personal data held or processed by it;

- 47.2.2 shall (and shall use its best endeavours to procure that the Operator Parties shall) take at all material times, all reasonable steps to ensure the integrity of any of its staff with access to personal data processed in connection with the Project;
- 47.2.3 shall act only on the instructions of **tie** in relation to the processing of any personal data in respect of which **tie** is the "data controller" for the purposes of that Act;
- 47.2.4 shall only obtain, hold, process, use, store and disclose such personal data as is necessary to perform its obligations under this Agreement; and
- 47.2.5 shall allow **tie** access to any relevant premises on reasonable notice to inspect its procedures referred to in Clause 47.2.1.

48. INFORMATION AND AUDIT ACCESS

- 48.1 The Operator shall in accordance with Good Industry Practice keep and maintain:
 - 48.1.1 detailed records regarding the Project Development Services and its activities in relation to the Project;
 - 48.1.2 all Project Data;
 - 48.1.3 detailed records regarding the Project Operations, including details of ticket sales, Patronage Revenue receipts and breakdowns of Operating Costs; and
 - 48.1.4 all invoices, timesheets and expense claims for which it has sought or is seeking reimbursement under the provisions of this Agreement;and shall keep such records for at least twelve years following expiry or termination of this Agreement.
- 48.2 The records referred to in Clause 48.1 shall be kept in good order and in such form as to be capable of audit (including by electronic means) by the **tie** Project Manager or any other third party. The Operator shall make such records available for inspection by or on behalf of **tie** and the **tie** Project Manager at all reasonable times.
- 48.3 The Operator shall provide to the **tie** Project Manager and **tie**'s auditors all information, documents, records and the like in the possession of, or available to, the

Operator (and to this end the Operator shall use all reasonable endeavours to procure that all such items in the possession of the Operator Parties shall be available to it) as may be reasonably requested by the **tie** Project Manager for any purpose in connection with the Project or this Agreement.

48.4 The Operator shall provide and shall procure that the Operator Parties shall provide such information, data records, and assistance as **tie** may reasonably require from time to time, including to enable **tie** and CEC to meet its obligations to provide reports and returns pursuant to Law, directions and guidance applicable to the passenger transport sector and audit.

48.5 The Operator shall comply, as its own cost, with any request by **tie** in respect of the recording, storage, keeping, disclosure, organisation, use, processing, dissemination, deletion or destruction of any records, data or information obtained by the Operator as a result of carrying out the Transport Services or any other obligation under this Agreement.

48.6 **tie** shall provide to the Operator (subject to reasonable notice and relevant undertaking as to costs) such information within its possession or control with respect to the Project as the Operator may reasonably request to enable it to perform its obligations under this Agreement, provided that **tie** shall have no obligation to provide information with respect to which it is subject to an obligation of confidentiality (whether under any Law, at contract or otherwise).

48.7 The provisions of this Clause 48 (*Information and Audit Access*) shall apply during the continuance of this Agreement and after its expiry or termination howsoever arising.

49. ENTIRE AGREEMENT

49.1 The Operator acknowledges and confirms that it has, by carrying out such due diligence and other investigations as any Operator acting in accordance with Good Industry Practice would do, satisfied itself fully as to the veracity, accuracy, reasonableness, scope, materiality, currency (where applicable) and completeness of all the Background Information.

49.2 Except where expressly provided otherwise in this Agreement, this Agreement constitutes the entire agreement between the Parties in connection with its subject

matter and supersedes all prior representations, communications, negotiations and understandings concerning the subject matter of this Agreement.

- 49.3 Each of the Parties confirms to the other that it has neither been induced to enter into this Agreement in reliance on, nor has it made, any representation or warranty except those contained or referred to in this Agreement.
- 49.4 Any representations or warranties other than those contained or referred to in this Agreement are superseded and extinguished by this Agreement.
- 49.5 Each Party irrevocably and unconditionally waives all rights and remedies which it might otherwise have had in relation to any representations or warranties other than those contained or referred to in this Agreement.
- 49.6 Each Party irrevocably and unconditionally waives any right it may have to rescind this Agreement on the grounds that any representation or warranty (whether contained or referred to in this Agreement or not) constitutes a misrepresentation.
- 49.7 Nothing in this Clause 49 (*Entire Agreement*) shall affect the liability of either Party in respect of fraud or fraudulent misrepresentation.

50. FURTHER ASSURANCE

- 50.1 Each Party shall at the reasonable request and cost of the other (save where either in satisfaction of an Operator Condition Precedent or where it is expressly provided that the cost of such act or execution shall be for that Party's account) do any act or execute any document that may be necessary to give full effect to this Agreement.

51. JURISDICTION

- 51.1 This Agreement, any document completed or to be completed in accordance with its provisions and any matter arising from it or any such document shall be governed by and construed in accordance with Scots law.
- 51.2 Subject to Clause 42 (*Dispute Resolution Procedure*), the Parties hereby irrevocably submit to the exclusive jurisdiction of the Court of Session in relation to this Agreement, any such document and any such matter.

52. VARIATIONS AND WAIVERS TO BE IN WRITING

No variation, alteration or waiver of any of the provisions of this Agreement shall be effective unless it is in writing and signed by or on behalf of the Party against which the enforcement of such variation, alteration or waiver is sought.

53. WAIVER AND CUMULATIVE REMEDIES

53.1 Save where expressly stated, no failure or delay by either Party to exercise any right or remedy in connection with this Agreement will operate as a waiver of it or of any other right or remedy nor will any single or partial exercise preclude any further exercise of the same, or of some other right or remedy. A waiver of any breach of this Agreement shall not be deemed to be a waiver of any subsequent breach.

53.2 The Parties' rights and remedies under this Agreement are, except where provided otherwise in this Agreement, independent, cumulative and do not operate to exclude one another or any rights or remedies provided by law.

54. NO PARTNERSHIP OR AGENCY

54.1 Nothing in this Agreement shall be construed as creating a partnership between **tie** and the Operator.

54.2 The Operator shall not (and shall procure that the Operator Parties shall not) act or purport to act as agent for **tie** in relation to any matter. The Operator shall not be entitled to bind **tie** in any way or to create any liability or cause of action against **tie** and shall not hold itself out (and shall procure that no Operator Party shall hold itself out) as having any such authority or power, provided always that this Clause 54.2 shall be without prejudice to:

54.2.1 Clause 17 (*Collection of Fare Revenue*) of the Operating Appendix, pursuant to which the Operator is authorised to enter into contracts of carriage with passengers, and to collect Patronage Revenue, as agent for **tie**; and

54.2.2 Clause 13 (*Edinburgh Tram Network Integration*) of this Agreement and Clause 11 (*Operation and Maintenance Procedures*) of the Operating Appendix, pursuant to which **tie** may delegate to the Operator the exercise of some of **tie**'s contractual rights under the Infrastructure Delivery Agreement(s).

55. NOTICES

55.1 Any notice or notification required or authorised to be given under this Agreement by one Party to the other shall be:

55.1.1 in writing;

55.1.2 sent by one of the following methods:

55.1.2.1 pre-paid registered or recorded delivery post or facsimile transmission addressed to the Party to which it is given at:

(a) in the case of notices given to **tie**: Transport Initiatives Edinburgh Limited, 91 Hanover Street, Edinburgh, EH2 1JD fax number 0131 718 4271, attention: A. Macaulay Esq., Projects Director, or such other address in the United Kingdom as **tie** may notify the Operator from time to time for that purpose; or

(b) in the case of notices given to the Operator, TRANSDEV Edinburgh Tram Limited, 91 Hanover Street, Edinburgh, EH2 1JD, attention D. Humphrey Esq. or such other address in the United Kingdom as the Operator may notify **tie** from time to time for that purpose; or

55.1.2.2 facsimile transmission addressed to the **tie** Project Manager or the Operator Project Manager (as appropriate) at a facsimile number notified to the giving Party by the receiving Party for the service of notices under this Agreement from time to time; or

55.1.2.3 personal delivery into the hands of:

(a) in the case of notices given to **tie**, the **tie** Project Manager;
or

(b) in the case of notices given to the Operator, the Operator Project Manager

55.1.3 be deemed duly served:

55.1.3.1 if sent by pre-paid registered or recorded delivery post, 2 clear Business Days after posting; or

55.1.3.2 if sent via facsimile transmission or personal delivery, on the day of issue of the relevant fax confirmation receipt or such personal delivery (as appropriate), unless that day is not a Business Day in which case it shall be deemed duly served on the next Business Day thereafter.

56. INVALID TERMS

56.1 If any term of this Agreement shall be held to any extent to be invalid, unlawful or unenforceable:

56.1.1 that term shall to that extent be deemed not to form part of this Agreement; and

56.1.2 the validity and enforceability of the remainder of this Agreement shall not be affected.

57. THIRD PARTIES RIGHTS

57.1 Save as provided in Clause 57.2, a person who is not party to this Agreement shall have no right to enforce any term of this Agreement.

57.2 The **tie** Advisers and CEC shall have the benefit of the terms of Clause 25.5.

58. HUMAN RIGHTS ACT

58.1 Insofar as and to the extent that the Operator is deemed to be acting as a public authority for the purposes of the Human Rights Act 1998, any claim asserted or proceedings commenced against **tie** arising from a negligent act or negligent omission by the Operator or breach by the Operator of its obligations under this Agreement shall, for the purposes of Clause 28 (*Indemnity*), be treated as an Indemnified Liability.

59. MALADMINISTRATION COMPLAINTS

59.1 The Operator shall provide such reasonable assistance (including the provision of witnesses) as **tie** may reasonably request (having regard to the Transport Services, in particular as to the timing, duration and number of witnesses) in connection with any audit process or judicial review of **tie's** involvement in the Project or the Project generally.

IN WITNESS WHEREOF these presents consisting of this and the 87 preceding pages together with Schedules 1 to 19 (inclusive) and the Operating Appendix together with Schedules 1 to 6 (inclusive) which are annexed and signed as relative hereto are executed as follows:

EXECUTED for and on behalf of **TRANSPORT INITIATIVES EDINBURGH LIMITED**

at Edinburgh on 14 May 2004 by

~~Director~~/Authorised Signatory: ...



Full Name: ... MICHAEL WILLIAM DAVID HOWELL

Witness:



Full Name: ... SHARON FITZGERALD

Address: ... 40/40A DCA, RUTLAND SQUARE, EDINBURGH

EXECUTED for and on behalf of **TRANSDEV EDINBURGH TRAM LIMITED**

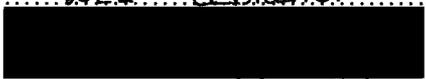
at Edinburgh on 14 May 2004 by

~~Director~~/Authorised Signatory:



Full Name: ... JOEL LEBRETON

Witness: ...



Full Name: ... David Humphrey

Address: ...



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SCHEDULE 1

Definitions and Interpretation

1. In this Agreement, unless the context otherwise requires:

"Acquired Rights Directive" means the European Council Directive 77/187/EEC on the approximation of laws of European Union member states relating to the safeguarding of employees' rights in the event of transfers of undertakings, businesses or parts of undertakings or businesses;

"Additional System Surplus" has the meaning given to it in paragraph 23.1 of Schedule 3 to the Operating Appendix (*Project Phase D Payment Mechanism and KPI Regime*);

"Affected Party" means a Party that is unable to comply with all or a material part of its obligations under this Agreement as a direct result of a Force Majeure Event;

"Affiliate" means in relation to any organisation:

- (a) any person having any shares in or membership of that organisation, whether directly, through nominees or through shares in or membership of any other person; and
- (b) any person in which that organisation holds shares or of which that organisation is a member whether directly, through nominees or through shares in or membership of any other person;

"Affordability Limits" means such financial limits as may be advised by **tie** to the Operator from time to time in relation to the affordability of the Project or any part of it;

"Agreement" means the main body of this document, together with its Schedules and Operating Appendix, (as amended from time to time pursuant to Clause 52 (*Variations and Waivers to be in Writing*));

"Annual Service Report" means the report to be provided by the Operator pursuant to Clause 16 (*Best Value and Project Phase D Benchmarking*) of the Operating Appendix;

"Approvals Management Plan" means the plan referred to in paragraph 26.8 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance the terms of this Agreement;

"Assets" means all assets and rights to enable **tie** or another operator to own, operate and maintain the System and take over the Project Operations in accordance with this Agreement, including:

- (a) any equipment;
- (b) any books and records (including the Operating and Maintenance Manual, health and safety manuals and other know-how);
- (c) any spare parts, tools and other assets (together with any warranties in respect of assets being transferred);
- (d) any revenues and any other contractual rights; and
- (e) any Intellectual Property,

but excluding any assets and rights in respect of which **tie** is full, legal and beneficial owner;

"Average Individual KPI Performance" has the meaning given to it in paragraph 23.5 of Schedule 3 to the Operating Appendix (*Project Phase D Payment Mechanism and KPI Regime*);

"Average KPI Performance" has the meaning given to it in paragraph 23.4 of Schedule 3 to the Operating Appendix (*Project Phase D Payment Mechanism and KPI Regime*);

"Background Information" means all and any materials, documents, drawings, plans or other information in paper, electronic or any other form, relating in any way to the Project and the Private Bills (and the parliamentary process) and made available to the Operator by **tie**, CEC and/or any of their respective members, officers, agents and/or advisers in connection with the Project and/or the negotiation and/or preparation of this Agreement or during the process of competitive bidding which preceded such negotiation and preparation;

"Base Case RPIX" means RPIX as at 1 January 2003 equal to 177.1;

"Base Case Assumptions" means the assumptions set out in Schedule 18 (*Base Case Assumptions*) as may be agreed to be amended from time to time in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) or following a **tie** Change in accordance with Clause 24 (*tie Changes*) or following an Operator Change in accordance with Clause 25 (*Operator Changes*);

"Best Value Improvement Plans" means the plan referred to in Clause 16 (*Best Value and Project Phase D Benchmarking*) of the Operating Appendix;

"Bid Conditions" means the bid conditions included in Schedule 11 (*Bid Conditions*) to this Agreement and signed by the parties;

"Bonded Costs" means the costs, expenses, liabilities, loss of profits and damages incurred by **tie** as a result of the matters listed in Clauses 8.4.1, 8.4.2, 8.4.3 and 8.4.4 of this Agreement;

"Business Day" means any day other than a Saturday, Sunday or Edinburgh Holiday;

"Capped Fee" means subject to Clause 15.13, the relevant cap as set out in the Financial Proposals;

"Category Five Fixed Costs" means the costs numbered "5" in the tables included in the Base Case Assumptions, which are set in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) at a level in accordance with the Project Development and Operating Costs, and such other costs as **tie** and the Operator may agree from time to time should be treated as "Category Five Fixed Costs". All Category Five Fixed Costs shall be Indexed at Premium;

"Category Four Fixed Costs" means the costs numbered "4" in the tables included in the Base Case Assumptions, which are set in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) at a level in accordance with the Project Development and Operating Costs, and such other costs as **tie** and the Operator may agree from time to time should be treated as "Category Four Fixed Costs" All Category Four Fixed Costs shall be Indexed at Premium;

"Category One Fixed Costs" means the costs numbered "1" in the tables included in the Base Case Assumptions, which are set in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) at a level in accordance with the Project Development and Operating Costs, and such other costs as **tie** and the Operator may agree from time to time should be treated as "Category One Fixed Costs". All Category One Fixed Costs shall be Indexed at Premium;

"Category Three Fixed Costs" means the costs numbered "3" in the tables included in the Base Case Assumptions, which are set in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) at a level in accordance with the Project Development and Operating Costs, and such other costs as **tie** and the Operator may agree from time to time should be treated as "Category Three Fixed Costs". All Category Three Fixed Costs shall be Indexed at Premium;

"Category Two Fixed Costs" means the costs numbered "2" in the tables included in the Base Case Assumptions, which are set in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs*

and Rates) at a level in accordance with the Project Development and Operating Costs, and such other costs as **tie** and the Operator may agree from time to time should be treated as "Category Two Fixed Costs" All Category Two Fixed Costs shall be Indexed at Premium;

"CDM Regulations" means the Construction (Design and Management) Regulations 1994 (SI 1994/3140);

"CEC" means the City of Edinburgh Council and its successors and assignees whomsoever;

"CEC Fares Policy" means any policy developed and applied by CEC concerning the level and/or structure of ticket pricing for the Edinburgh Tram Network;

"CEC UTC System" means the system of electronically operated signals managed by CEC to control traffic movements on the streets and roads in the City of Edinburgh in which the System will be installed, and for the avoidance of doubt, includes any such electronically operated signals which operate on a stand alone basis provided that to the extent that the System serves areas outside Edinburgh from time to time, references to "CEC UTC System" shall be deemed to apply to UTC systems operated in such areas to the extent appropriate in the context;

"Certificate of Full Service Commencement" means, in relation to a Line, the certificate of Full Service Commencement to be issued by **tie** in accordance with Clause 4.5 of the Operating Appendix or Clause 3.6 of the Operating Appendix (as appropriate) in respect of that Line;

"Certificate of Service Commencement" means, in relation to a Line, the certificate of Service Commencement to be issued by **tie** in accordance with Clause 3.4 of the Operating Appendix in respect of that Line;

"Change in Law" means the coming into effect after the Effective Date of:

- (a) Legislation, other than any Legislation which on the Effective Date has been published:
 - (i) in a draft Bill (to have effect in Scotland) as part of a Scottish Executive or United Kingdom Government consultation paper;
 - (ii) in a Bill;
 - (iii) in draft subordinate Legislation within the meaning of section 21(1) of the Interpretation Act 1978; or

(iv) as a draft directive or a draft regulation in the Official Journal of the European Communities; or

(b) any applicable judgment of a relevant court of law which changes a binding precedent;

"Change of Control" means any sale or disposal of any legal, beneficial or equitable interest in any or all of the share capital of a corporation or the control over the exercise of voting rights in a corporation or the control over the right to appoint or remove directors of a corporation;

"Claim" has the meaning given in Clause 29.1;

"Code of Construction Practice" means the code which has been developed in conjunction with all relevant local authorities with regard to environmental and safety aspects affecting the interests of local businesses, the general public and the surroundings in the vicinity of the Construction Works. The Code will apply to both the Construction Works and any Infrastructure Provider Maintenance;

"Commercially Sensitive Information" means this Agreement (unless otherwise agreed by the Parties), any information relating to detailed costings and funding of the Project and/or any other information which is agreed to be or is identified at the time of issue as being commercially sensitive;

"Compliance Critical Risk" means a risk or matter the Operator is obliged to insure against and which the failure of the Operator to carry any of the Required Insurances would prevent the Operator from lawfully performing the Project Development Services or the Project Operations in whole or in substantial part in the manner required by this Agreement;

"Concessionary Travel Scheme" means:

- (i) in respect of Edinburgh, East Lothian and Midlothian, the concessionary travel scheme known as "Concessionary Travel - Arrangements from 30 September 2002 for residents of The City of Edinburgh, East Lothian and Midlothian Councils"; and
- (ii) in respect of West Lothian, the concessionary travel scheme known as "West Lothian Concessionary Travel Scheme";

or any successor to either of such schemes nominated by **tie**;

"Construction Panel" has the meaning given to it in paragraph 5.4 of Schedule 7 (*Dispute Resolution Procedure*);

"Construction Works" means the infrastructure construction and installation works as part of the works to be carried out by any Infrastructure Provider;

"Control Centre" means the control centre for the control of the System to be provided by the Infrastructure Provider(s) and operated by the Operator pursuant to this Agreement;

"Core Network" means Line 1, Line 2 and Line 3 or any of them;

"Core Staff Fixed Rates" means the costs numbered "9" in the tables included in the Base Case Assumptions, which are set in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) at a level in accordance with Table 1 of the Project Development and Operating Costs, and such other rates as **tie** and the Operator may agree from time to time to be treated as Core Staff Fixed Rates. All Core Staff Fixed Rates shall be Indexed at Premium;

"Default Interest Rate" means the interest rate per annum equivalent to two percent above the base rate of the Bank of England current on the date on which the relevant payment first becomes overdue adjusted to reflect any changes to the rate during the period over which the payment remains overdue;

"Depot(s)" means the facilities for:

- (a) the stabling, servicing, cleaning and/or maintenance of Trams and/or elements of infrastructure: and/or
- (b) accommodation for operational and maintenance staff;

"Design Manual" means the design manual to be developed by the **tie** Advisers during Project Phases A and B, with input from the Operator pursuant to the Project Development Output Specification, as such Design Manual is amended during Project Phases A and B, and otherwise from time to time in accordance with this Agreement ;

"Development Assumptions" means those assumptions made by **tie** or the **tie** Advisers, in relation to the development of the System, and potential revenues and costs, and as such Development Assumptions may be modified at **tie's** option pursuant to Schedule 2 (*Project Development Output Specification*) during Project Phase A and Project Phase B in relation to each Line;

"Development Phase" means in respect of each Line: Project Phase A, Project Phase B and Project Phase C in respect of such Line;

"Dispute" means any dispute, difference or unresolved claim between the Parties in connection with or arising from this Agreement;

"Dispute Resolution Procedure" means the procedure set out in Clause 42 (*Dispute Resolution Procedure*) and Schedule 7 (*Dispute Resolution Procedure*);

"Document Management Plan" means the plan referred to in paragraph 26.10 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance the terms of this Agreement;

"Due Date for Payment" means the dates calculated in accordance with Clauses 15.4, 15.8, 17.2 and 17.6 as appropriate;

"Edinburgh" means the geographical area of the unitary authority of the City of Edinburgh Council as at the Effective Date and any other geographical area which comes within the area of responsibility of CEC at any time during the Term, provided that to the extent that the System serves areas outside Edinburgh from time to time, references to "Edinburgh" shall be deemed to apply to such areas to the extent appropriate in the context;

"Edinburgh Holiday" means any day which is a public holiday recognised by the CEC;

"Edinburgh Tram Network" means the Core Network together with any Network Expansion and Line extensions that may be required by **tie** from time to time during the Term;

"Effective Date" shall mean the date on which **tie** notifies the Operator in writing that the condition precedent stipulated in Clause 2.5 has been satisfied;

"Emergency Services" means Lothian and Borders Police, Lothian and Borders Fire Brigade, Scottish Ambulance Services and HM Coastguard;

"Employment Liabilities" means any award, loss, fine, compensation, damages order, payment made by way of settlement, costs and expenses (including legal costs on an indemnity basis) properly incurred in connection with a claim made by or in respect of any of the Project Development Staff or Project Operations Staff (including a claim made by a trade union, a governmental or statutory body or local authority or commission), and also including the costs of any investigation by the Equal Opportunities Commission, the Commission for Racial Equality or the Disability Rights Commission, and of costs of implementing any requirements that may arise from any such investigation;

"EMU" means Economic and Monetary Union as contemplated in the Treaty of European Union;

"EMU Legislation" means legislative measures of the European Council for the introduction of, changeover to or operation of a single or unified European currency (whether known as the Euro or otherwise), being in part the implementation of the third stage of EMU;

"Enabling Legislation" means such Legislation, in the form of Scottish Private Bills, Acts or otherwise, as gives permanent authority to CEC and to **tie** to finance, build, commission, operate, maintain and decommission the Edinburgh Tram Network;

"Environmental and Sustainability Management Plan" means the plan referred to in paragraph 26.13 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance with the terms of this Agreement;

"Environmental Statement" means the environmental statements supporting each of the Scottish Private Bills;

"Escrow Agent" means the agent to be agreed between **tie** and the Operator in the event that any Operator Software and/or Specially Written Software and/or Third Party Software is upgraded or updated, and deposited in accordance with Clause 46.9;

"Escrow Agreement" means the agreement to be agreed between **tie** and the Operator in the event that any Operator Software and/or Specially Written Software and/or Third Party Software is upgraded or updated, and deposited in accordance with Clause 46.9;

"Estimate" means the estimate to be provided by the Operator pursuant to Clause 24.3 of the Operating Appendix;

"Euro" means the single currency of Participating Member States of the European Union;

"Euro Compliant" has the meaning given in Clause 9.10 of the Operating Appendix;

"Expiry Date" means, subject to **tie's** right to extend the Expiry Date pursuant to Clause 2.2 or any agreement between **tie** and the Operator (pursuant to Clause 2.3), 02.00 hours on the date which is the fifteenth anniversary of the Effective Date;

"Fares" means the prices being charged from time to time by the Operator for journeys on the System;

"Final Date for Payment" means the dates calculated in accordance with Clauses 15.6, 15.10, 17.4 and 17.8 as appropriate;

"Final Persistent Breach Notice" means a notice served by **tie** pursuant to Clause 33.2;

"Financial Panel" has the meaning given to it in paragraph 5.4 of Schedule 7 (*Dispute Resolution Procedure*);

"Financial Proposals" means the financial proposals presented by the Operator and approved by **tie** and agreed at the Effective Date as Schedule 4 (*Financial Proposals*) to this Agreement as may be adjusted from time to time in accordance with this Agreement or otherwise by agreement between **tie** and the Operator;

"First Party" has the meaning given in Clause 3.3;

"Fixed Costs" means the Category One Fixed Costs, the Category Two Fixed Costs, the Category Three Fixed Costs, the Category Four Fixed Costs, the Category Five Fixed Costs, and any other costs which **tie** and the Operator may agree from time to time should be treated as "fixed costs" whether within one of the already defined categories of costs or otherwise Indexed at Premium provided that where there is a time interval between the Service Commencement Date and the Full Service Commencement Date for a Line, the Fixed Costs for the System (including such Line) for such period shall be the Interim Fixed Costs;

"Fixed Rates" means the Core Staff Fixed Rates, the Non-Core Staff Fixed Rates and/or any other rates which **tie** and the Operator may agree from time to time should be treated as "fixed rates" whether within one of the already defined categories of rates or otherwise as Indexed at Premium;

"Force Majeure Event" means the occurrence after the Effective Date of:

- (a) war, civil war, armed conflict or terrorism; or
- (b) nuclear, chemical or biological contamination unless the source or cause of the contamination is the result of actions of the Operator; or
- (c) pressure waves caused by devices travelling at supersonic speeds.

"Full Service" has the meaning given in Clause 8.7 of the Operating Appendix;

"Full Service Commencement" means, in respect of any Line, the provision of the full level of the Transport Services in respect of that Line as specified in the Operating Output Specification;

"Full Service Commencement Date" means, in respect of each Line, the date specified in the Certificate of Full Service Commencement in respect of that Line;

"Full Service Day" means pursuant to the terms of Clause 8 (*Special Events*) of the Operating Appendix, a day falling during the Service Period in respect of which **tie** have given prior written notice to the Operator requiring the Operator to provide a Full Service over all or part of the System;

"Good Industry Practice" means using standards, practices, methods and procedures conforming to the Law and exercising that degree of skill, care, diligence, prudence and foresight that would reasonably be expected from a large, reputable, professionally qualified, competent and skilled organisation experienced in carrying out activities of a similar nature, scope and complexity to those comprised in the Project Development Services, the Project and the Project Operations and seeking in good faith to comply with its contractual obligations and all duties owed by it;

"Guidance" means any applicable guidance, direction or determination issued by any regulatory body with which **tie** and/or the Operator is bound to comply;

"Handback Package" means the information referred to in Clause 28 (*Transition on Termination or Expiry*) of the Operating Appendix, as updated by the Operator from time to time in accordance with the provisions of that Clause;

"Headway" means, in relation to the Transport Services, the period in minutes and whole seconds between a Tram and the subsequent Tram either departing from an Originating Tramstop or a Headway Measurement Tramstop;

"Headway Measurement Tramstop" means any Tramstop so designed by agreement between the Operator and **tie**;

"Health and Safety Plan" means the plan referred to in paragraph 26.6 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance the terms of this Agreement;

"Helpdesk" has the meaning given to it in Clause 12.2 of the Operating Appendix;

"HMRI" means Her Majesty's Railway Inspectorate (or any successor authority);

"HS Act" has the meaning given to it in Clause 4.4;

"Inappropriate Base Case Assumption" means any Base Case Assumption which is agreed or determined in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) to be

(a) outwith any threshold set within the relevant Base Case Assumption or,

(b) where there is no stated threshold within the Base Case Assumption, any such Base Case Assumption which is incorrect to a material extent following the further development of the Project pursuant to this Agreement;

"Inception Report" means the report to be submitted by the Operator to the Partnering Methodology and Programme pursuant to paragraph 5.5.6 of Schedule 2 (*Project Development Output Specification*), setting out details of the Operator's proposals for the Partnering Methodology and Programme;

"Incident Management Plan" means the plan referred to in paragraph 26.11 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance with the terms of this Agreement;

"Indemnified Liabilities" means actions, claims, (including third party claims) demands, proceedings, losses, damages, liabilities, costs and expenses (including reasonable legal fees and expert witness fees);

"Indexed" means in relation to an amount, that amount to be multiplied by the value of RPIX at the Point of Indexation, divided by the Base Case RPIX to generate a percentage movement;

"Indexed at Premium" means in relation to an amount, that amount to be multiplied by a factor calculated as the value of RPIX at the Point of Indexation, divided by Base Case RPIX to generate a percentage movement, with a further 0.5% added to this percentage movement;

"Indirect Loss" means any business interruption, loss of profits, loss of business, loss of business opportunity, loss of or damage to or corruption of data or loss of management time or time of other employees;

"Infrastructure and Equipment" means in respect of each Line, all infrastructure and equipment to be made available for the operation of the System in respect of that Line, including:

- (i) track, power, signalling and communications equipment;
- (ii) Tramstops;
- (iii) Depot(s);
- (iv) the Control Centre;
- (v) Trams; and

(vi) CCTV and ticket vending machines.

"Infrastructure and Equipment Output Specification" means, in respect of each Line, the output specification contained in the Infrastructure Delivery Agreement in respect of that Line;

"Infrastructure Delivery Agreement (IDA)" means, in respect of each Line (or Network Expansion), the agreement to be entered into between **tie** and the Infrastructure Provider for that Line (or Network Expansion) in respect of (inter alia) the delivery and maintenance of the Infrastructure and Equipment for that Line or Network Expansion;

"Infrastructure Provider" means any party with whom **tie** concludes an Infrastructure Delivery Agreement,

"Infrastructure Provider Maintenance" means all maintenance of the System other than the Operator Maintenance;

"Initial Fares" means the fares set by the Operator in accordance with the CEC Fares Policy and notified to the public no less than 60 days in advance of Service Commencement;

"Initial Response" has the meaning given in paragraph 26.5.5 of Schedule 2 (*Project Development Output Specification*);

"Insolvency Event" means any of the following events:

- (a) the Operator is unable to pay its debts as they fall due or is insolvent or admits in writing inability to pay its debts as they fall due;
- (b) the Operator suspends for a period of two months making payments on all or any class of its debts or a moratorium is declared by the Operator in respect of its indebtedness;
- (c) the Operator ceases business or announces an intention to do so;
- (d) the following are entered into:
 - (i) a voluntary arrangement (other than a solvent one) for a composition of debts of the Operator;
 - (ii) a scheme of arrangement in respect of the Operator pursuant to the Insolvency Act 1986 or the Companies Act 1985; or

- (iii) a material composition or arrangement other than a solvent one with the Operator's creditors;
- (e) either of the following:
 - (i) the winding-up of the Operator (including passing a shareholders' resolution or the presentation of a petition by the Operator for the purpose of winding up the Operator); or
 - (ii) its administration (including where an application is made by the Operator, or petition is presented by the Operator for or any meeting of its directors or members resolves to make an application for an administration order);
- (f) an order for the winding-up or administration of the Operator is made;
- (g) any liquidator, judicial custodian, receiver, administrative receiver, administrator or the like is appointed in respect of the Operator or any material part of the Operator's assets;
- (h) possession is taken of, or any execution or other process (other than on the dependence or inhibition) is levied or enforced upon, any material part of the property (whether real or personal) of the Operator by or on behalf of any creditor or encumbrancer of the Operator; or
- (i) anything analogous to any of the events mentioned in paragraphs (a) to (h) above occurs in relation to the Operator under the law of any relevant jurisdiction;

"Integrated Transport Initiative" means CEC's transportation enhancement and investment programme approved in principle by the Scottish Executive as set out in the report prepared by **tie** entitled 'A Vision for Edinburgh' dated 2nd September 2002 and known as the Integrated Transport Initiative for South East and Central Scotland (encompassing the Edinburgh Tram Network as a major core project) which is currently being managed and procured by **tie** on behalf of CEC;

"Intellectual Property Rights" means any rights in or to any patent, petty patent, copyright, sui generis database right, design right, utility model, trade mark, brand name, service mark, trade name, business name, internet domain name, business get-up, trade dress, chip topography right, know how or confidential information and any other rights in respect of any industrial or intellectual property, whether capable of being registered or not, including all rights to apply for any of the foregoing rights or for an extension, revival or renewal of any of the foregoing rights and any similar or analogous rights to any of the above, whether arising or granted under the law of England or of any other jurisdiction;

"Interim Fixed Costs" means, where there is a time interval between the Service Commencement Date and the Full Service Commencement Date for a Line, the Fixed Costs for the System including such Line for such period. Such Interim Fixed Costs shall be Indexed at Premium;

"Interim Target Operating Costs" means, where there is a time interval between the Service Commencement Date and the Full Service Commencement Date for a Line, the Target Operating Costs for the System including such Line for such period. Such Interim Target Operating Costs shall be Indexed;

"Interim Target Revenues" means, where there is a time interval between the Service Commencement Date and the Full Service Commencement Date for a Line, the Target Revenues for the System including such Line for such period;

"Internal Dispute Resolution" means the procedure set out in paragraph 2 of Schedule 7 (*Dispute Resolution Procedure*);

"Joint Names Insurance" has the meaning given in Clause 26.3;

"Joint Revenue Committee" means the committee to be established by tie in accordance with Clause 20 (*Adjustment of Fixed Costs, Target Operating Costs and Target Revenues*), of the Operating Appendix;

"Key Performance Indicators" means those performance indicators described in Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) to the Operating Appendix, as such Key Performance Indicators may be amended from time to time in accordance with this Agreement;

"Key Personnel" means those Project Development Staff specified as such in Schedule 3 (*Key Personnel*);

"KPI Customer Satisfaction Survey" means the customer satisfaction surveys to be carried out by or on behalf of tie each Reporting Period for the purposes of the KPI Regime;

"KPI Monitoring Report" means the report included with the Service Quality Report;

"KPI Regime" means the regime for deductions from the KPI Regime Profit Element depending on the Operator's performance against the Key Performance Indicators, as set out in Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) to the Operating Appendix;

"KPI Regime Profit Element" shall mean the Profit Element multiplied by a factor of 1.1;

"KPI Warning Notice" means the notice served by tie in accordance with paragraphs 13, 14 and/or 15 of Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) on the Operator following service of a major KPI Beach Notice;

"Law" means:

- (a) any applicable Legislation;
- (b) any applicable Guidance; and
- (c) any applicable judgment of a relevant court of Law which is a binding precedent,

in each case in force in Scotland;

"Legal Panel" has the meaning given to it in paragraph 5.4 of Schedule 7 (*Dispute Resolution Procedure*);

"Legislation" means any Act or instruments of the Scottish Parliament or the United Kingdom Parliament (where in force in Scotland) or subordinate legislation within the meaning of section 21(1) of the Interpretation Act 1978, any exercise of the Royal Prerogative, and any enforceable community right within the meaning of section 2 of the European Communities Act 1972, in each case with respect to Scotland;

"Line" means each of Line 1 (or part thereof), Line 2 (or part thereof) and any Network Expansion agreed pursuant to Clause 11 (*Network Expansion*) (or part thereof);

"Line 1" means a loop through north Edinburgh connecting Edinburgh city centre with Leith, Newhaven, Granton, Roseburn and Haymarket and passing through the Waterfront Development Area, as such route may be further developed and/or amended during Project Phase A or Project Phase B in respect of Line 1;

"Line 2" means a western line from Edinburgh city centre to Edinburgh Park, the Gyle, Gogarburn and Edinburgh Airport / Newbridge, with possible extensions to Livingston and South Queensferry, as such route may be further developed and/or amended during Project Phase A or Project Phase B in respect of Line 2;

"Line 3" means a proposed south-eastern line from Edinburgh city centre to Cameron Toll, the New Royal Infirmary, Craigmillar, Fort Kinnaird and Newcraighall with a possible extension to Musselburgh, as such route may be further developed and/or amended during Project Phase A or Project Phase B in respect of Line 3;

"Local Authority" has the meaning given it under Section 235(1) of the Local Government (Scotland) Act 1973;

"Local Services" shall have the meaning given by section 2 of the Transport Act 1985;

"Local Transport Strategy (LTS)" means CEC's plans and priorities for the development of an integrated transport policy within Edinburgh, designed to serve the people of Edinburgh in a way which is consistent with the Scottish Executive's overall sustainable development objectives, and as such LTS is amended by CEC from time to time;

"Long-Term Roads Change" means a Relevant Roads Change which persists for more than 3 months but is not permanent;

"Losses" means all damages, losses, liabilities, costs, expenses (including legal and other professional charges and expenses) and charges whether arising under statute, contract or at common law or in connection with judgments, proceedings or demands;

"Maintenance Plan" means the plan referred to in paragraph 26.5 of Schedule 2 (*Project Development Output Specification*) in relation to the Operator Maintenance of the Infrastructure and the Equipment, as such plan is modified from time to time in accordance with the terms of this Agreement;

"Major KPI Breach Notice" has the meaning given in paragraph 13 of Schedule 3 to the Operating Appendix (*Project Phase D Payment Mechanism and KPI Regime*);

"Marketing Plan" means the plan referred to in paragraph 26.15 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance with the terms of this Agreement;

"Mobilisation Certificate" means the certificate to be issued by ~~the~~ pursuant to paragraph 38.3 of Schedule 2 (*Project Development Output Specification*);

"National Currency Unit" means the unit of currency (other than a Euro unit) of a Participating Member State;

"Necessary Consents" means without limitation all permissions, consents, approvals, non objections, certificates, permits, licences, statutory agreements and authorisations, required by Law , and all necessary consents and agreements from any third parties or Relevant Authority, any Planning Permission, building fixing agreement, building control approval, consent from Network Rail, consent

from HMRI (whether by simple application or by ongoing approval process), needed to plan, commence, carry out or complete (i) the Construction Works, or (ii) the Project Operations in accordance with this Agreement;

"Network Effects Study" means the study commissioned by tie to determine the effects on costs and revenues of operating all the Lines together as a single network, and referred to in paragraph 5.1 of Schedule 2 (*Project Development Output Specification*);

"Network Expansion" means expansion beyond Line 1 (as defined at the end of Project Phase B) and Line 2 (as defined at the end of Project Phase B) , and any further light rail system connecting either with or within the System or with any other light rail system which connects with the System;

"Network Rail" means Network Rail Limited (company number 4402220) and any Affiliate or any successors to any part of its assets and/or undertakings which is relevant to the performance of the Project Operations;

"No Better and No Worse" shall be construed by reference to the Operator's:

- (a) rights, anticipated receipts, duties and liabilities under or arising pursuant to performance of this Agreement; and
- (b) ability to perform its obligations and exercise its rights under the Agreement;

so as to ensure that:

- (c) the ability of the Operator to meet the requirement of the Operating Appendix is not adversely affected or improved as a consequence of the Relevant Event;
- (d) the ability of the Operator to achieve Target Costs for Project Phase C2, Target Operating Costs and Target Revenues is not materially adversely affected or materially improved; and
- (e) the ability of the Operator to continue to perform its obligations in terms of this Agreement in respect of the Fixed Costs is not materially adversely affected or materially improved;

and any reference in this Agreement to leaving the Operator in "No Better and No Worse position" shall be construed accordingly.

"Non-Core Staff Fixed Rates" means the costs numbered "8" in the tables included in the Base Case Assumptions, which are set in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs*

and Rates) at a level in accordance with Table 1 of the Project Development and Operating Costs, and such other rates as **tie** and the Operator may agree from time to time to be treated as Non-Core Staff Fixed Rates. All Non-Core Staff Fixed Rates shall be Indexed at Premium;

"Notice of Adjudication" has the meaning given to it in paragraph 5.1 of Schedule 7 (*Dispute Resolution Procedure*);

"Notice of Intention to Withhold Payment" means a notice specifying the amount to be withheld and the ground for withholding payment, or if there is more than one ground, each ground and the amount attributable to it;

"Notification" has the meaning given to it in paragraph 2.1 of Schedule 7 (*Dispute Resolution Procedure*);

"OFT" means the Office of Fair Trading or its successor entity;

"One Ticket" means the through ticketing scheme currently operated by SESTRAN Travelticket Limited or any successor to such scheme nominated by **tie**;

"Open Book Basis" means the availability and disclosure (consistent with operation of Clause 48 (*Information and Audit Access*)) of all underlying data and calculations used by the Operator to create and justify costings and financial analysis presented to **tie** during all Project Phases;

"Operating and Maintenance Manual" means a manual setting out the procedures for operating and maintaining the System in sufficient detail to enable **tie** or a Successor Operator to operate and maintain the System to the same standards as those required of the Operator under this Agreement;

"Operating Appendix" means Appendix 1 to this Agreement in relation to (inter alia) the operation of the Transport Services on the System as amended from time to time pursuant to this Agreement;

"Operating Costs" means the actual operating costs incurred by the Operator in a Reporting Period ;

"Operating Deficit" means Operating Costs exceed Operating Revenues in respect of a Reporting Period;

"Operating Effective Date" means the date that **tie** notifies the Operator that each of the Operator Conditions Precedent (with the exception of any Operator Conditions Precedent that have been expressly waived by **tie** in writing) have been satisfied in accordance with Schedule 1 (*Conditions Precedent*) to the Operating Appendix;

"Operating Method Statements" means the method of performing the Project Operations (and, to the extent relevant, the Project Development Services) developed by the Operator and **tie** pursuant to the Project Development Output Specification, and as amended from time to time in accordance with:

- (a) the Project Development Output Specification in relation to each additional Line or Network Expansion on which the Operator is to provide the Transport Services in accordance with this Agreement; or
- (b) Schedule 9 (*Review Procedure*);

"Operating Output Specification" means **tie**'s requirements as regards the Project Operations to be performed by the Operator during the Service Period, as set out in Schedule 4 (*Operating Output Specification*) to the Operating Appendix, and developed by **tie** and the Operator pursuant to the Project Development Output Specification, and as varied from time to time in accordance with:

- (a) this Agreement in relation to each additional Line or Network Expansion on which the Operator is to provide the Transport Services in accordance with this Agreement; or
- (b) Clause 52 (*Variations and Waivers to be in Writing*) and Clauses 23 (Performance and Financial Adjustments), 24 (**tie** Changes) and 25 (Operator Changes) of the Operating Appendix;

"Operating Revenues" means the revenues collected by the Operator in the operation of the System, including all Patronage Revenue but, for the avoidance of doubt, excluding any amounts paid by **tie** to the Operator pursuant to this Agreement;

"Operations Management Plan" means the plan referred to in paragraph 26.2 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance with the terms of this Agreement;

"Operations Panel" has the meaning given to it in paragraph 5.4 of Schedule 7 (*Dispute Resolution Procedure*);

"Operator Change" means a change in the Project Operations proposed by the Operator during Project Phase C or Project Phase D and which **tie** accepts pursuant to Clause 25 (*Operator Changes*) of the Operating Appendix;

"Operator Conditions Precedent" means the conditions specified in Schedule 1 (*Conditions Precedent*) to the Operating Appendix;

"Operator Default" means one of the following events:

- (a) a breach by the Operator of any of its material obligations under this Agreement;
- (b) Not used;
- (c) an Insolvency Event save where caused directly by **tie** being in breach of its obligations under this Agreement;
- (d) the Operator commits any breach of Clause 43 (*Assignment, Sub-Contracting and Changes in Control*);
- (e) the Operator abandons the Project Development Services or the Project Operations (or a material part of them) at any time and in this context 'abandon' shall mean:
 - (i) during the Development Phase, a failure to deploy the level of agreed resources which results in substantial failure to provide the Project Development Services for a period exceeding 5 Business Days save as may be agreed from time to time;
 - (ii) during the Service Period, if no Transport Services are provided on the System (or a material part of it), for a period exceeding 5 consecutive days, by reason (in whole or material part) of any industrial dispute directly affecting the Operator which causes a breach by the Operator of its obligations under this Agreement or for a period exceeding 2 consecutive days, by reason (in whole or material part) of any matter other than an industrial dispute directly affecting the Operator which constitutes breach by the Operator of its obligations under this Agreement;
- (f) the Service Commencement Date for a Line is not achieved on or before the date falling three months after the Planned Service Commencement Date as same may be amended for that Line, to the extent that the reason for such delay is caused by a breach by the Operator of any of its obligations under this Agreement ;
- (g) after the issue of a Major KPI Breach Notice, the issue of a second such notice at any time during the 13 Reporting Periods following the issue of the Major KPI Breach Notice;
- (h) a breach by the Operator of its obligations to take out and maintain the Required Insurances in accordance with the terms of this Agreement; or
- (i) except in the first three years of operation following the issue of the first Certificate of Services Commencement, if the Operating Costs exceed the Target Operating Costs and any

Fixed Costs at any other time during the Service Period in 6 Reporting Periods out of any rolling period of 12 months; and

- (j) under performance as stipulated by paragraph 15 of Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of the Operating Appendix.

"Operator Financial Model" means the financial model presented by the Operator and approved by **tie** and agreed at the Effective Date as Schedule 5 (*Operator Financial Model*) to this Agreement as may be adjusted from time to time in accordance with this Agreement or otherwise by agreement between **tie** and the Operator;

"Operator IPR" means:

- (a) all Intellectual Property Rights (including Intellectual Property Rights in relation to the Operator Software) which the Operator can demonstrate by documentary evidence were already existing and owned by or licensed to the Operator prior to the Effective Date; and
- (b) any modifications or developments of any of the rights listed in paragraph (a) above or the Project Operations and which are generic in nature and not specific to the Project;

"Operator Maintenance" means the maintenance of the System to be carried out by the Operator and as outlined in paragraph 26.5 of the Project Development Output Specification;

"Operator Necessary Consents" means:

- (i) any Necessary Consents from HMRI for the provision by the Operator of the Transport Services; and
- (ii) any Necessary Consents which the Operator is required to obtain which are specified in the Approvals Management Plan; and
- (iii) such other Necessary Consents which the Operator is required to obtain that **tie** may from time to time specify by notice to the Operator,

"Operator Notice of Change" means a notice served by the Operator pursuant to Clause 25 (*Operator Changes*) of the Operating Appendix;

"Operator Party" means each and any of the Operator's agents and contractors and its or their subcontractors (of any tier) and its or their directors, officers and employees in relation to the Project and **"Operator Parties"** shall be construed accordingly;

"Operator Project Manager" shall have the meaning given to it in Clause 6.7;

"Operator Snagging Matters" means minor failures by the Operator to comply with either (i) **tie** Completion Requirements or (ii) the Operating Output Specification where such minor failures and their rectification:

- (a) would not materially impair provision of the Transport Services by the Operator or the use and enjoyment of the System or Transport Services by the Operator or members of the public; and
- (b) would not cause any material cost, nuisance, hindrance or annoyance to any person;

"Operator Software" means programs, the Intellectual Property Rights in which are (a) owned by the Operator; and (b) used by the Operator to carry out its obligations under this Agreement;

"Operator's Core Team" means those members of the Operator's core team set out in the Base Case Assumptions and the Project Development and Operating Costs, and such substitutes as may be agreed from time to time;

"Operator's Non-Core Staff" means those members of the Operator's non-core staff set out in the Base Case Assumptions and the Project Development and Operating Costs, and such substitutes as may be agreed from time to time;

"Originating Tramstop" means the Tramstop where a Tram is scheduled in the Timetable to begin its service journey and will be the same point at which Tram departure times will be measured;

"Outline Service Integration Plan" means the plan prepared by the Operator and set out in Schedule 16 (*Outline Service Integration Plan*) which shall be developed by the Operator in accordance with this Agreement;

"Overall Approvals Management Plan" means that plan to be developed by **tie** and **tie's** advisers referred to in paragraph 26.8 of Schedule 2 (*Project Development Output Specification*) to this Agreement;

"Pain/Gain Share Period" means a period of, in continuous alternating fashion during Project Phase D, six consecutive Reporting Periods and then seven Reporting Periods provided that:

- (i) the first Pain/Gain Share Period shall commence on the Service Commencement Date of the first Line to become operational;

- (ii) each Pain/Gain Share Period shall start on the day following the last day of the preceding such period; and
- (iii) the last Pain/Gain Share Period shall end on the date of termination or expiry of this Agreement;

"Panels" has the meaning given to it in paragraph 5.4 of Schedule 7 (*Dispute Resolution Procedure*);

"Participating Member State" means each state so described in any EMU Legislation;

"Partnering Methodology and Programme" means the programme for the development of the Project during Project Phase A, Project Phase B and Project Phase C in respect of each Line, and the methodology for such development, as agreed between **tie** and the Operator pursuant to paragraph 5.5.6 of the Project Development Output Specification (taking account of the Inception Report), as such Partnering Methodology and Programme is amended from time to time pursuant to this Agreement;

"Party" means each and any of the parties to this Agreement and Parties shall be construed accordingly;

"Patronage Revenue" means all revenue collected by the Operator from fares levied in respect of passengers (including Penalty Fares collected by the Operator), and including revenue collected by and reimbursements to the Operator payable under any Concessionary Travel Scheme, One Ticket and any other through ticketing, fare sharing or similar scheme in which the System participates from time to time with other public transport services;

"Payment Mechanism" means the payment mechanism as set out in Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) to the Operating Appendix;

"Penalty Fare" means a penalty fare payable in accordance with the provisions of the Scottish Private Bill as enacted or any other applicable Legislation by a passenger on a Tram who fails to produce a valid fare ticket or general travel authority when requested to do so by the Operator;

"Performance Bond" means an 'on demand' bond provided by the Operator and issued by a surety acceptable to **tie** and in the form of that set out in Schedule 14 (*Performance Bond*);

"Performance Indicators" means those performance indicators referred to in paragraph 25 of the Project Development Output Specification;

"Performance Monitoring Regime" means the detailed regime (as may be amended from time to time in accordance with an agreed **tie** Change or agreed Operator Change or as may be otherwise amended in accordance with the Agreement) produced by the Operator and **tie** pursuant to paragraph 25 of the Project Development Output Specification setting out how the Operator will monitor its compliance with the Operating Output Specification and its obligations under this Agreement in a way which will enable (i) the Operator to produce the Service Quality Reports; (ii) **tie** to satisfy itself as to the level of the Operator's compliance with the Operating Output Specification and other relevant obligations under this Agreement; and (iii) the Parties to perform their respective responsibilities pursuant to and as described in Clause 16 (*Best Value and Project Phase D Benchmarking*) of the Operating Appendix;

"Permanent Roads Change" means a Relevant Roads Change which is permanent;

"Persistent Breach Notice" means a notice served by **tie** pursuant to Clause 33 (*Persistent Breach*);

"Personal Loss" means any personal injury or death, illness, disability, shock, mental anguish, injury or trauma to any person (including one of the Parties);

"Planned Service Commencement Date" means, in respect of any Line, the date fixed by the Project Programme by which Service Commencement in respect of that Line is planned to occur;

"Planning Permission" means planning permission, listed building consent, conservation areas consent and/or other consent or approval reasonably required from time to time for construction and/or installation and/or operation of the System (including for any Variation);

"Point of Indexation" shall be January each year to be applied annually as of 1st April each year;

"Position Paper" has the meaning given to it in paragraph 2.2 of Schedule 7 (*Dispute Resolution Procedure*);

"PPCN" means a Project Phase Completion Notice;

"Pre-Mobilisation Certificate" means the certificate to be issued by **tie** pursuant to paragraph 38.1 of Schedule 2 (*Project Development Output Specification*);

"Profiled Fixed Costs" means the Fixed Costs as profiled in accordance with Clause 10.14;

"Profiled Profit Element" means the Profit Element as profiled in accordance with Clause 10.14;

"Profiled Target Operating Costs" means the Target Operating Costs as profiled in accordance with Clause 10.14;

"Profiled Target Revenue" means the Target Revenue as profiled in accordance with Clause 20.7 (*Adjustment of Fixed Costs, Target Operating Costs and Target Revenues*) of the Operating Appendix;

"Profit Element" means, as the context admits (i) the Operator's profit element for Project Phase C2 which shall be Indexed and (ii) the Operator's profit element during Project Phase D which shall be Indexed, both as set out in the Financial Proposals;

"Prohibited Act" means:

- (a) offering, giving or agreeing to give to the Scottish Executive, CEC, **tie**, or any **tie** Party or any other public body or any person owned or employed by any of them any gift or consideration of any kind as an inducement or reward:
 - (i) for doing or not doing (or for having done or not having done) any act in relation to the obtaining or performance of this Agreement; or
 - (ii) for showing or not showing favour or disfavour to any person in relation to this Agreement;
- (b) paying commission or agreeing to pay commission to any person in connection with the award of this Agreement;
- (c) committing any offence:
 - (i) under the Prevention of Corruption Acts 1889-1916 or section 68(2) of the Local Government (Scotland) Act 1973;
 - (ii) under any Law creating offences in respect of fraudulent acts; or
 - (iii) at common law in respect of fraudulent acts in relation to this Agreement or any other relevant agreement with the Scottish Executive, **tie**, CEC or any other public body; or
- (d) defrauding or attempting to defraud or conspiring to defraud the Scottish Executive, **tie** or any other public body;

"Project" means **tie**'s proposal to obtain relevant statutory powers, land and other rights and consents for, and to procure the design, development, construction, operation, maintenance, expansion and funding of, the Edinburgh Tram Network;

"Project Data" means all drawings, reports, documents, plans, photographs, formulae, calculations, data, equipment and materials:

- (a) relating to the design, construction, testing, commissioning, completion, operation, funding, maintenance and/or expansion of the Edinburgh Tram Network and/or System and/or Project; and/or
- (b) brought into existence in the course of tendering for the Project and/or performing, and/or used in connection with the performance of, the Project Development Services;

"Project Development and Operating Costs" means the costs and other information presented by the Operator and approved by **tie** and agreed at the Effective Date as Schedule 6 (*Project Development and Operating Costs*) to this Agreement, as may be adjusted from time to time in accordance with this Agreement or otherwise by agreement between **tie** and the Operator;

"Project Development Costs" means, in respect of Project Phase A, Project Phase B and Project Phase C1:

- (a) in respect of the Operator's Core Team the amount of budgeted time (subject to Clause 15.4) during that period in the provision of the Project Development Services by persons within the Operator's Core Team multiplied by the Core Staff Fixed Rates ; and
- (b) in respect of each member of the Operator's Non-Core Staff involved in the provision of the Project Development Services in accordance with Clause 15 (*Project Development Costs*), the amount of time spent during that period in the provision of the Project Development Services by such additional staff members multiplied by the Non-Core Staff Fixed Rates;

"Project Development Objectives" means the objectives of **tie** and the Operator set out in paragraph 2 of Schedule 2 (*Project Development Output Specification*) during Project Phase A, Project Phase B and Project Phase C in respect of each Line, including the facilitation of the achievement of the Project Vision during Project Phase D;

"Project Development Output Specification" means **tie**'s requirements as regards the services and works to be provided by the Operator during Project Phases A, B and C as set out at Schedule 2

(*Project Development Output Specification*), as varied from time to time in accordance with this Agreement;

"Project Development Services" means the services to be provided by the Operator to **tie** pursuant to this Agreement in respect of any Line or Network Expansion, as described in Clause 4 (*The Project Development Services*);

"Project Development Staff" means any employees, contractors or other personnel engaged by the Operator or any Operator Party from time to time in the provision of the Project Development Services, the identity of all such persons to be notified to **tie** and approved by **tie** in accordance with Clause 4.2.8;

"Project IPR" means all Intellectual Property Rights in the Project Data and the Specially Written Software and any other Intellectual Property Rights created in the performance of the Project Development Services and/or the delivery of the Project, which are specific in nature to the Project;

"Project Operations" means the performance of:

- i) the Transport Services on the System (including the operation of the Control Centre);
- ii) the Operator Maintenance of the System; and
- iii) all other obligations of the Operator under this Agreement from time to time;

in each case, subject to Variations;

"Project Operations Staff" means any employees, contractors or other personnel engaged by the Operator or any Operator Party from time to time in the provision of the Project Operations;

"Project Phase" means Project Phase A, Project Phase B, Project Phase C and/or Project Phase D as appropriate;

"Project Phase A" means the phase of the Project in respect of a Line described in paragraphs 4 to 14 of the Project Development Output Specification;

"Project Phase B" means the phase of the Project in respect of a Line described in paragraphs 15 to 31 of the Project Development Output Specification;

"Project Phase C" means the phase of the Project in respect of a Line described in paragraphs 32 to 44 of the Project Development Output Specification;

"Project Phase C1" means the phase of the Project in respect of a Line described in paragraphs 35 to 38 of the Project Development Output Specification;

"Project Phase C2" means the phase of the Project in respect of a Line described in paragraphs 39 to 44 of the Project Development Output Specification;

"Project Phase Completion Notice" or **"PPCN"** means, in respect of each Line, the notice issued by **tie** on the date of:

- (a) for Project Phase A, the grant of Royal Assent to the relevant Scottish Private Bill;
- (b) for Project Phase B, the award by **tie** of an IDA for the first Line (or part thereof) authorised by a Scottish Private Bill;
- (c) for Project Phase C1, the issue by **tie** of the Mobilisation Certificate pursuant to paragraph 38.3 of the Project Development Output Specification;
- (d) for Project Phase C2, Full Service Commencement; or

in each case, or as otherwise determined by **tie**;

"Project Phase D" means the phase of the Project in respect of any Line after the Service Commencement Date for such Line;

"Project Programme" means the programme set out in Schedule 8 (*Project Programme*) (as amended from time to time in accordance with this Agreement);

"Project Return" means the return for each relevant Project Phase set out in the Financial Proposals;

"Project Vision" means **tie's** and CEC's vision for the Project as set out at Recital D of this Agreement;

"Property Loss" means any loss of or damage to any property, real or personal, of any person (including one of the Parties);

"Public Liaison and Media Plan" means the plan referred to in paragraph 26.16 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance with the terms of this Agreement;

"Qualifying Change in Law" means a Change in Law which comes into effect during Project Phase C or Project Phase D which involves additional Project Development Costs, Operating Costs and/or

necessitates amendment of this Agreement and/or the Project Operations and, in each case, which was not reasonably foreseeable prior to the issue of the PPCN for Project Phase B for the relevant Line (excluding any change to any Concessionary Travel Scheme or any through ticketing, fare sharing or similar scheme);

"Quality Management Plan" means the plan referred to in paragraph 26.9 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance the terms of this Agreement;

"Quality Manager" means the person to be appointed by the Operator pursuant to Clause 7.3 of this Agreement or Clause 14.2 of the Operating Appendix (as appropriate);

"Quarter" means each period in any year:

- (a) beginning on 1 April and ending on 30 June;
- (b) beginning on 1 July and ending 30 September;
- (c) beginning on 1 October and ending on 31 December; and
- (d) beginning on 1 January and ending on 31 March;

in each case, to the extent only that such period falls during the Term of this Agreement, provided that the first Quarter will commence on the Effective Date and end on 30 June 2004, and the final Quarter will end on the final day of each Project Phase C1;

"RA 1984" means the Roads (Scotland) Act 1984;

"Rateable Value" means the rateable value assigned annually to the System by the Scottish Ministers or Relevant Authority;

"Referral Notice" has the meaning given to it in paragraph 5.12 of Schedule 7 (*Dispute Resolution Procedure*);

"Referring Party" has the meaning given to it in paragraph 5.1 of Schedule 7 (*Dispute Resolution Procedure*);

"Related Contracts" has the meaning given to it in paragraph 6.1 of Schedule 7 (*Dispute Resolution Procedure*);

"Related Dispute" has the meaning given to it in paragraph 6.1 of Schedule 7 (*Dispute Resolution Procedure*);

"Relevant Authority" means any court with the relevant jurisdiction and any local authority, national authority or supra national agency, inspectorate, minister, Scottish Executive, body, official or public or statutory person of the government of the United Kingdom or of the European Union;

"Relevant Event" means a **tie** Change, a Qualifying Change in Law or a Permanent Roads Change;

"Relevant Roads Change" means the occurrence at any time during Project Phase C2 or Project Phase D of :

- (a) works by or on behalf of CEC or any Roads Authority resulting, once completed, in a physical change to the road layout affecting the operation of the System;
- (b) a change to the permitted uses of the road as a result of the making, revocation or variation of a traffic regulation order by CEC or other Roads Authority, excluding any traffic regulation order made, revoked or varied at the request of any third party consequential to any works carried out by that third party;
- (c) a decision by CEC or other Roads Authority to alter or cease providing the priorities given by the CEC UTC System to Trams over other classes of vehicle from those priorities agreed between **tie** and the Operator during Project Phase A or Project Phase B in respect of the relevant Line; or
- (d) the carrying out of works to Roads or the carrying out of works to the CEC UTC System;
- (e) a delay after the Service Commencement Date by CEC or other Roads Authority in bringing into operation the priorities to be given by the CEC UTC System to Trams over other classes of vehicle in accordance with the agreement reached between **tie** and the Operator in respect of UTC priorities during Project Phase A or Project Phase B in respect of the relevant Line;

in each case affecting the passage of Trams or the provision of the Transport Services and directly resulting in failure by the Operator to meet the Operating Output Specification;

"Relief Event" means (save to the extent any of the following events arise as a result of any act or omission of the Operator and/or an Operator Party):

- (a) at any time on or after the Effective Date:

- (i) fire, explosion, lightning, tempest, flood, bursting or overflowing of water tanks, apparatus or pipes, ionising radiation (to the extent it does not constitute a Force Majeure Event), earthquakes, riots or civil commotion;
 - (ii) failure by any statutory undertaker, utility company, or other like body to carry out works or provide services;
 - (iii) any accidental loss of or damage to a material part of the System;
 - (iv) any failure or shortage of power or fuel;
 - (v) any blockade or embargo which does not constitute a Force Majeure Event; or
 - (vi) any official or unofficial strike, lockout, go-slow or other industrial dispute and generally affecting the public transport industry in Scotland or a significant part thereof;
- (b) at any time during the Service Period or during Project Phase C2 the exercise by CEC or a Roads Authority of any authority to close or restrict roads or streets pursuant to their powers under the Road Traffic Regulation (Special Events) Act 1994 or other Legislation;

where such occurrence materially and adversely affects the Operator's performance of its obligations in the operation of the System.

"Reporting Period" means a period of 28 days provided that:

- (i) the first such period during the Term shall commence on the Service Commencement Date of the first Line to become operational;
- (ii) the first such period in the Term may be varied by up to 7 days by notice from **tie** to the Operator;
- (iii) each such period shall start on the day following the last day of the preceding such period; and
- (iv) the last such period during the Term shall end on the Expiry Date or termination of this Agreement;

"Required Insurances" means the insurances set out in Part 1 of Schedule 10 (*Required Insurances*) and such other insurances as the Operator itself may be required from time to time to maintain by Law

or may be required from time to time by **tie** as a **tie** Change to take out and maintain in respect of the Project Development Services and Project Operations;

"Reset Decision Date" has the meaning given to it under Clause 21 (*Reset of the Fixed Costs, the Target Operating Costs and the Target Revenue*) of the Operating Appendix;

"Responding Party" has the meaning given to it in paragraph 5.2 of Schedule 7 (*Dispute Resolution Procedure*);

"Retention" means the sums calculated in accordance with Clauses 15.5 and 17.3 as appropriate;

"Revenue Foregone" shall mean the Patronage Revenue foregone by the Operator by reason of passengers being permitted to travel pursuant to the Concessionary Travel Scheme instead of purchasing the normal appropriate ticket, the amount of such Patronage Revenue foregone being calculated in accordance with the terms and conditions of such Concessionary Travel Scheme;

"Review Procedure" means the procedure set out in Schedule 9 (*Review Procedure*);

"Roads" has the meaning given to it in the RA 1984;

"Roads Authority" has the meaning given it under RA 1984 and, where appropriate, shall include any parties responsible for private roads;

"RPIX" means the general index of retail prices for all items excluding mortgage interest payments (Office of National Statistics: Series Identifier: CHMK) as published or any replacement thereof or, in the event such index ceases to exist, such other similar index as the Parties shall agree from time to time (or, if the Parties cannot so agree, as determined under the Disputes Resolution Procedure on the referral of either Party) provided that, if the basis of computation of such index shall have changed between the two relevant months, any official reconciliation between the two bases of computation published by a United Kingdom government department shall be binding on the Parties and, in the absence of such official reconciliation, such adjustment shall be made to the figure of such index for the second of those months to make it correspond as nearly as possible to the method of computation for the first of those months and such adjusted figure shall be considered for the purpose of this Agreement to the exclusion of the actual published figure;

"Scottish Private Bill(s)" means the enabling legislation promoted by **tie** and/or CEC pursuant to the relevant Scottish Parliamentary process granting the permanent legal authority to fund, construct, operate and maintain the Edinburgh Tram Network;

"**Second Party**" shall have the meaning given in Clause 3.3;

"**Security Interest**" means any mortgage, pledge, lien, hypothecation, security interest or other charge or incumbrance or any other agreement or arrangement having substantially the same economic effect and includes any Security as defined in section 248(b) of the Insolvency Act 1986;

"**Security Management Plan**" means the plan referred to in paragraph 26.14 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance with the terms of this Agreement;

"**Service Commencement**" means, in respect of each Line or Network Expansion, the commencement of the Transport Services on such Line or Network Expansion;

"**Service Commencement Date**" means, in respect of each Line or Network Expansion, the date specified in the Certificate of Service Commencement in respect of that Line or Network Expansion;

"**Service Integration Plan**" means the plan referred to in paragraph 12 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance the terms of this Agreement;

"**Service Period**" means the period:

- (a) in respect of any Line or Network Expansion, from (and including) the Service Commencement Date in respect of that Line or Network Expansion;
- (b) until (and including) the earlier of the Expiry Date and the Termination Date;

"**Service Quality Report**" means the report to be submitted by the Operator pursuant to Clause 12 (*Service Performance and Quality Monitoring*) of the Operating Appendix in the form developed and containing the information agreed by the Parties in accordance with the Project Development Output Specification and the Operating Output Specification;

"**Shareholders**" means any person from time to time holding share capital in the Operator;

"**Snagging Notice**" means the notice to be issued by **tie** to the Operator, which shall specify Operator Snagging Matters;

"**Special Event**" means any event:

- (i) notified by **tie** to the Operator pursuant to Clause 8 (*Special Events*) of the Operating Appendix which will, or may, affect the Project Operations; or
- (ii) notified by the Operator to **tie** pursuant to Clause 8 (*Special Events*) of the Operating Appendix which the Operator considers requires an amendment to the Project Operations (including, without limitation, the Timetable), and which **tie** agrees;

"Special Event Notice" means a notice to be given by (i) **tie** to the Operator or (ii) the Operator to **tie**, in either case pursuant to the terms of Clause 8 (*Special Events*) of the Operating Appendix;

"Special Event Plan" means a plan to be produced by the Operator and forwarded to **tie** pursuant to the terms of Clause 8.3 (*Special Events*) of the Operating Appendix;

"Specially Written Software" means programs which are written by or on behalf of the Operator specifically to enable the Operator to carry out its obligations under this Agreement;

"STAG II Approval" means approval under part II of the Scottish Transport Appraisal Guidance (as such guidance may be amended from time to time);

"Staffing Information" has the meaning given to it in Clause 41.10;

"Submitted Item" has the meaning given to it in paragraph 1.2 of Schedule 9 (*Review Procedure*);

"Successor Operator" means any person notified by **tie** to the Operator as having been, or intended to be, appointed to operate and/or maintain the System following termination or expiry of this Agreement;

"System" means the light rail transit system to be developed pursuant to this Agreement and the Trams, Infrastructure and Equipment, plant, machinery, apparatus, equipment, furniture, street furniture and facilities, track, station and Tramstop structures and platforms, Depots, Control Centre, electrical sub-stations, overhead line equipment (including bases and poles, building fixings, catenaries and wiring), closed circuit television system, signalling system and spares and consumables and offices and office furniture and office equipment in such offices and other items to be provided in accordance with the Operating Appendix or used by the Operator to perform its obligations under the Operating Appendix;

"System Integration Plan" means the plan referred to in paragraph 26.17 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance with the terms of this Agreement;

"**System Land**" is the land:

(a) on which the Project Operations are carried out;

(b) which is maintained by the Infrastructure Provider(s); and/or

(c) which is impacted upon as a result of the Project Operations or the provision of the Transport Services;

"**Systems Assurance Plan**" means the plan referred to in paragraph 26.12 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance with the terms of this Agreement;

"**Target Costs for Project Phase C2**" means the target costs numbered "6" in the tables included in the Base Case Assumptions and such other costs as **tie** and the Operator may agree from time to time should be treated as "Target Costs for Project Phase C2"; which are estimated to be expended in regard to the performance of the Project Development Services to conclusion of Project Phase C2 as developed during Project Phase A from the Base Case Assumptions, the Financial Proposals, the Operator Financial Model and the Project Development and Operating Costs, and agreed by the Parties prior to the completion of Project Phase B which shall be Indexed and may otherwise be adjusted from time to time in accordance with this Agreement ;

"**Target Operating Costs**" means the annual target costs numbered "6" in the tables included in the Base Case Assumptions and such other costs as **tie** and the Operator may agree from time to time should be treated as "Target Operating Costs"; which are estimated to be incurred by the Operator during Project Phase D as developed from the Base Case Assumptions, the Financial Proposals, the Operator Financial Model and the Project Development and Operating Costs, and agreed by the Parties prior to completion of Project Phase B which shall be Indexed and may otherwise be adjusted from time to time in accordance with this Agreement provided that where there is a time interval between the Service Commencement Date and the Full Service Commencement Date for a Line, the Target Operating Costs for the System (including such Line) for such period shall be the Interim Target Operating Costs;

"**Target Revenues**" means the annual target revenues estimated to be generated by operation of the System (as collected by the Operator) as set by the Joint Revenue Committee to be included in the Financial Proposals and the Operator Financial Model and as may be adjusted from time to time in accordance with this Agreement provided that where there is a time interval between the Service

Commencement Date and the Full Service Commencement Date for a Line, the Target Revenues for the System (including such Line) for such period shall be the Interim Target Revenues;

"Tax" means any kind of tax, duty, levy, imposition, assessment or other charge (other than VAT) whether or not similar to any in force at the Effective Date and whether imposed by a local, governmental authority or other Relevant Authority in the United Kingdom or elsewhere;

"Temporary Roads Change" means a Relevant Roads Change which persists for less than 3 months;

"Term" means the period from (and including) the Effective Date until (and including) the earlier of the Expiry Date and the Termination Date;

"Terminated Line" shall have the meaning given to it in Clause 31.3;

"Termination Date" means 02.00 hours on any date of early termination of this Agreement;

"Termination Notice" means a notice to terminate this Agreement served by either Party in accordance with the terms of this Agreement;

"Testing and Commissioning Plan" means the plan referred to in paragraph 37 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance the terms of this Agreement;

"Third Party Shareholder" means such party nominated by the Operator and approved by **tie**;

"Third Party Software" means programs, the Intellectual Property Rights in which are (a) owned by a third party and (b) used by the Operator to carry out its obligations under this Agreement;

"tie Actual System Surplus" has the meaning given to it in paragraph 23.3 of Schedule 3 to the Operating Appendix (*Project Phase D Payment Mechanism and KPI Regime*);

"tie Advisers" means the advisers appointed by **tie** in relation to the Edinburgh Tram Network;

"tie Change" means:

- (a) a change in the Project Operations proposed by **tie** during Project Phases C1, C2 or Project Phase D;
- (b) a truncation of Line 1 and/or Line 2 and/or Line 3 from what was anticipated to form part of the Core Network during any Project Phase;

- (c) a change to the Required Insurances during any Project Phase;
- (d) a change to the number of Depots (including a change from one to two depots) during any Project Phase;
- (e) a **tie** discretionary item numbered "7" in the tables included in the Base Case Assumptions during any Project Phase; and
- (f) during any Project Phase, any other change stated to be a **tie** Change in accordance with this Agreement or proposed by **tie** in accordance with this Agreement, which is stated to be considered or treated as a **tie** Change;

which the Operator is obliged to implement under Clause 24 (*tie Changes*) of the Operating Appendix;

"tie Completion Requirements" means the requirements set out in Schedule 2 (*tie Completion Requirements*) to the Operating Appendix;

"tie Customer Satisfaction Survey" means the customer satisfaction survey produced annually (or with such other frequency as may be agreed between the Operator and **tie**) in accordance with Clause 16.4 of the Operating Appendix;

"tie Default" means one of the following events:

- (a) an expropriation, sequestration or requisition of a material part of the System and/or shares in the Operator by **tie** or any Relevant Authority;
- (b) a failure by **tie** to make payment of any amount of money exceeding £200,000 (Indexed) that is due and payable by **tie** to the Operator under this Agreement, where that amount fell due and payable two (or more) Reporting Periods prior to the date of service of the Termination Notice;
- (c) a breach by **tie** of its obligations under this Agreement which substantially frustrates or renders it impossible for the Operator to perform its obligations under this Agreement for a continuous period of 90 days during Project Phases A, B, C and/or D; or
- (d) a breach by **tie** of Clause 43 (*Assignment, Sub-Contracting and Changes in Control*);

"tie Full Service Notice" means a notice to be given by **tie** to the Operator pursuant to the terms of Clause 8.7 of the Operating Appendix;

"tie Inspectors" means the inspectors appointed by **tie** for the purposes set out in Clause 17.3 of the Operating Appendix;

"tie Notice of Change" means a notice served by **tie** pursuant to Clause 24.1 of the Operating Appendix, setting out the matters specified in Clause 24.2 of the Operating Appendix;

"tie Party" means the **tie** Advisers or any of **tie's** agents, contractors and sub-contractors of any tier and its or their directors, officers and employees but excluding the Operator, any Operator Party and statutory undertakers and utilities;

"tie Project Manager" shall have the meaning given to it in Clause 6.1;

"tie Target System Surplus" has the meaning given to it in paragraph 23.2 of Schedule 3 to the Operating Appendix (*Project Phase D Payment Mechanism and KPI Regime*);

"Timetable" means:

- i) subject to paragraph (ii), the timetable of all Transport Services to be run on the System, such Timetable to be agreed between **tie** and the Operator during Project Phase C2, and amended from time to time in accordance with this Agreement;
- ii) in respect of any day when a Special Event Plan is in effect, the revised Timetable specified in such Special Event Plan, if different to the Timetable referred to in paragraph (i) or if an unscheduled Special Event such Timetable as the Operator can reasonably provide;

"Training Plan" means the plan referred to in paragraph 26.7 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance the terms of this Agreement;

"Tram" means any vehicle (whether or not used for the carriage of passengers) carried on flanged wheels along the rails of a Tramway;

"Tram Business" means the business of providing the Project Operations;

"Tramstop" means the places (including termini) at which fare paying passengers are permitted to board and/or leave Trams;

"Tramway" means a system of transport used wholly or mainly for the carriage of passengers and employing parallel rails which provide support and guidance for vehicles carried on flanged wheels;

"Transfer Date" has the meaning given to it in Clause 41.2;

"Transferring Project Staff" has the meaning given to it in Clause 41.1;

"Transport Services" means the public passenger transport services to be provided by the Operator on the System (or any part thereof) in accordance with the Operating Appendix;

"Treaty of European Union" means the Treaty of Rome of 25 March 1957, as amended by the Single European Act 1986 and the Maastricht Treaty (which was signed at Maastricht on 7 February 1992 and came into force on 1 November 1993), as amended from time to time;

"Trial Run Validation Plan" means the plan referred to in paragraph 26.4 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance the terms of this Agreement;

"TUPE" means the Transfer of Undertakings (Protection of Employment) Regulations 1981;

"Underperformance Points" means points allocated for poor performance in accordance with the model to be developed by the parties during Project Phases A and B into Schedule 12 (*Performance Scoring*);

"Uninsurable" means that:

- (a) insurance is not available to the Operator in respect of the Project in the European insurance market with reputable insurers of good standing in respect of that matter; or
- (b) the insurance premium payable for insuring that matter is at such a level that such matter is not generally being insured against in the European insurance market with reputable insurers of good standing;

"UTC" means the urban traffic control systems and monitoring functions operated by CEC or other Roads Authority (as appropriate);

"VAI" means Vision Achievement Incentive;

"Variation" means a **tie** Change or an Operator Change;

"VAT" means any value added taxes;

"Vision Achievement Incentive" means the incentive payment for sustained superior performance of Project Operations over a Vision Period as calculated in accordance with Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of the Operating Appendix;

"Vision Period" has the meaning given to it in paragraph 23.6 of Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) to the Operating Appendix;

"Year" means each period beginning on 1 April and ending on the following 31 March, where any part of such period is during the Term.

2. In this Agreement, except where the context otherwise requires:

2.1 words importing gender include masculine, feminine and neuter;

2.2 the singular includes the plural and vice versa;

2.3 a reference to any part, Clause, sub-clause or Schedule is, except where it is expressly stated to the contrary, a reference to such part, Clause or sub-clause of or Schedule to this Agreement;

2.4 a reference in any Schedule to any part, paragraph or sub-paragraph is, except where it is expressly stated to the contrary, a reference to such part, paragraph or sub-paragraph of that Schedule (as the case may be);

2.5 for the avoidance of doubt, any reference to this Agreement shall be interpreted as including the Operating Appendix;

2.6 any reference to this Agreement or to any other document shall include any variation, amendment, or supplement to such document expressly permitted under the terms of this Agreement;

2.7 any reference to any enactment, order, regulation or other similar instrument (including any EU instrument) (whether specifically named or not) shall be construed as a reference to the enactment, order, regulation or instrument as amended, replaced, consolidated or re-enacted and shall include any orders, consents, regulations, legally binding codes of practice or subordinate legislation (within the meaning of section 21(1) of the Interpretation Act 1978) made thereunder;

2.8 a reference to a person includes individuals, firms, partnerships, bodies corporate, joint ventures, government departments and any organisation capable of suing or

being sued and references to any of the same include the others and their successors and assignees and transferees to the extent that such assignment and transfer are expressly permitted under the terms of this Agreement;

- 2.9 headings and the contents list are for convenience of reference only and do not affect the interpretation of this Agreement;
 - 2.10 the ejusdem generis rule does not apply and the meaning of general words is not to be restricted by any particular examples preceding or following those general words;
 - 2.11 a reference to a time of day is a reference to the time in Scotland;
 - 2.12 subject to the restrictions imposed by this Agreement on subcontracting, an obligation to do something includes an obligation to procure it to be done;
 - 2.13 an obligation not to do something includes an obligation not to wilfully allow it to be done;
 - 2.14 the word "including" means "including without limitation"; and
 - 2.15 a reference to "consent" shall mean consent in writing.
3. This Agreement shall be interpreted and construed as a whole provided that in the event of any inconsistency or conflict between the main body of this Agreement and/or the Schedules and/or the appendices, then:
- 3.1 the main body and the Operating Appendix shall prevail to the extent of any such conflict or inconsistency over the Schedules; and
 - 3.2 **tie** and the Operator shall agree which of the Schedules shall prevail to the extent of any such conflict or inconsistency between the Schedules.



Director/Authorised Signatory
Transport Initiatives Edinburgh Limited



.....
Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

This is Schedule 2 referred to in the foregoing Development Partnering and Operating Franchise Agreement between Transport Initiatives Edinburgh Limited and TRANSDEV Edinburgh Tram Limited dated 14 May 2004

SCHEDULE 2

Project Development Output Specification

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1. OVERALL SYSTEM REQUIREMENTS

- 1.1 The System shall be an electrically powered light rail system using Trams to carry passengers and may include all or any of the following Lines:
 - 1.1.1 Line 1;
 - 1.1.2 Line 2;
 - 1.1.3 Line 3; and
 - 1.1.4 any Network Expansion

- 1.2 **tie's** overall requirements of the System are that it shall facilitate the achievement of the Project Vision and be:
 - 1.2.1 safe and secure;
 - 1.2.2 reliable;
 - 1.2.3 attractive;
 - 1.2.4 delivered within the Affordability Limits;
 - 1.2.5 affordable for passengers;
 - 1.2.6 efficient;
 - 1.2.7 environmentally acceptable;
 - 1.2.8 sustainable;
 - 1.2.9 easy for passengers to use;
 - 1.2.10 accessible to all including mobility impaired passengers;
 - 1.2.11 able to provide a minimum level of service specified by **tie**;
 - 1.2.12 able to support the policy, planning and system aspirational objectives of the City of Edinburgh Council;
 - 1.2.13 integrated with other transport modes;

- 1.2.14 capable of Network Expansions; and
- 1.2.15 able to project a System wide high quality brand image.
- 1.3 **tie** requires that operation of the System shall reflect a high standard of presentation and public image and that the System shall be operated efficiently with minimum disturbance to the public and minimum delay to passengers.
- 1.4 All aspects of the operation of the System shall take account of the need to react safely and quickly to emergencies.
- 1.5 The System shall incorporate such staffing, surveillance and alarm equipment as is appropriate to ensure the safety of the public, especially lone and mobility impaired travellers.
- 1.6 **tie** requires that the System shall be capable of responding to any Network Expansion and increased ridership resulting from such Network Expansion without adverse impact on quality.
- 1.7 The System shall be constructed, maintained and operated in accordance with Good Industry Practice at all times and in accordance with the Law.

2. PROJECT DEVELOPMENT OBJECTIVES

The objectives of **tie** and the Operator during Project Phase A, Project Phase B and Project Phase C in respect of each Line shall be to:

- 2.1 develop a System that complies with the requirements set out in paragraph 1 above;
- 2.2 promote the Enabling Legislation for each Line through the Scottish Private Bill parliamentary process;
- 2.3 procure all Necessary Consents, all works, Trams, Infrastructure and Equipment, services and supplies and to secure all funding and insurance required for the design, construction, funding, operation and maintenance of the Core Network:
 - 2.3.1 in accordance with the Partnering Methodology and Programme, and the Project Programme;
 - 2.3.2 in accordance with the terms of the Agreement including this Project Development Output Specification, the Operating Appendix, the Operating Output Specification,

- the Operating Method Statements, the Environmental Statements for each Line and the Design Manual, as amended from time to time in accordance with this Agreement;
- 2.3.3 within the Affordability Limits;
 - 2.3.4 in relation to the Operator's operating expenditure, at no greater aggregate cost to **tie** than as projected in the Operator Financial Model; and
 - 2.3.5 in accordance with the Law and Good Industry Practice;
- 2.4 develop the technical definition of the Project including, without limitation, the Infrastructure and Equipment Output Specification for the procurement of Infrastructure and Equipment for each Line, and in particular:
- 2.4.1 to jointly review the technical work carried out by the **tie** Advisers for Line 1, Line 2 and Line 3 prior and subsequent to the Effective Date;
 - 2.4.2 where necessary to refine the Operator's forecasts of operating expenditure as set out in the Operator Financial Model;
 - 2.4.3 to identify network effects through co-operation with the **tie** Advisers carrying out the Network Effects Study;
 - 2.4.4 to carry out work required to achieve the integration of the Project with existing transport operators in Edinburgh;
 - 2.4.5 to engage with relevant regulatory authorities regarding Project Phase D for each Line;
 - 2.4.6 to examine innovative contractual arrangements for the interface between operation and maintenance of the Core Network;
 - 2.4.7 to ensure that System design and operational methods take into account Good Industry Practice with regard to urban traffic control;
 - 2.4.8 to validate the demand / revenue forecasts produced by the **tie** Advisers; and
 - 2.4.9 to ensure System and network integration.

- 2.5 develop and implement the terms of coordination arrangements with local bus operators regarding bus-tram integration, including integrated ticketing, and to ensure that such arrangements comply with the Law;
- 2.6 to develop and refine the Target Costs for Project Phase C2 and the Target Operating Costs in accordance with paragraph 7 below; and
- 2.7 to assist the Joint Revenue Committee to set the Target Revenues.

3. DELIVERY OF INFRASTRUCTURE AND EQUIPMENT

- 3.1 Subject to the passage of the Enabling Legislation referred to in relation to Project Phase A in respect of the relevant Line, the satisfaction of the **tie** Affordability Limits, the successful development of the Infrastructure and Equipment Output Specification pursuant to Project Phase B, and any termination rights of either Party under this Agreement, **tie** shall procure the Infrastructure and Equipment for each Line through one or more Infrastructure Providers.
- 3.2 In relation to the design of the System, **tie** is committed to the provision of a System which is, as far as possible, in harmony with its surroundings. Central Edinburgh is designated as a World Heritage Site and it is essential that intrusion is minimised and that opportunities for enhancement are realised. The quality of the Infrastructure and Equipment design and construction is a critical factor in achieving this objective.
- 3.3 A Design Manual is under development by CEC, **tie** and the **tie** Advisers which will consider, amongst other factors, the following:
 - 3.3.1 power provision and its means of support:
 - preference to fix to buildings;
 - lightweight support systems, minimising visual impact;
 - multi-function support systems to combine overhead line equipment with street lighting or signing;
 - design of masts;
 - location and spacing of masts;

- use of central supports on two-line sections;
- ground fixings; and
- screening by landscape.

3.3.2 Station design:

- location in relation to passenger convenience and existing features and buildings;
- quality of structural design to realise all necessary functions (shelter, seating, information systems, security needs, etc) in a simple structure;
- choice of materials and finishes;
- maintenance issues;
- signage and street furniture;
- access;
- colour schemes; and
- advertising.

3.3.3 Track layouts:

- choice of surface materials to distinguish primary uses;
- opportunities for urban enhancement;
- use of grass-ballasted track;
- treatment of level changes; and
- use of landscape/planting to minimise impact.

3.4 Whilst providing advice related to Infrastructure and Equipment Output Specification during Project Phase A or Project Phase B, or at any other time during the Term, the Operator shall at all times take into consideration the objectives of the Design Manual and its underlying

purpose. The Operator shall, where appropriate, from time to time recommend for consideration by **tie** and the **tie** Advisers amendments or additions to the Design Manual.

- 3.5 Similarly, when developing the Operating Method Statements for the System, the Operator shall endeavour to minimise any adverse impact of the System on the general quality of life in Edinburgh whilst maintaining Transport Services of the requisite quality and reliability.
- 3.6 As regards advertising on the System, pursuant to Clause 15 (*Advertising*) of the Operating Appendix, there shall be no advertising permitted on or in any of the Trams and/or the Tramstops nor at any other location on the System. These instructions will also be encompassed within the Design Manual in respect of advertising and graphic design at Tramstops and on Trams. The Design Manual will reflect **tie**'s policies and requirements current during Project Phase A and Project Phase B. Such policies may be subject to amendment at any time after Project Phase B pursuant to Clause 24 (*tie Changes*) or Clause 25 (*Operator Changes*) of the Operating Appendix.

PROJECT PHASE A

Development

4. INTRODUCTION

- 4.1 The primary objective of **tie**, the **tie** Advisers and the Operator during Project Phase A in respect of any Line shall be to promote the Enabling Legislation for that Line through the Scottish Private Bill parliamentary process.
- 4.2 The Project Development Services to be provided by the Operator during Project Phase A in respect of each Line are intended to coincide with the other activities of **tie** directed towards promoting the Enabling Legislation for that Line through the Scottish Private Bill parliamentary process.
- 4.3 As at the Effective Date, it is possible that:
- 4.3.1 the Enabling Legislation for each Line will be promoted separately, on a sequential basis, through the Scottish Private Bill parliamentary process; or
 - 4.3.2 the Enabling Legislation for two of the Lines will be promoted together through the Scottish Private Bill parliamentary process, with the other Line being promoted separately.
- 4.4 Whichever option described in paragraph 4.3 is chosen by **tie**:
- 4.4.1 the **tie** Advisers will prepare, with support from the Operator to the extent requested by **tie**, technical and financial information in respect of each Line separately or in any combination of Lines, in support of the promotion of the Enabling Legislation;
 - 4.4.2 the Transport Services on the System will be operated by a single operator with incremental expansion of the System as relevant approvals and funding are obtained; and
 - 4.4.3 part only or combination of parts of the Lines may be authorised.

5. PROJECT DEVELOPMENT ACTIVITIES DURING PROJECT PHASE A

- 5.1 **tie** has commissioned individual studies by the **tie** Advisers to investigate each of the Lines comprised in the Core Network. Each of these studies considers each Line in isolation. **tie** has also commissioned a study to determine the effects on costs and revenues of operating

- all the Lines together as a single network ("**Network Effects Study**"). These studies have provided, or will provide, documentation to support the promotion of the Enabling Legislation for each Line through the Scottish Private Bill parliamentary process including:
- 5.1.1 plans and sections;
 - 5.1.2 a book of reference;
 - 5.1.3 an estimate of the operating costs and revenue for each Line (on a stand alone basis), based upon the Development Assumptions;
 - 5.1.4 estimates of the network effects for operating costs and revenues for different combination of Lines, based upon the Development Assumptions;
 - 5.1.5 an estimate of the capital costs for each Line; and
 - 5.1.6 relevant documentation to obtain STAG II Approval.
- 5.2 In support of the primary objective for Project Phase A set out in paragraph 4.1 above, the Operator will be expected, during Project Phase A in respect of each Line, to comply with the requirements of paragraphs 5.3 to 5.6 below.
- 5.3 The Operator shall co-operate with **tie**, the **tie** Advisers and the Joint Revenue Committee in relation to the development and/or refinement of:
- 5.3.1 the items listed in paragraphs 5.1.1 to 5.1.6 above;
 - 5.3.2 preliminary Target Costs for Project Phase C2, preliminary Target Operating Costs and preliminary Target Revenues;
 - 5.3.3 the Development Assumptions;
 - 5.3.4 the Infrastructure and Equipment Output Specification for the relevant Line;
 - 5.3.5 the Operating Output Specification;
 - 5.3.6 liaison with City of Edinburgh Council, other public transport operators and third parties;
 - 5.3.7 the Network Effects Study; and
 - 5.3.8 the Partnering Methodology and Programme and the Project Programme.

- 5.4 If so required by **tie**, the Operator shall advise upon any operational issues or assumptions which may be queried during the passage of the Enabling Legislation for each Line through the Scottish Private Bill parliamentary process. This may include, without limitation:
- 5.4.1 provision of oral or written expert evidence during the committee hearings and process; and
 - 5.4.2 participation in the management of any objections to, or petitions against implementation of the System and the Transport Services, including the drafting of responses.
- 5.5 Without prejudice to paragraphs 5.3 and 5.4, the Operator shall:
- 5.5.1 review **tie**'s financial model and business case and make recommendations as to how the Project can be delivered and funded within the Affordability Limits (or so as to minimise any excess above such Affordability Limits);
 - 5.5.2 provide support to **tie** and the **tie** Advisers in respect of the production and refinement of technical, operating and maintenance designs, specifications and programmes for each Line including system specifications, technical drawings, land plans, sections and other detailed design work required to apply for the Scottish Private Bill(s) and related ancillary statutory authority to implement the Project;
 - 5.5.3 provide support to **tie** and the **tie** Advisers in respect of the preparation of any applications, notices, designs, statements and relevant factual or technical evidence and all other procedures to obtain the Scottish Private Bill(s) and any other Necessary Consents required for the Project;
 - 5.5.4 provide support to **tie** and the **tie** Advisers in respect of discussions and negotiations and the conclusion of any undertakings, agreements or other commitments with third parties as may be necessary or desirable to remove any objections to the Project or to secure the grant of any Necessary Consents or otherwise facilitate the construction, installation, operation and maintenance of any of the proposed Lines in the Core Network. Such third parties may include, in particular (i) owners or occupiers of land required for or potentially affected by the Project, (ii) Network Rail and statutory undertakers and (iii) key stakeholders or influencers;
 - 5.5.5 provide assistance to **tie** in negotiating developer or other local contributions to the Project;

- 5.5.6 provide an Inception Report to **tie** within 60 days of the Effective Date based on the outline partnering methodology and programme prepared by the Operator during the tender process leading to the execution of this Agreement, and **tie** and the Operator shall agree the Partnering Methodology and Programme taking account of such Inception Report; and
- 5.5.7 provide support to **tie** and the **tie** Advisers in respect of the development of the programme for works required in connection with the construction and installation of any Line and the co-ordination of such works with any roads, utility, development or other works or projects in the vicinity of that Line;
- 5.6 The extent of the support and assistance to be provided by the Operator in respect of each of the matters set out in paragraphs 5.3 to 5.5 above will be determined from time to time by **tie**.

6. OPERATOR'S PROJECT DEVELOPMENT RESOURCES DURING PROJECT PHASE A

In addition to the Operator's Project Manager appointed pursuant to Clause 6.7 of the Agreement, the Operator's Core Team shall include the resources set out in the Project Development and Operating Costs during Project Phase A:

7. DEVELOPMENT OF PRELIMINARY TARGET OPERATING COSTS, PRELIMINARY TARGET REVENUES, PRELIMINARY TARGET COSTS FOR PROJECT PHASE C2, FIXED COSTS AND DEVELOPMENT ASSUMPTIONS

- 7.1 The starting point for the development of the preliminary Target Costs for Project Phase C2, the preliminary Target Operating Costs, the Fixed Costs (excluding the Category One Fixed Costs and the Category Five Fixed Costs) and preliminary Target Revenues will be:
- 7.1.1 the information in the Financial Proposals, the Operator Financial Model, the Project Development and Operating Costs, in relation to (i) the costs for Project Phase C2, and (ii) operating costs for Phase D, and the indicative revenue forecasts prepared by the Joint Revenue Committee; and
- 7.1.2 the Development Assumptions prepared by the **tie** Advisers.
- 7.2 **tie**, the **tie** Advisers, and the Operator shall work together in good faith to:

- 7.2.1 review (and agree any changes to) the Development Assumptions and any methods for calculating the Target Costs for Project Phase C2, the Target Operating Costs, , the Fixed Costs (excluding the Category One Fixed Costs and the Category Five Fixed Costs) where not otherwise agreed and the setting of the Target Revenues by the Joint Revenue Committee; and
 - 7.2.2 develop the Operator Financial Model, the Target Costs for Project Phase C2, the Target Operating Costs and the Fixed Costs (excluding the Category One Fixed Costs and the Category Five Fixed Costs)
- 7.3 The review and development of the Development Assumptions, the Target Costs for Project Phase C2, the Target Operating Costs and the Fixed Costs (excluding the Category One Fixed Costs and the Category Five Fixed Costs) pursuant to paragraph 7.2 shall take account of any developments agreed between **tie** and the Operator at the relevant time in relation to, without limitation:
 - 7.3.1 the Operating Output Specification; and
 - 7.3.2 the Infrastructure and Equipment Output Specification in respect of each Line.
- 7.4 The Operator and **tie** shall agree all the major principles in the Development Assumptions by the end of Project Phase A, provided that **tie** and the Operator acknowledge that further minor amendments to the Development Assumptions may be required in Project Phase B as discussed below. Without limitation, the major principles for the purposes of this paragraph 7.4 shall include:
 - 7.4.1 those matters listed in paragraphs 9.1.1 to 9.1.13 below; and
 - 7.4.2 the patronage forecast model prepared by the Joint Revenue Committee and used by the **tie** Advisers, and the principal inputs and assumptions used in such model.
- 7.5 The Operator and **tie** shall also agree the preliminary Target Costs for Project Phase C2, and the preliminary Target Operating Costs by the end of Project Phase A. The only changes between such preliminary targets, and the final targets to be agreed by the end of Project Phase B shall be those changes resulting from amendments to the Operating Output Specification and Infrastructure and Equipment Output Specification during Project Phase B.

7.6 All changes to the Financial Proposals, the Operator Financial Model, the Project Development and Operating Costs, the Target Costs for Project Phase C2, and the Target Operating Costs to be discussed by **tie** and the Operator pursuant to this paragraph 7 shall be developed such that the Operator shall be in No Better and No Worse position as a result of the relevant change.

8. DEVELOPMENT OF THE INFRASTRUCTURE AND EQUIPMENT OUTPUT SPECIFICATION

8.1 Prior to the date of this Agreement, or at the commencement of Project Phase A in respect of each Line, the **tie** Advisers will provide to the Operator an outline Infrastructure and Equipment Output Specification for that Line. This outline Infrastructure and Equipment Output Specification will take into account, where necessary and appropriate, the requirements of the Design Manual, which are intended to include, without limitation, proposals in relation to:

8.1.1 operations and Control Centre and stabling facilities;

8.1.2 power supply;

8.1.3 command, control and communications including System Control and Data Acquisition (SCADA) and signalling;

8.1.4 turn-round facilities;

8.1.5 lay-over provision;

8.1.6 vehicles and fleet size;

8.1.7 stop facilities (including ease of physical access between the System and other transport modes wherever interchange opportunities are available);

8.1.8 park-and-ride facilities;

8.1.9 ticket sales points;

8.1.10 public information provisions;

8.1.11 UTC equipment and its compatibility with CEC installations including potential road user charging equipment;

- 8.1.12 whole-life costs;
- 8.1.13 security installations; and
- 8.1.14 capital costs;
- 8.2 **tie** requires a high standard of reliability in the operation of the Transport Services. Accordingly the Operator shall work together with **tie** and the **tie** Advisers to develop the Infrastructure and Equipment Output Specification in respect of each Line starting from the outline Infrastructure and Equipment Output Specification referred to in paragraph 8.1 and observing the provisions of the Design Manual, to ensure that the Infrastructure and Equipment to be provided pursuant to each Infrastructure Delivery Agreement shall enable the achievement of a high standard of reliability in operation of the Transport Services.
- 8.3 In carrying out the development under paragraph 8.2, the Operator, **tie** and the **tie** Advisers will use reliability analyses which utilise wherever possible historical operating data from similar equipment.
- 8.4 The **tie** Advisers will also provide to the Operator draft plans indicating the land required for the construction and/or operation of each Line.
- 8.5 The Operator will provide comments and support to **tie** and/or the **tie** Advisers in relation to:
 - 8.5.1 the outline Infrastructure and Equipment Output Specification in respect of any Line referred to in paragraph 8.1, and any subsequent drafts of the Infrastructure and Equipment Output Specification developed pursuant to paragraph 8.2; and
 - 8.5.2 the land identified for the Project, in particular the siting of Depots and stabling facilitiestaking into account particularly the Operator's reasonable operation requirements to deliver the Operating Output Specification during Project Phase D in respect of the relevant Line.
- 8.6 The Operator will provide an initial review and comments pursuant to paragraph 8.5 within 60 days of commencement of Project Phase A in respect of the relevant Line, and will provide further reviews and comments in a timely manner throughout Project Phase A.

9. REFINEMENT OF THE OPERATING OUTPUT SPECIFICATION

9.1 The Operator and **tie** may agree amendments to the Operating Output Specification for Project Phase D in respect of each Line. Such amendments shall include any amendments resulting from the refinement of the operating assumptions made by the **tie** Advisers (following comments from the Operator) in respect of at least the following in relation to each Line or combination of Lines:

- 9.1.1 service patterns and route km;
- 9.1.2 timetabling;
- 9.1.3 Tram frequencies;
- 9.1.4 journey times;
- 9.1.5 Tram priority at junctions;
- 9.1.6 carrying capacities;
- 9.1.7 fleet size;
- 9.1.8 highway interface / UTC priority;
- 9.1.9 service integration;
- 9.1.10 fare structure;
- 9.1.11 demand, patronage and revenues;
- 9.1.12 maintenance regimes; and
- 9.1.13 Operating Costs.

9.2 The amendments to the Operating Output Specification shall take account of, without limitation:

- 9.2.1 developments arising from the promotion of the Enabling Legislation for the relevant Line through the Scottish Private Bill parliamentary process; and
- 9.2.2 the development of the Infrastructure and Equipment Output Specification for the relevant Line pursuant to paragraph 8.

- 9.3 The Operator will provide an initial review and comments pursuant to paragraph 9.1 above within 60 days of commencement of Project Phase A in respect of the relevant Line, and will provide further reviews and comments in a timely manner throughout Project Phase A.
- 9.4 **tie** and the Operator shall also have preliminary discussions regarding the development of the KPI Regime, taking into account any agreed amendments to the Operating Output Specification. The issues for development as regards the KPI Regime are as set out in paragraph 24 below.

10. NETWORK EFFECTS

- 10.1 As referred to in paragraph 5.1 above, **tie** has commissioned the **tie** Advisers to conduct the Network Effects Study to investigate the changes in Operating Costs, Operating Revenues and other benefits which would result from operating the Core Network (or combinations of two of the Lines) as a single system rather than as separate Lines. To the extent that this study is still in progress during Project Phase A in respect of any Line, the Operator shall work in conjunction with the study team of the **tie** Advisers and prior to the end of Project Phase A shall review, agree and endorse the major principles of the Development Assumptions made by the **tie** Advisers in respect of the network effects from the operation of two or three of the Lines as a network.
- 10.2 The review to be carried out by the Operator of the network effects will take into account the reviews to be carried out by the Operator pursuant to paragraphs 8 and 9 for the individual Lines as outlined above and without limitation will cover:
- 10.2.1 any increase in Operating Revenues resulting from enhanced passenger journey opportunities made possible by the operation of the Lines as part of a network; and
- 10.2.2 any reduction in Operating Costs as a result of synergies made possible by the operation of the Lines as part of a network.

11. LIAISON WITH CITY OF EDINBURGH COUNCIL AND OTHERS

- 11.1 The Operator shall, in consultation with **tie**, manage arrangements and reach agreements with CEC and others (including police and emergency services) with respect to any operational aspects of the interface with roads, railways or properties in the proximity of the System, including:
- 11.1.1 safety in operations;

- 11.1.2 impact of and response to System failures, breakdowns, etc.;
- 11.1.3 interface with Network Rail and train operators;
- 11.1.4 design and construction of on-street Tramway;
- 11.1.5 actions consequential on obstruction of the System resulting in disruption to the Transport Services;
- 11.1.6 maintenance of shared facilities including roadway, pavement, verges, etc.
- 11.1.7 maintenance of road/tram signals; and
- 11.1.8 access arrangements

and such arrangements and agreements shall be subject to approval by **tie** and shall be incorporated into the Operations Management Plan to be developed in Project Phase B and Project Phase C.

12. LIAISON WITH OTHER PUBLIC TRANSPORT OPERATORS

- 12.1 The Operator shall keep itself fully informed of the policies, strategies and plans being promoted and implemented by CEC and any other relevant Local Authority in respect of transport and their integration with other policies such as health, safety and environment.
- 12.2 Taking account of the policies, strategies and plans being referred to in paragraph 12.1, the Operator will engage with other transport operators including but not exclusively bus operators, Scotrail and other train operators and British Airports Authority, with the objective of maximising use of public transport and increasing mode transfer from the private car. The operators of any park-and-ride facilities near but not directly related to the Tram operations should also be consulted.
- 12.3 Building upon the discussions with other public transport operators conducted by the Operator prior to the Effective Date, the Outline Service Integration Plan and the discussions with other transport operators pursuant to paragraph 12.2, the Operator shall develop the Service Integration Plan through which the Transport Services will complement and dovetail with other public transport services in Edinburgh and any areas outside Edinburgh served by the Transport Services. This process shall, whenever possible, include appropriate agreements with transport operators to support these objectives.

12.4 Matters to be addressed by the Service Integration Plan will cover, but not exclusively, the following:

12.4.1 operating timetable;

12.4.2 hours of operation;

12.4.3 journey times;

12.4.4 service integration (the Tram System as part of a wider public transport system);

12.4.5 competition;

12.4.6 Special Events planning;

12.4.7 interchange facilities;

12.4.8 ticketing arrangements;

12.4.9 maintenance of shared facilities; and

12.4.10 incident management and provision of alternative service

12.5 The Service Integration Plan shall be based on the following principles:

12.5.1 ease of physical access between the System and other transport modes shall be facilitated wherever interchange opportunities are available;

12.5.2 wherever practicable, publicity, particularly timetable and fares information shall be presented in a common format by the Operator and other public transport operators;

12.5.3 wherever practicable, public transport operators shall be required to advertise other operators' services within their timetables where these form a complementary element of the local public transport network; and

12.5.4 subject to compliance with the Law, the Operator shall use its best endeavours to implement, with other public transport operators, and in a manner consistent with CEC's transport strategies, timetable coordination measures. These may include coordination of feeder buses and train services with the Transport Services and late night or last Tram services departing from Haymarket or Waverley stops providing advertised connections from arriving main line services.

- 12.6 In relation to the ticketing arrangements referred to in paragraph 12.4.8 above, the Operator shall develop and agree with **tie** and other public transport operators measures for promoting integrated ticketing (through One Ticket or its successor ticket nominated by **tie**);
- 12.7 The Service Integration Plan shall be regularly refined as the System is further developed during Project Phases B, C and D. Any amendments to the Service Integration Plan during Project Phase C or Project Phase D shall be subject to Schedule 9 (*Review Procedure*).
- 12.8 The Operator shall assist and co-operate with the Joint Revenue Committee in the modelling of any impacts on revenue in the development of the Service Integration Plan.

13. INTEGRATION COMPLIANT WITH LAW

- 13.1 The Operator shall be responsible for ensuring that its plans for and agreements with operators to deliver integration of the Transport Services with bus and train operations in Edinburgh in accordance with the Service Integration Plan (as amended from time to time) are compliant with Law, including competition law.
- 13.2 The Operator shall keep **tie** informed from time to time of all actions being taken by the Operator to ensure compliance with paragraph 13.1, including the views of regulatory authorities and the provision of copies of any legal advice obtained by the Operator in relation to the impact of competition law on the proposed Service Integration Plan.

14. GATEWAY FROM PROJECT PHASE A TO PROJECT PHASE B

- 14.1 Subject to paragraph 14.2, the Operator will notify **tie** when the Operator considers that it has completed each of the tasks to be carried out pursuant to Project Phase A in respect of a Line and that all matters to be agreed during Project Phase A have been agreed between the Operator and **tie**. If **tie** agrees that all of such tasks have been completed and/or relevant matters agreed, **tie** shall notify the Operator that Project Phase B shall commence in respect of that Line.
- 14.2 **tie** and the Operator acknowledge that the parliamentary process in relation to the Scottish Private Bill(s) (including obtaining Royal Assent to the Scottish Private Bills(s)) may take considerably longer than the other tasks to be carried out pursuant to Project Phase A in respect of a Line. Accordingly, the Operator may give notice to **tie** pursuant to paragraph 14.1 when the Operator considers that:

- 14.2.1 each of the tasks to be carried out pursuant to Project Phase A in respect of the relevant Line has been completed (other than obtaining the Royal Assent to the Scottish Private Bills(s)) and that all matters to be agreed during Project Phase A have been agreed between the Operator and **tie**; and
- 14.2.2 the progress of the parliamentary process in relation to the Scottish Private Bill(s) is such that it is reasonable (having regard to the Project Programme) to commence the Project Development Services under Project Phase B.
- 14.3 If following a notice under paragraph 14.2, **tie** agrees that (i) all of such tasks have been completed (other than obtaining the Royal Assent to the Scottish Private Bills(s)) and/or relevant matters agreed, and (ii) it is reasonable (having regard to the Project Programme) to commence the Project Development Services under Project Phase B:
- 14.3.1 **tie** shall notify the Operator that Project Phase B shall commence in respect of that Line by issuing a PPCN; and
- 14.3.2 the Operator shall continue to provide the Project Phase A Project Development Services in respect of support for the parliamentary process in relation to the Scottish Private Bill(s) until the Royal Assent to such bill(s) is obtained.
- 14.4 Following a notice from the Operator pursuant to paragraph 14.1 or 14.2, to the extent that **tie** considers that any relevant task has not been completed by the Operator and/or relevant matter agreed, **tie** will notify the Operator accordingly, including details of the further activities to be carried out by the Operator in order to complete such task.
- 14.5 During Project Phase A , **tie** may, in its sole discretion, give two weeks notice to the Operator that Project Phase B shall commence in respect of any Line, and in such circumstances:
- 14.5.1 **tie** may direct that some or all of the Project Phase B Project Development Services shall be commenced; and
- 14.5.2 the Operator shall continue to provide the Project Phase A Project Development Services in respect of that Line until (i) the relevant tasks have been completed, and (ii) all matters to be agreed during Project Phase A have been agreed between the Operator and **tie**, or until **tie** otherwise directs.

PROJECT PHASE B

Procurement of the Infrastructure and Equipment

15. INTRODUCTION

The primary objectives of **tie**, the **tie** Advisers and the Operator during Project Phase B in respect of any Line shall be to:

- 15.1 finalise the Infrastructure and Equipment Output Specification in respect of that Line;
- 15.2 conduct a competition to appoint the Infrastructure Provider, including the execution of the Infrastructure Delivery Agreement, in respect of that Line;
- 15.3 agree:
 - 15.3.1 the Operating Output Specification for Project Phase D in respect of that Line (such Operating Output Specification for Project Phase D to also relate to the operation of that Line as a network with any Line already operational at the relevant time);
 - 15.3.2 the Target Costs for Project Phase C2 in respect of that Line; and
 - 15.3.3 the Target Operating Costs to take effect at the commencement of Project Phase D in respect of that Line.
- 15.4 agree any other amendments to the Operating Appendix consequential on the terms of the Infrastructure and Equipment Output Specification and the Infrastructure Delivery Agreement in respect of that Line;
- 15.5 obtain final funding approval from the Scottish Executive in respect of that Line and conclude any contracts for the provision of funding by CEC local development contributions; and
- 15.6 co-operate with and assist **tie**, the **tie** Advisers and the Joint Revenue Committee in relation to the development and/or refinement of the patronage forecast model and the setting of Target Revenue

16. PROJECT DEVELOPMENT ACTIVITIES DURING PROJECT PHASE B

- 16.1 In support of the primary objectives for Project Phase B set out in paragraph 15 above, the Operator will be expected, during Project Phase B in respect of each Line, to comply with the requirements of paragraphs 16.2 to 16.4 below.
- 16.2 The Operator shall co-operate with **tie** and the **tie** Advisers in support of the primary objectives for Project Phase B set out in paragraph 15 above, including in relation to:
- 16.2.1 any refinements to the Development Assumptions agreed between the Operator and **tie** in Project Phase A, and the agreement of any such refinements;
 - 16.2.2 the further development and subsequent finalisation of the Infrastructure and Equipment Output Specification and the terms of the IDA for the relevant Line;
 - 16.2.3 the procurement process in relation to the IDA for the relevant Line, including the evaluation of bids and the subsequent appointment of the Infrastructure Provider for the relevant Line;
 - 16.2.4 the further development and subsequent agreement of the Operating Output Specification;
 - 16.2.5 the further development and subsequent agreement of the Target Costs for Project Phase C2; and
 - 16.2.6 the further development and subsequent agreement of the Target Operating Costs.
- 16.3 Without prejudice to paragraphs 16.2, the Operator shall:
- 16.3.1 review **tie**'s financial model and business case and make recommendations as to how the Project can be delivered and funded within the Affordability Limit (or so as to minimise any excess above such Affordability Limit);
 - 16.3.2 provide support to **tie** and the **tie** Advisers in respect of the preparation of any applications, notices, designs, statements and relevant factual or technical evidence and all other procedures to obtain any Necessary Consents required for the Project;
 - 16.3.3 provide support to **tie** and the **tie** Advisers in respect of discussions and negotiations and the conclusion of any undertakings, agreements or other commitments with third parties as may be necessary or desirable to remove any objections to the

Project or to secure the grant of any Necessary Consents or otherwise facilitate the construction, installation, operation and maintenance of any of the proposed Lines in the Core Network. Such third parties may include, in particular (i) owners or occupiers of land required for or potentially affected by the Project, (ii) Network Rail and statutory undertakers, (iii) key stakeholders or influencers;

- 16.3.4 provide assistance to **tie** in negotiating developer or other local contributions to the Project;
 - 16.3.5 provide support to **tie** and the **tie** Advisers in respect of the development of the programme for works required in connection with the construction and installation of any Line and the co-ordination of such works with any roads, utility, development or other works or projects in the vicinity of that Line; and
 - 16.3.6 provide support to **tie** and the **tie** advisers in respect of the commissioning by **tie** of a system operational model of a form and extent to be agreed. The Operator shall provide all information related to Project Operations to facilitate specification and execution of such model
- 16.4 The extent of the support and assistance to be provided by the Operator in respect of each of the matters set out in paragraph 16.2 or 16.3 will be determined from time to time by **tie**.
- 16.5 Further to paragraph 16.3.6 above, **tie** shall procure a system operational model and complimentary software with jointly named licensees that shall:
- 16.5.1 simulate the Tram and the infrastructure to provide "laws of physics" run time estimates;
 - 16.5.2 simulate the operation of a Timetable with simulated perturbations; and
 - 16.5.3 have the capacity to provide vehicle and driver scheduling, driver rostering and Timetable production.
- 16.6 If **tie** is unable to provide such a licence in accordance with Clause 16.5, and unless **tie** can otherwise procure that the data and software necessary shall be made available to the Operator, the Operator shall be requirement to procure such system operational model and complimentary software. Such requirement shall be a **tie** Change and shall be considered in accordance with Clause 24 (*tie Changes*) and Clause 23 (*Performance and Financial Adjustments*) of the Operating Appendix.

17. OPERATOR'S PROJECT DEVELOPMENT RESOURCES DURING PROJECT PHASE B

In addition to the Operator Project Manager appointed pursuant to Clause 6.7, the Operator's Core Team shall include the following resources set out in the Project Development and Operating Costs during Project Phase B.

18. DEVELOPMENT OF THE INFRASTRUCTURE AND EQUIPMENT OUTPUT SPECIFICATION

18.1 The Operator, **tie** and the **tie** Advisers shall continue the development of the Infrastructure and Equipment Output Specification in respect of the relevant Line, based on the work carried out during Project Phase A pursuant to paragraph 8 above. As in Project Phase A, the provisions of the Design Manual shall be observed as a means of ensuring that System delivery shall be to the requisite quality.

18.2 As referred to in paragraph 15 above, the Infrastructure and Equipment Output Specification for the relevant Line must be finalised during Project Phase B for that Line.

18.3 Final decisions on the Infrastructure and Equipment Output Specification will be made by **tie**, although the Operator will be expected to participate actively in discussions related to the function, performance and quality of items to be specified, taking into account such matters as reliability and whole life costs. Such items will include, for example:

18.3.1 alignment (sight lines; safety aspects; crossovers and turnbacks);

18.3.2 wheel/rail interface issues, especially those which relate to safety, operability and overall System performance;

18.3.3 vehicle design (internal layout; provisions for mobility impaired (including any accessibility Legislation), cycles, prams/pushchairs; communications within vehicle);

18.3.4 vehicle performance and dynamics;

18.3.5 noise;

18.3.6 Tramstop design (provisions for mobility impaired, including requirements of Disability Discrimination Act 1995) including overall layout and provision of passenger facilities;

- 18.3.7 materials (Tramstops; vehicle interiors; anti-vandal);
- 18.3.8 Control Centre (size; layout; equipment);
- 18.3.9 customer Helpdesk;
- 18.3.10 staff facilities (size; detailed requirements);
- 18.3.11 public address system;
- 18.3.12 lighting;
- 18.3.13 communications systems;
- 18.3.14 Depot and stabling facilities including equipment provision;
- 18.3.15 routine maintenance and the equipment necessary to undertake it; and
- 18.3.16 ticketing systems, integration and revenue collection, including ensuring that:

- (a) the fare revenue collection systems have no adverse impact on dwell times of Trams at Tramstops, do not cause undue delay to passengers and that tickets are not sold or validated by Tram drivers; and
- (b) any ticket vending facilities are easy to use by all passengers including unassisted wheelchair users;

- 18.3.17 Any proposals to use smartcards for ticketing (and any connections to any regional smartcard scheme);
- 18.3.18 ticket validation systems;
- 18.3.19 security of the System (CCTV, security lighting, emergency call systems);
- 18.3.20 passenger information systems; and
- 18.3.21 inspection and testing.

- 18.4 In addition, the Operator will also actively participate in development of the IDA documentation to include infrastructure elements to facilitate the Operator's future management of the following:

18.4.1 statutory and third party interface, including road, rail and utilities;

18.4.2 environmental management; and

18.4.3 System integration

19. DEVELOPMENT OF THE TERMS OF THE INFRASTRUCTURE DELIVERY AGREEMENT AND TENDER DOCUMENTATION

19.1 The Operator shall provide such input as **tie** may reasonably require in relation to the development of the terms of the Infrastructure Delivery Agreement and tender documentation in respect of the relevant Line. Without limitation, **tie** shall invite comments from the Operator in respect of the following terms of the Infrastructure Delivery Agreement:

19.1.1 the acceptance tests for the Infrastructure and Equipment (including the extent to which **tie** will delegate responsibility to the Operator for carrying out such acceptance tests);

19.1.2 reliability tests;

19.1.3 the ongoing maintenance obligations of the Infrastructure Provider;

19.1.4 performance regimes and the output of the Infrastructure and Equipment needed to support them;

19.1.5 integration with other Lines;

19.1.6 Roads interface;

19.1.7 warranty and latent defects content and periods;

19.1.8 as-builts, maintenance manuals and spares;

19.1.9 environment management; and

19.1.10 safety.

19.2 In relation to the ongoing maintenance obligations of the Infrastructure Provider, the Operator shall provide such input as **tie** may reasonably require in relation to the development of the Maintenance Plan (including the details of any possession of any Line

required for track maintenance), having regard to the effect of such possession on the Timetable, the Fixed Costs (excluding the Category Five Fixed Costs), the Target Revenues and Target Operating Costs.

20. INFRASTRUCTURE TENDER EVALUATION AND NEGOTIATION OF INFRASTRUCTURE DELIVERY AGREEMENT

20.1 The Operator shall provide such input as **tie** may reasonably require in relation to the evaluation of tenders received from prospective Infrastructure Providers, and the negotiation of the terms of the Infrastructure Delivery Agreement.

20.2 **tie** will disclose to the Operator such elements of the tenders received from prospective Infrastructure Providers as are necessary to enable the Operator to provide input pursuant to paragraph 20.1. To the extent that additional confidentiality undertakings are required from the Operator in connection with such disclosure (including without limitation, undertakings by the Operator direct to the prospective Infrastructure Providers), the Operator and **tie** will discuss such requirements in good faith.

21. AMENDMENTS TO THE OPERATING APPENDIX DURING PROJECT PHASE B

21.1 As stated in Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) **tie** acknowledges that the Operator has agreed (i) the Operator Financial Model as at Effective Date and (ii) the terms of the Operating Appendix on the basis of the Base Case Assumptions and the Law as at the Effective Date.

21.2 During Project Phase B in respect of each Line, the Operator and **tie** shall develop and then agree:

21.2.1 any amendments to the Operating Output Specification in respect of such Line or on the System in accordance with paragraph 22;

21.2.2 amendments to the Operating Appendix, the Base Case Assumptions, the Financial Proposals, the Operator Financial Model, the Project Development and Operating Costs, and/or the Operating Output Specification in accordance with paragraph 23, including:

a) the Target Costs for Project Phase C2;

- b) the Target Operating Costs to apply in the Operating Appendix from the Service Commencement Date in respect of such Line; and
- c) the Fixed Costs (except for the Category One Fixed Costs and the Category Five Fixed Costs)

21.2.3 refinements to the KPI Regime set out in the Operating Appendix to apply from the Service Commencement Date in respect of such Line in accordance with paragraph 24;

21.2.4 refinements to the Performance Monitoring Regime set out in the Operating Appendix to apply from the Service Commencement Date in respect of such Line or impact on the System in accordance with paragraph 25;

21.2.5 the Operating Method Statements in accordance with paragraph 26 based on the outlines for the Operating Method Statements prepared by the Operator during the tender process leading to the execution of this Agreement; and

21.2.6 any other changes to the Operating Appendix in accordance with the mechanism in Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) of the Agreement;

and all such changes shall be developed on the basis that the Operator shall be in No Better and No Worse position as a result of the relevant change.

21.3 Any changes to the Operating Appendix (including the Target Costs for Project Phase C2, the Target Operating Costs and the Fixed Costs (except for Category One Fixed Costs and Category Five Fixed Costs)) as a result of all developments during Project Phases A and B in respect of a Line shall be agreed before the date of execution of the Infrastructure Delivery Agreement in respect of that Line.

22. AMENDMENTS TO THE OPERATING OUTPUT SPECIFICATION

22.1 The Operator, **tie** and the **tie** Advisers shall continue the refinement of the Operating Output Specification for Project Phase D, based on the work carried out during Project Phase A pursuant to paragraph 9 above.

22.2 As referred to in paragraph 15 above, the Operating Output Specification for Project Phase D for each Line shall be finalised during Project Phase B for that Line, provided that such Operating Output Specification shall also relate to the operation of that Line as a network with any Line already operational at the relevant time.

22.3 Any amendments to the Operating Output Specification shall be agreed in writing between the Operator and **tie** and shall take account of, without limitation, the development of the terms of:

22.3.1 the Infrastructure and Equipment Output Specification pursuant to paragraph 18;

22.3.2 the Infrastructure Delivery Agreement and tender documentation pursuant to paragraph 19; and

22.3.3 the Transport Services regime, including hours of operation, Tram frequencies and operating pattern.

23. DEVELOPMENT OF THE OPERATOR FINANCIAL MODEL (INCLUDING THE TARGET COSTS FOR PROJECT PHASE C2, AND THE TARGET OPERATING COSTS)

23.1 The Operator, **tie** and the **tie** Advisers shall continue the development of the Operator Financial Model (including the Target Costs for Project Phase C2, and the Target Operating Costs) based on the work carried out during Project Phase A pursuant to paragraph 7 above.

23.2 To the extent that any refinements of the Development Assumptions are necessary during Project Phase B, such refinements shall be agreed between **tie** and the Operator and shall be taken into account for the purposes of the development of the Operator Financial Model pursuant to paragraph 23.1.

23.3 **tie** and the Operator acknowledge that:

23.3.1 amendments to the Operating Output Specification;

23.3.2 amendments to the KPI Regime;

23.3.3 amendments to the Performance Monitoring Regime;

23.3.4 the terms of the Operating Method Statements;

23.3.5 the terms on which Necessary Consents are procured;

- 23.3.6 the terms of the Infrastructure Delivery Agreement (including the Infrastructure and Equipment Output Specification) in respect of each Line; and
- 23.3.7 other changes during the development of the Project during Project Phases A and B;
- may mean that some of the Base Case Assumptions are Inappropriate Base Case Assumptions.
- 23.4 Subject to Clause 10.6 of the Agreement, to the extent that any of the Base Case Assumptions prove to be Inappropriate Base Case Assumptions, **tie** and the Operator shall discuss and seek to agree amendments to the Operating Appendix, the Financial Proposals, Base Case Assumptions, the Operator Financial Model, the Project Development and Operating Costs, and/or the Operating Output Specification in accordance with the mechanism described in Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) of the Agreement.
- 23.5 The amendments to the Target Operating Costs, and/or Fixed Costs (except for the Category One Fixed Costs and the Category Five Fixed Costs) shall take into account:
- 23.5.1 any possession of a Line required for track maintenance; and
- 23.5.2 any planned roads maintenance.
- 23.6 Without prejudice to paragraphs 23.1 to 23.4, the Operator will in addition periodically review and recommend adjustments to **tie**'s business case, economic model and risk management plan to reflect events and developments during the course of Project Phase B.

24. DEVELOPMENT OF THE KPI REGIME

- 24.1 The KPI Regime shall be directly linked to the Operator's performance of the following Key Performance Indicators:
- 24.1.1 Headway/timetable/service reliability;
- 24.1.2 first and last Tram;
- 24.1.3 customer survey;
- 24.1.4 security;

- 24.1.5 cleanliness of Tram interiors and stops;
- 24.1.6 information and signage; and
- 24.1.7 revenue generation and protection.
- 24.2 The Operator shall, in conjunction with **tie** and the **tie** Advisors, develop the KPI Regime to apply during Project Phase D (including any changes to the Key Performance Indicators and/or the relevant benchmarks) to the extent appropriate to take account of the developments to the Project during Project Phases A, B and C, all such refinements to be agreed between the Operator and **tie**.
- 24.3 The Operator shall develop methods to monitor the performance and quality of the Transport Services and the Project Operations during Project Phase D against the Key Performance Indicators, such methods to be acceptable to **tie**. Wherever possible and practicable, performance shall be monitored electronically. The Operator shall be responsible for all electronic monitoring equipment and for ensuring that **tie** receives direct Service Quality Reports, in form and format to be agreed.
- 24.4 Where performance against a Key Performance Indicator cannot be electronically monitored or it is not practicable to do so, actual performance shall be measured in accordance with the following:
- 24.4.1 **tie** Inspectors will inspect Tramstops and/or the Transport Services and assess the level of performance against the relevant Key Performance Indicator; and
- 24.4.2 in each Reporting Period, **tie** will inspect such number of Tramstops and Transport Services as **tie** may consider appropriate.
- 24.5 Target benchmark performance levels shall be agreed for each Key Performance Indicator. Underperformance Points shall be deducted based on levels of performance in Project Phase D below the target benchmark, subject to an agreed scoring system to be developed during Project Phase B. Deductions from the KPI Regime Profit Element for each Reporting Period shall be directly linked to the number of Underperformance Points scored.
- 24.6 **tie** will notify the Operator following the end of each Reporting Period (within such time period as may be agreed between **tie** and the Operator) where performance in that Reporting Period against a Key Performance Indicator is below the target benchmark, whether such performance is measured:

- 24.6.1 electronically;
 - 24.6.2 by the **tie** Inspectors; or
 - 24.6.3 by some other monitoring method agreed between **tie** and the Operator pursuant to paragraph 24.4.
- 24.7 The Headway or Timetable Key Performance Indicator relates to the operation of the Transport Services against the service intervals or clock times in the Timetable, as measured at agreed monitoring points. Where the scheduled service interval is 10 minutes or less, monitoring will be carried out against scheduled Headway. Where the actual service interval exceeds the relevant service interval in the Timetable by 2 minutes or more Underperformance Points shall be awarded. Such Underperformance Points shall increase with interval deficiency. Where the scheduled service interval exceeds 10 minutes, trams shall be monitored against scheduled clock departure times. Where the actual departure time is more than one minute earlier or more than two minutes later than the scheduled departure time, Underperformance Points shall be awarded, the number of points awarded increasing in the event of greater discrepancy from scheduled departure time.
- 24.8 The first and last Tram Key Performance Indicator relates to the punctuality of the first and last passenger services, on each service route. Underperformance Points shall be allocated for each occasion when either:
- 24.8.1 no passenger service which completes its journey over the length of a service route, stopping at every stop on that service route, departs the relevant Originating Tramstop within 2 minutes of the time scheduled in the Timetable for the first passenger service of the day for that service route; or
 - 24.8.2 no passenger service which completes its journey over the length of a service route, stopping at every stop on that service route, departs the relevant Originating Tramstop within 2 minutes of the time scheduled in the Timetable for the last passenger service of the day for that service route.
- 24.9 The Key Performance Indicator for cleanliness of Tram interiors and stops shall be developed to reflect the Operator's obligations in respect of Operator Maintenance and shall be measured against a number of service elements, such as:
- 24.9.1 cleaning of shelters, seating and waiting rooms;

- 24.9.2 cleaning of poster cases and signage;
 - 24.9.3 cleaning of lifts and escalators (if any);
 - 24.9.4 cleaning of stairs and footbridges;
 - 24.9.5 cleaning of platforms;
 - 24.9.6 cleaning of tram system car parks;
 - 24.9.7 cleaning of cycle parking facilities;
 - 24.9.8 cleaning of ticket vending machines;
 - 24.9.9 cleaning of public and staff telephones;
 - 24.9.10 cleaning of Tram interior; and
 - 24.9.11 reporting of items requiring attention by the Infrastructure Provider.
- 24.10 The Key Performance Indicator for information and signage will be developed to ensure that sufficient information is consistently provided to make passenger journeys easy. This will also reflect the objectives of the Marketing Plan and Public Liaison and Media Plan, and shall include at least the following:
- 24.10.1 currency and availability of timetable and fares information;
 - 24.10.2 provision of advance information on planned disruptions to the Transport Services, such as maintenance works and Special Events;
 - 24.10.3 range of outlets providing information;
 - 24.10.4 manning of the Helpdesk and response times to (i) calls from "help points" on Tramstops and (ii) telephone calls to the Helpdesk; and
 - 24.10.5 quality of information announced through public address system.
- 24.11 The Key Performance Indicator for security will be developed to reflect the objectives of the Security Management Plan and to promote a high level of security at all times. This will include at least the following:
- 24.11.1 response times by the Operator to security incidents;

24.11.2 presence of the Operator's staff at locations relevant to personal security on the System;

24.11.3 reporting of security equipment failures and management of their rectification; and

24.11.4 third party interface co-ordination and co-operation.

24.12 The Key Performance Indicator for customer survey shall be measured by means of passenger questionnaire surveys undertaken by **tie**. A minimum agreed sample size of completed questionnaires shall be undertaken during each Reporting Period. The survey shall be designed to be statistically robust and representative of the network, of its users and of actual day-to-day performance. Each question shall be allocated a score (e.g. between 1 and 10; where a score of 1 represents a very bad view, scores of 5 and 6 indicate the customer is neither dissatisfied or satisfied and a score of 10 indicates a very satisfied customer). Any score below an agreed minimum shall qualify for Underperformance Points. Questions to be included in the survey shall be agreed between **tie** and the Operator. Typical questions might be:

24.12.1 "For the tram journey currently being undertaken, how well do you think it performed in...

- Arriving when you expected it to;
- Offering a clean and pleasant vehicle;
- Being easy to board;
- Providing you with a seat;
- Making you feel perfectly safe and at ease;
- Providing a fast journey;
- Telling you which station is next;
- Telling you about service disruptions; and
- Telling you where you can change to buses and trains;

24.12.2 Thinking of the Tramstop at which you boarded the Tram, how did it perform in...

- Making you feel perfectly safe and at ease;
- Keeping you informed of any problems;
- Being clean and well maintained;
- Being well lit; and
- Telling you when the next tram is due."

24.13 The Key Performance Indicator for revenue generation and protection relates to the number of people travelling on the system with a valid ticket and will be developed to ensure a high level of compliance at all times. Measurement (in addition to Operator methodology) shall include spot checks by the monitoring inspectors. An agreed minimum number of inspections shall be undertaken each monitoring period and will include checks of at least the following:

24.13.1 availability of facilities for purchasing tickets;

24.13.2 availability of full range of tickets;

24.13.3 administration of refund procedures; and

24.13.4 numbers of passengers travelling with a valid ticket.

25. DEVELOPMENT OF THE PERFORMANCE MONITORING REGIME AND THE PERFORMANCE INDICATORS

25.1 The Operator shall, in conjunction with **tie** and the **tie** Advisors, refine the Performance Indicators (including the benchmarks) that will monitor and measure the overall performance of the System during Project Phase D. Such refinements shall take account of the developments to the Project during Project Phases A and B and all such refinements shall be agreed between the Operator and **tie**.

25.2 The Performance Indicators shall cover the following disciplines:

25.2.1 safety & environment;

25.2.2 operations; and

25.2.3 maintenance

25.3 Each discipline may include the following components and unless otherwise agreed will be attributable to the Operator, the Infrastructure Provider or both, as indicated below. Automatic monitoring techniques shall be adopted for the Performance Monitoring Regime except where the Operator can demonstrate that this is not practicable. Where the responsibility for monitoring Performance Indicators does not lie solely with the Operator, the Operator shall be responsible for receiving relevant data from all other concerned parties, for reviewing the completeness of the data, for collation of data from all sources and for reporting to **tie**.

25.4 Safety & Environment Performance Indicators

25.4.1 Operator + Infrastructure Provider

- staff fatalities, accidents or injuries;
- derailments;
- planned general environmental inspections;
- staff competencies (safety critical);
- drugs & alcohol compliance;
- environmental audits (carried out and outstanding);
- maintenance corrective action reports (including track closures);
- staff working time exceedances;
- staff hours lost through sickness; and
- staff turnover

25.4.2 Operator

- fatalities, accidents or injuries to members of the public;
- passenger fatalities, accidents or injuries;
- collisions involving trams and other vehicles;

- SPASs (severe and / or technical);
- incidents of speeding;
- near misses (public or vehicles);
- instances of crime/vandalism; and
- malicious acts

25.4.3 Infrastructure Provider

- Line closure (maintenance) irregularities;

25.5 Operations Performance Indicators

25.5.1 Operator + Infrastructure Provider

- Cancellations due to Operator and/or Infrastructure Provider;

25.5.2 Operator

- service regularity;
- service punctuality;
- service availability;
- number of operational incidents by type and severity;
- service delay/disruption by type/location/minutes delay;
- overcrowding and operational hindrance; and
- journey times over key stages;

25.5.3 Infrastructure Provider

- fleet reliability;
- fleet failure by type and frequency;
- Infrastructure and Equipment / System availability; and

- critical failures: System/AC/DC traction equipment;

25.6 Maintenance Performance Indicators

25.6.1 Operator + Infrastructure Provider

- temporary speed restrictions;
- incident response (response to failures);
- System failures (signalling, information, communications);
- signalling failures; and
- removal of graffiti;

25.6.2 Operator

- cleanliness at stops and in vehicles;

25.6.3 Infrastructure Provider

- route availability;
- broken or defective rails;
- incident response (rectification);
- signalling system equipment maintenance against plan;
- track asset equipment maintenance against plan;
- overhead line equipment maintenance against plan;
- structures, buildings (including Tramstop & Depot) maintenance against plan; and
- overhead line failure.

26. DEVELOPMENT OF OPERATING METHOD STATEMENTS

26.1 Content of the Operating Method Statement

26.1.1 Using as a basis the information prepared by the Operator during the tender process leading to the execution of this Agreement, the Operator shall develop, in consultation with the tie Advisers, and where necessary in conjunction with others, Operating Method Statements covering its duties and obligations during commissioning (Project Phase C) and operations (Project Phase D).

26.1.2 The minimum requirements for the Operating Method Statements are that it shall encompass the following components:

- Operations Management Plan;
- Service Integration Plan;
- Trial Run Validation Plan;
- Maintenance Plan (Operator Maintenance);
- Health and Safety Plan;
- Training Plan;
- Approvals Management Plan;
- Quality Management Plan;
- Document Management Plan;
- Incident Management Plan;
- Systems Assurance Plan;
- Testing and Commissioning Plan;
- Environmental and Sustainability Management Plan;
- Security Management Plan;
- Marketing Plan;

- Public Liaison and Media Plan; and
- System Integration Plan.

26.1.3 The minimum coverage of each of the above plans is provided in the following paragraphs. The terms of the Operating Method Statements shall be subject to **tie**'s approval prior to the end of Project Phase B.

26.1.4 It is recognised that during Project Phase B, the scheme may not be developed to the extent that all of these plans can be finalised. However, scheme definition will have advanced sufficiently for the plans to be prepared in some detail and sufficiently to identify staff structure and any costs associated with implementation of the plans. These costs will be taken into account when agreeing the Target Operating Costs and any adjustments to the Fixed Costs (excluding the Category One Fixed Costs and the Category Five Fixed Costs) pursuant to paragraph 23 and/or the setting of the Target Revenues by the Joint Revenue Committee.

26.1.5 Any amendment to the Operating Method Statements during Project Phase C or thereafter shall be subject to the approval of **tie** pursuant to Schedule 9 (*Review Procedure*) and to the extent that any such amendment will affect the operating costs or revenues during Project Phase D, the Target Operating Costs, Fixed Costs (other than the Category Five Fixed Costs) and/or Target Revenues may be amended in accordance with the Variation procedure.

26.2 Operations Management Plan

26.2.1 The Operator shall produce operations management documents covering rules, procedures and actions to be observed in Project Phase D, including incident management. These documents shall describe the rules to be followed by personnel in the course of their duties, whether site based or mobile and when undertaking operational and maintenance activities. The Operator shall ensure that the Operations Management Plan shall where appropriate encompass the requirement of other more detailed plans within the Operating Method Statements (e.g. with respect to training or Health and Safety). These documents shall cover the following situations:

- normal unperturbed operations for the System;

- arrangements for staff training and competence assessment of all Operator Parties engaged in the operation of the System, including the core competencies applicable to all staff and/or Operator Parties engaged in the Project Operations;
- procedures for managing disruption to the System, however caused;
- disaster recovery procedures and during accidents and emergencies;
- management of alternative transport when required;
- revenue collection;
- the process for integration of Lines 1, 2 and 3 to form common operational procedures;
- operational performance benchmarking, monitoring and reporting;
- provision of appropriate technical resources to investigate, develop and implement solutions to operational problems;
- complaints management;
- the monitoring, review and amendment where necessary of third party interface agreements including in particular road, rail and utility interfaces; and
- feedback of corrective actions into the operational procedures.

26.3 Service Integration Plan

The Operator shall continue to develop, in association with other public transport operators, a Service Integration Plan as described in paragraph 12 above in relation to Project Phase A. The plan shall take account of any developments in planning or transportation matters, or any change in policies of **tie** or CEC which might affect service integration and public transport provision.

26.4 Trial Run Validation Plan

26.4.1 The Operator shall prepare a trial run validation plan which shall include but not be limited to the following activities in respect of each stage of introduction and the System as a whole:

- the simulated introduction of Equipment failure at times unknown to the personnel operating the System;
- the staged introduction of misbehaving passengers at times unknown to the personnel operating the System;
- the staged introduction of large crowds of passengers at times unknown to the personnel operating the System;
- the simulation of a fire with subsequent emergency evacuation of passengers;
- the simulated introduction of operating staff illness;
- the simulated introduction of external influences such as power supply failure, leaves on track, ice and snow conditions, road traffic accidents or other line obstructions;
- the quality management activities necessary to ensure proper performance of tests and reporting;
- the safety management activities necessary to ensure that safety is not jeopardised by the trial running validation activities;
- other requirements that may be specified by HMRI; and
- where necessary the participation of the emergency services and other authorities.

26.4.2 The Operator shall further develop the Trial Run Validation Plan in conjunction with the Infrastructure Provider during Project Phase C pursuant to paragraph 34.

26.5 Maintenance Plan

26.5.1 The Operator shall develop, in consultation with the **tie** Advisers, the Maintenance Plan.

26.5.2 The Maintenance Plan shall require that the Operator shall carry out the Operator Maintenance with the objective of ensuring that the functionality of all Equipment and elements used in providing the Transport Services (and other Project Operations) is maintained and that the visual and physical appearance of the System does not deteriorate through the build up of litter, dirt, debris, detritus, industrial or bodily fluids.

26.5.3 Operator Maintenance, and the required frequency of such maintenance, shall be as follows:

- cleaning of all Tramstops, access ways and car parks operated under the auspices of **tie** so as to ensure they are clean and free from all litter, dirt, debris, detritus, industrial and bodily fluids; such cleaning to be carried out not less than daily;
- emptying of all litter bins at Tramstops or on the Trams daily or as regularly as necessary to prevent them from becoming full;
- promptly remove any observed or reported rubbish and debris at the Tramstops or on Trams likely to create a risk of fire or other dangers; and
- regularly remove any observed or reported litter on Trams throughout each day so as to maintain a reasonably clean travelling environment for passengers. This obligation shall also relate to the cleaning up of observed or reported fluids of any type on the Trams.

26.5.4 Operator Maintenance shall also include the carrying out of the initial response to a failure of, damage to or other incident occurring on the System which:

- (a) is not specifically identified in paragraph 26.5.3 as the Operator's responsibility to resolve; but
- b) actually or, in the Operator's reasonable opinion, potentially interrupts or delays the Transport Services.

26.5.5 The initial response referred to in paragraph 26.5.4 ("Initial Response") includes the following activities:

- (a) initial reporting of the occurrence of a failure, damage or other incident to the relevant Infrastructure Provider including (if appropriate) request for urgent maintenance or repair;
- (b) to the extent necessary, attendance at the site of the occurrence of the Operator's operations and/or maintenance staff to assess the cause of the problem;
- (c) determination of the appropriate course of action;
- (d) where possible and safe and within the capabilities immediately available to the Operator, rectification of the problem by the Operator;
- (e) where possible and safe and within the Operator's immediately available capabilities, implementation of temporary repairs; and
- (f) implementation of measures to overcome and/or mitigate the disruption to Transport Services.

26.5.6 The Initial Response will not include the performance of permanent repairs except where these are of a minor or trivial nature.

26.5.7 In relation to any requirement for an Initial Response, the Operator shall initiate a response to an incident requiring an Initial Response within 15 minutes of the earlier of:-

- (a) the Operator identifying that such incident has occurred; and
- (b) an Infrastructure Provider or tie notifying the Operator of such incident; and
- (c) any other third party notifying the Operator of such incident through the Helpdesk or otherwise.

26.5.8 Without prejudice to paragraph 26.5.7, the Operator shall, acting reasonably, have complete discretion regarding the manner in which it undertakes the Initial Response including any action which it chooses to take to mitigate disruption to Transport Services.

26.5.9 **tie** confirms that the Operator shall have no liability to **tie** or any Infrastructure Provider for any liability, damages or loss suffered by **tie** or any Infrastructure Provider, including in relation to:

- (a) any loss of availability payment by an Infrastructure Provider; or
- (b) any payment of any availability payment by **tie** to an Infrastructure Provider in respect of any period when the System was not fully available

arising from the Operator's response to the requirement to undertake an Initial Response unless (and to the extent that) the Operator's action in undertaking or failing to respond to the requirement for such Initial Response were:-

- (i) in breach of its undertakings in paragraph 26.5.7; or
- (ii) negligent.

26.5.10 Notification to Infrastructure Provider

- (a) Except where the relevant Infrastructure Provider has notified the Operator in accordance with Clause 34.2.1, the Operator shall notify the relevant Infrastructure Provider by telephone or radio (as appropriate) immediately following a report to the Control Centre or Helpdesk of the occurrence of a failure, damage or other incident requiring an Initial Response.
- (b) Representatives of the relevant Infrastructure Provider shall be entitled to attend the site of the incident in order to consult on the appropriate measures to be taken to restore normal Transport Services and to observe any actions taken by the Operator.
- (c) As soon as possible following the incident, the Operator shall issue a written report to the relevant Infrastructure Provider describing the incident, its cause (so far as known), its duration, its location, the actions taken and any follow up actions required.

26.5.11 The Maintenance Plan shall state that in carrying out its maintenance obligations, the Operator shall use all reasonable endeavours to minimise:

- disruption to Transport Services;

- impairment of access to Transport Services by passengers whose mobility is in any way impaired; and
- the environmental impact of carrying out such obligations.

26.6 Health and Safety Plan

26.6.1 The Operator shall develop a Health and Safety Plan which shall satisfy all relevant Law and shall cover as a minimum the following:

- approach to setting and verification of safety standards;
- management control, monitoring and implementation of corrective action in respect of health and safety;
- benchmarking, monitoring, control and reporting of health and safety related incidents including near misses;
- the confidential reporting system required to be established and maintained;
- arrangements for ensuring security and safety of staff and the public;
- Operator Parties' health and safety scrutiny arrangements;
- approach to discharge of responsibilities under the CDM Regulations;
- approach to human factors and ergonomics; and
- drug and alcohol policy.

26.6.2 **tie** and the Operator shall ensure (in consultation with the **tie** Advisers) that by the end of Project Phase B in respect of any Line, the Health and Safety Plan is properly integrated with the health and safety plan of the Infrastructure Provider for that Line.

26.7 Training Plan

26.7.1 The Operator shall develop a Training Plan to ensure the competencies of all staff and Operator Parties (and their staff) engaged in the operation of the System. The implementation of the Training Plan shall be the direct responsibility of the Operator's managing director. An essential element of the Training Plan is that all

staff and Operator Parties (and their staff) receive safety training prior to undertaking any duties related to operation of the System.

26.7.2 The Training Plan shall include as a minimum, the following:

- induction training for all staff which not only embraces the policies and organisation of the Operator but also the safety culture of a public transport system;
- health and safety policy and procedure training for all staff including staff employed by any Operator Party;
- technical training for drivers, controllers or technical/operations staff to the standards as established by HMRI, such training to ensure the safe and competent operation of all Trams and Infrastructure and Equipment;
- incident management procedures for operational and support staff;
- cross training in order to ensure flexibility of working by staff and full understanding of the duties of others;
- staff development and re-training programmes;
- training log for each employee and employee of any Operator Party;
- the quality of all training and re-training should meet all health and safety requirements with specific emphasis to that required by the HMRI; and
- as a general principle employees should only be required to carry out tasks for which they have been trained.

26.7.3 The Training Plan shall comprise a comprehensive training programme for both Project Phase C (commissioning) and Project Phase D (operational). As regards training in Project Phase C, the Operator shall ensure that such training courses are coordinated with the commissioning of the System to ensure that trainees derive maximum benefit from progressive involvement.

26.8 Overall Approvals Management Plan and Approvals Management Plan

26.8.1 An Overall Approvals Management Plan for the System shall be developed by **tie** and **tie**'s Advisers, which shall cover at least the following:

- (a) all statutory Necessary Consents to be obtained, identifying in each case the applicable Relevant Authority, the person or body responsible for obtaining the statutory Necessary Consent, and the intended date by which such statutory Necessary Consent is to be obtained;
- (b) all third party Necessary Consents to be obtained, identifying in each case the applicable third party, the person or body responsible for obtaining the third party Necessary Consent, and the intended date by which the third party Necessary Consent is to be obtained;
- (c) procedures to be used in obtaining statutory Necessary Consents and third party Necessary Consents; and
- (d) procedures for maintaining the Overall Approvals Management Plan.

26.8.2 The Operator shall comply with all aspects of the Overall Approvals Management Plan as may be necessary to implement and maintain the Overall Approvals Management Plan.

26.8.3 The Operator shall develop an Approvals Management Plan capable of incorporation within the Overall Approvals Management Plan and covering at least the following:

- (a) all statutory Necessary Consents to be obtained by the Operator and the intended date by which such statutory Necessary Consents are to be obtained;
- (b) all third party Necessary Consents to be obtained, by the Operator and the intended date by which such third party Necessary Consents are to be obtained;
- (c) procedures to be used by the Operator in obtaining statutory Necessary Consents and third party Necessary Consents required in terms of paragraphs (a) and (b) above; and

(d) procedures for maintaining the Overall Approvals Management Plan.

26.8.4 The Operator shall comply with all aspects of the Approvals Management Plan as may be necessary to implement and maintain the Approvals Management Plan.

26.9 Quality Management Plan

26.9.1 The Operator shall develop a Quality Management Plan which shall satisfy the requirements of the Operator's independent auditor and shall encompass at least the following:

- quality management and control procedures (including those of Operator Parties engaged in the Project Operations);
- internal and external quality audit programme; and
- change management procedures.

26.9.2 The Quality Management Plan shall comply with BS EN ISO 9001:2000 or equivalent and the Operator shall subject the system described in the Quality Management Plan to regular independent audits at the Operator's own cost. Copies of the audit reports shall be provided to **tie** on request.

26.10 Document Management Plan

The Operator shall develop a Document Management Plan which shall cover at least the following:

26.10.1 procedures for documentation control (including in relation to the issue of documents to **tie** or CEC); and

26.10.2 a schedule of documents to be prepared by, for or on behalf of the Operator in carrying out the mobilisation, commissioning and operation of the System, including details as to their purpose, distribution, document hierarchy and intended issue date (such schedule to be updated in the event of change).

26.11 Incident Management Plan

26.11.1 The Incident Management Plan to be developed by the Operator shall consider at least the following possible events and shall develop procedures to be followed should they occur:

- road traffic accident;
- crowd control;
- signalling failure (local or system wide);
- power failure;
- Tram breakdown;
- service obstruction;
- passenger emergency (e.g. heart attack);
- fire;
- criminal or hooligan behaviour; and
- driver illness.

26.11.2 Where appropriate and necessary the Incident Management Plan should be developed in conjunction with the HMRI, CEC, Police, Emergency Services, and Network Rail and should include options for the provision of alternative rail or bus services during periods of closure of all or part of the System.

26.12 Systems Assurance Plan

The Operator shall develop a Systems Assurance Plan which shall incorporate as a minimum the following:

26.12.1 System assurance organisation and key personnel;

26.12.2 responsibilities for delivering the Systems Assurance Plan;

26.12.3 procedures for monitoring and controlling all Operator Parties;

26.12.4 details of the integration of systems assurance analysis with design and construction, including:

- decision making process;
- management of unacceptable risks;
- action management;
- management of programme deviations;

26.12.5 targets to be met (including in relation to the reliability of the Transport Services);

26.12.6 systems assurance programme;

26.12.7 techniques and methods to be employed;

26.12.8 outline of systems assurance demonstration plan;

26.12.9 procedures for the collection, analysis, correction and documentation of failures (FRACAS – Failure Reporting and Corrective Action System); and

26.12.10 internal audit programme, techniques and procedures.

26.13 Environmental and Sustainability Management Plan

The Operator, in conjunction with **tie** and the **tie** Advisers, shall develop an Environmental and Sustainability Management Plan which shall comply with all relevant Legislation and shall cover as a minimum the following:

26.13.1 environmental management system (EMS) including the consolidation of all existing Environmental Statements (lodged to support the parliamentary process), obligations and undertakings into a unified EMS for the Edinburgh tram system;

26.13.2 environmental management procedures;

26.13.3 purchasing policy and arrangements regarding the future availability and sustainability of materials together with their potential performance, taking due account of the whole life cost implications of using such materials; and

26.13.4 benchmarking, sustainability and delivering continuous improvement.

26.14 Security Management Plan

26.14.1 The Operator shall develop a Security Management Plan including appropriate security measures utilising the Infrastructure and Equipment provided through the Infrastructure Provider, which shall encompass at least the following:

- (a) passenger and staff personal security arrangements;
- (b) the provision of appropriate levels of illumination (including the avoidance of dark corners) at, and on the approaches to, Tramstops;
- (c) arrangements for working with third parties to effectively control and reduce security risks to passengers and staff when on or about the Edinburgh Tram Network;
- (d) benchmarking, monitoring, control and reporting of security related incidents;
- (e) management, control, monitoring and implementation of corrective action in respect of personal security.
- (f) application of technology in safeguarding passenger and staff security.
- (g) passenger 'help points' at Tramstops linked to the Control Centre and to video recording; and
- (h) application of CCTV surveillance covering platform areas and facilities, ticket vending machines, 'help points', park and ride sites, Tram interiors, and also to areas outside those specifically required to be covered within these requirements.

26.14.2 In addition, the Operator shall provide appropriate security measures to complement the above which must at least include consultation with and consideration of the recommendations of all relevant police authorities and forces (including Lothian and Borders Police and/or British Transport Police) for preventative uniformed patrols on the System, for responses to incidents/accidents and for joint crime-prevention initiatives in schools, youth clubs and in the local community;

26.15 Marketing Plan

The Operator shall develop a Marketing Plan based on the information prepared by the Operator during the tender process leading to the execution of this Agreement which shall encompass, without limitation:

- 26.15.1 ticket sales arrangements, including from outlets other than Tramstops or on the Trams;
- 26.15.2 promotion to passengers of the integrated public transport services offered by the Operator and other operators;
- 26.15.3 marketing and public relations in respect of the Transport Services generally;
- 26.15.4 advertising of the Transport Services (provided that any promotion of the Transport Services at Tramstops or on the Trams shall comply with **tie's** restrictions in relation to advertising); and
- 26.15.5 local community relationships, possibly to include open days.

26.16 Public Liaison and Media Plan

In conjunction with **tie**, the Operator shall develop, maintain and implement a Public Liaison and Media Plan which shall contain as a minimum the following:

- 26.16.1 arrangements for the provision of support to **tie's** and CEC's public liaison team;
- 26.16.2 information centre(s) to be provided and location;
- 26.16.3 information and newsletters proposed to be publicly issued on a regular, periodic or occasional basis;
- 26.16.4 proposed procedures for notifying affected members of the public or other third parties of planned work comprised in the maintenance of the Edinburgh Tram Network;
- 26.16.5 proposals to maintain/build up support for the Edinburgh Tram Network;
- 26.16.6 proposals for informing the public as to the role of the Operator and the Infrastructure Provider;

26.16.7 procedures for replying to queries or complaints from the public;

26.16.8 plans for public information meetings;

26.16.9 procedures for the regular production of press releases;

26.16.10 proposals for the provision of information at local level; and

26.16.11 proposals for website information and co-ordination with the **tie** tram website.

26.17 System Integration Plan

26.17.1 The Operator shall develop a Systems Integration Plan to be implemented when necessary for each occasion when a change is made to the operating network, whether complete opening of a partially operational Line, the addition of a new Line to the Core Network, or the opening of an extension to any Line.

26.17.2 The plan shall cover proposals for integration of Transport Services, information systems and ticketing. In conjunction with Infrastructure Providers (during Project Phase C) the Operator shall include within the plan proposals for the testing and commissioning of the new Infrastructure and Equipment whilst maintaining operational Transport Services on the existing network. Any interruption of Transport Services in order to achieve System Integration under paragraph 26.17.1 above shall not last longer than one Business Day. The plan shall also address any changes in the maintenance regime arising from the additional Transport Services.

27. PLANNING SUPERVISOR

27.1 Duties as planning supervisor under the requirements of the CDM Regulations are currently undertaken by the **tie** Advisors for technical, operational and environmental matters for each Line.

28. SAFETY MANAGEMENT SYSTEM DEVELOPMENT

28.1 The Operator shall develop, to the satisfaction of **tie**, HMRI and other concerned authorities, a generic safety management system for the commissioning and operation of the System to the level necessary to ensure that relevant safety requirements are included in the tender documentation for the Infrastructure Delivery Agreement.

- 28.2 The generic safety management system shall be capable of development to a full and final version prior to commencement of commissioning of the System during Project Phase C.
- 28.3 The preliminary work on the safety management system will include the production of a safety justification framework document that will indicate the likely format and some of the detail of the eventual safety case that the Operator will be required to present to, and gain approval from, HMRI
- 28.4 The framework document will be drafted in consultation with the HMRI and other relevant bodies. It is expected to embrace the following subject areas:
- 28.4.1 description of the operation: Introductory section giving general description of the System, identification of safety responsibilities and reporting mechanisms;
 - 28.4.2 arrangements during initial access to the Lines: Organisation and management of working staff, safety, emergency arrangements, identification of staff, insurance, safety audit, arrangements for keeping and distributing records;
 - 28.4.3 arrangements for testing and staff training: Organisation and management of staff, safety arrangements including staff working on the Tramway, emergency arrangements, identification of staff, insurance, fault analysis, safety audit, arrangements for keeping and distributing records;
 - 28.4.4 infrastructure management: Track, speed limits, public crossings (surface and bridges), fencing, Tramstop infrastructure, monitoring and reporting systems;
 - 28.4.5 Tram operating arrangements: Operating arrangements including route knowledge, signalling etc., fitness and training of staff, certification of staff, Tram preparation, defect and breakdown procedures, communications, control of access to driving cabs, shunting arrangements;
 - 28.4.6 Tramstop arrangements: Operating arrangements, crowd control, emergency planning, access for contractors, control of access and vandalism, security;
 - 28.4.7 Tram maintenance arrangements: Engineering and operational acceptance of Tram vehicles, competence of staff engaged on maintenance, quality assurance, technical audit, monitoring, reporting of defects, procedure for imposing operating restrictions, acceptance of Trams for the Transport Services;

- 28.4.8 infrastructure maintenance: Inspection procedures, accreditation, control and monitoring, reporting procedures, emergency arrangements, communications, signage and warnings in the operating environment;
- 28.4.9 Interfaces with other organisations: Liaison with Emergency Services, HMRI, and highways authorities;
- 28.4.10 risk assessment: Assessment of the risks associated with all aspects of the Project Operations including groups of people most at risk, severity of failure event and likelihood of event occurring;
- 28.4.11 Health & Safety Policy: Policy statement, monitoring arrangements, alcohol and drugs policy including testing and disciplinary action; and
- 28.4.12 Code of Practice for working on or near the Line

29. PASSENGER'S CHARTER

- 29.1 The Operator shall, in conjunction with **tie**, prepare a passengers' charter in plain language to take effect from the Service Commencement Date for each Line.
- 29.2 It is intended that elements of the charter shall include:
 - 29.2.1 a statement of the Operator's intentions;
 - 29.2.2 standards of service covering punctuality, availability and reliability;
 - 29.2.3 level of provision and service for passengers with respect to, for example, telephone enquiries and services, provision for passengers with disabilities, bicycles and luggage;
 - 29.2.4 method of dealing with service disruptions;
 - 29.2.5 compensation arrangements in the event of service disruption or below-standard performance;
 - 29.2.6 contact details for comments and complaints;
 - 29.2.7 response times; and
 - 29.2.8 method of dealing with passengers.

29.3 It is also intended that the charter will contain information on the following matters:

29.3.1 interchange facilities;

29.3.2 service integration details (rail, air, bus and Park-and-Ride);

29.3.3 Timetable information display locations;

29.3.4 policy on planned disruption of service;

29.3.5 available guides and maps;

29.3.6 passenger information systems;

29.3.7 safety and security arrangements;

29.3.8 guidance to passengers (personal stereos, mobile telephones, animal carriage, litter, disabled or mobility impaired passengers);

29.3.9 ticket types, purchase and availability;

29.3.10 service standards;

29.3.11 vehicle and stop standards;

29.3.12 maintenance commitment;

29.3.13 complaints procedure; and

29.3.14 fault reporting procedure.

30. FINAL FUNDING APPROVAL

The Operator shall support **tie**'s applications for final funding approvals and contracts for the provision of funding for the Project by the Scottish Executive, CEC local development contributions or any other source of project funding (other than the Operator and the Operator Parties).

31. GATEWAY FROM PROJECT PHASE B TO PROJECT PHASE C

31.1 The Operator will notify **tie** when the Operator considers that it has completed each of the tasks to be carried out pursuant to Project Phase B in respect of a Line and that all matters to

- be agreed during Project Phase B have been agreed between the Operator and **tie**. Without limitation, the Operator will not serve such notice until:
- 31.1.1 the agreement between **tie** and the Operator of:
- (a) the Target Costs for Project Phase C2 in respect of that Line;
 - (b) (if there is to be a time interval between the Service Commencement Date and the Full Service Commencement Date in respect of that Line), the Interim Target Operating Costs and the Interim Fixed Costs for such period; and
 - (c) the Target Operating Costs and Fixed Costs (except for those Fixed Costs which have already been set) to take effect from the Full Service Commencement Date in respect of that Line;
- 31.1.2 the execution of the Infrastructure Delivery Agreement in respect of that Line by the relevant Infrastructure Provider; and
- 31.1.3 the setting of Interim Target Revenues (if there is to be a time interval between the Service Commencement Date and the Full Service Commencement Date in respect of that Line), or Target Revenues by the Joint Revenue Committee.
- 31.2 If **tie** agrees that all of such tasks have been completed and/or relevant matters agreed, **tie** shall notify the Operator that Project Phase C shall commence in respect of that Line.
- 31.3 To the extent that **tie** considers that any such task has not been completed by the Operator and/or relevant matter agreed, **tie** will notify the Operator accordingly, including details of the further activities to be carried out by the Operator in order to complete such task.
- 31.4 To the extent that some but not all of the Project Phase B tasks have been completed and/or relevant matters agreed, **tie** may, in its sole discretion, notify the Operator that Project Phase C shall commence in respect of that Line and issue a PPCN, and in such circumstances:
- 31.4.1 **tie** may direct that some or all of the Project Phase C Project Development Services shall be commenced; and
 - 31.4.2 the Operator shall continue to provide the Project Phase B Project Development Services until (i) the relevant tasks have been completed, and (ii) all matters to be

agreed during Project Phase B have been agreed between the Operator and **tie**, or until **tie** otherwise directs.

PROJECT PHASE C

Design, Build and Commissioning

32. INTRODUCTION

- 32.1 The primary objectives of **tie**, the **tie** Advisers and the Operator during Project Phase C in respect of any Line shall be to:
- 32.1.1 project manage the delivery of the Infrastructure and Equipment in respect of that Line pursuant to the Infrastructure Delivery Agreement for that Line including, without limitation, in respect of:
- (a) the detailed design of the Infrastructure and Equipment;
 - (b) the building of the Infrastructure and Equipment; and
 - (c) the testing and commissioning of the Infrastructure and Equipment, including the integration of the Infrastructure and Equipment with that in respect of any other Line;
- 32.1.2 prepare for Project Phase D, including the recruitment and training of staff; and
- 32.1.3 continue to revise the Operating Method Statements and their component plans.
- 32.2 The Operator shall work together with **tie** and the **tie** Advisers during Project Phase C to carry out the functions referred to in the following paragraphs to ensure that the Infrastructure and Equipment to be provided pursuant to each Infrastructure Delivery Agreement shall enable the achievement of a high standard of reliability in the operation of the Transport Services.
- 32.3 Project Phase C shall be split into 2 parts, Project Phase C1 and Project Phase C2.
- 32.4 Some of the Project Development Services to be provided by the Operator during Project Phase C shall be provided throughout Project Phase C; others shall be provided only during Project Phase C1 or Project Phase C2, as appropriate. Paragraph 33 provides further details.

33. PROJECT DEVELOPMENT ACTIVITIES DURING PROJECT PHASE C

- 33.1 In support of the primary objectives for Project Phase C set out in paragraph 32 above, the Operator shall, during Project Phase C in respect of each Line, comply with the requirements of paragraph 33.2 below.
- 33.2 The principal obligations of the Operator during Project Phase C1 are:
- 33.2.1 to advise and support **tie** upon aspects of the detailed design and construction of the Infrastructure and Equipment; and
 - 33.2.2 to advise **tie** in the project management of the delivery of the Infrastructure and Equipment;
 - 33.2.3 to prepare and plan for the commissioning and testing process to be carried out in Project Phase C2, without limitation by developing a Testing and Commissioning Plan in conjunction with the Infrastructure Provider, **tie** and the **tie** Advisers; and
 - 33.2.4 in conjunction with **tie** and the **tie** Advisers, to commence the commissioning and testing process in relation to the Infrastructure and Equipment (including both factory and site acceptance tests).
- 33.3 The principal obligations of the Operator during Project Phase C2 are:
- 33.3.1 to recruit, employ and train staff for Project Phase C2 (*Commissioning and Testing*) and Project Phase D (*Operations*); and
 - 33.3.2 in conjunction with **tie** and **tie's** Advisers, to complete the commissioning and testing process in relation to the Infrastructure and Equipment (including any factory and site acceptance tests not carried out in Phase C1).
- 33.4 Throughout Project Phase C, the Operator shall:
- 33.4.1 continue to maintain up to date, and revise as necessary, the Operating Method Statements;
 - 33.4.2 continue to revise the Service Integration Plan together with other public transport operators;

- 33.4.3 manage and supervise the obtaining of all Operator Necessary Consents for the System, to the extent not already obtained during Project Phase A or Project Phase B; and
- 33.4.4 comply with any relevant Necessary Consents forming part of the Overall Approvals Management Plan.
- 33.5 All activities referred to in this paragraph 33 shall be carried out in accordance with the relevant plans in the Operating Method Statements.

34. FURTHER DEVELOPMENT OF THE OPERATING METHOD STATEMENTS

- 34.1 Using as a basis the Operating Method Statements prepared in accordance with this Project Development Output Specification during Project Phase B, the Operator shall further develop and keep up to date the plans within the Operating Method Statements during Project Phase C, in consultation with **tie** and/or the Infrastructure Provider and/or any other relevant third parties to the extent appropriate.
- 34.2 Without limitation to paragraph 34.1, the Operator shall further develop in consultation with the relevant Infrastructure Provider(s):
 - 34.2.1 the Testing and Commissioning Plan;
 - 34.2.2 the Trial Run Validation Plan;
 - 34.2.3 the Maintenance Plan. To the extent that **tie** has requested the Operator to manage the performance by an Infrastructure Provider of its obligations under the relevant IDA, the Maintenance Plan shall be extended to cover the management of such maintenance;
 - 34.2.4 the Incident Management Plan, such development to also be in consultation with HMRI, CEC, the Emergency Services, and Network Rail; and
 - 34.2.5 the System Integration Plan.
- 34.3 Any changes to the Operating Method Statements during Project Phase C:
 - 34.3.1 shall be subject to the consent of **tie** pursuant to Schedule 9 (*Review Procedure*); and

34.3.2 shall not result in any amendment to the Fixed Costs, Target Operating Costs or the Target Revenues, or any other terms of the Operating Appendix, unless otherwise provided for in this Agreement or expressly agreed by **tie**.

PROJECT PHASE C1

35. OPERATOR'S PROJECT DEVELOPMENT RESOURCES DURING PROJECT PHASE C1

In addition to the Operator Project Manager appointed pursuant to Clause 6.7, the Operator's Core Team shall include the resources set out in the Project Development and Operating Costs during Project Phase C1.

36. OPERATOR'S ROLE DURING CONSTRUCTION

36.1 **tie** intends to establish a joint project management team at the beginning of Project Phase C to oversee delivery of the Infrastructure and Equipment for the System, comprising staff from **tie**, the **tie** Advisors and the Operator.

36.2 The IDA signed during Project Phase B will be concluded directly between **tie** and one or more Infrastructure Providers. **tie** intends to use the joint project management team to administer and engineer the IDA(s) through delegated powers. The Operator shall provide one or more representatives to the joint project management team, as may be required by **tie**, to ensure that the best advice is available to **tie** on all relevant aspects of the scheme, primarily related to operational issues.

36.3 The project management team will:

36.3.1 observe and report on the acceptability of proposed designs against the Design Manual and the Infrastructure and Equipment Output Specification and the ability of the proposals to meet operational objectives;

36.3.2 observe and report on the quality of Infrastructure and Equipment provision and installation and its compliance with the Infrastructure and Equipment Output Specification;

36.3.3 monitor progress of provision and installation;

36.3.4 certify progress to **tie** for payment purposes; and

36.3.5 audit compliance with the Code of Construction Practice.

37. TESTING AND COMMISSIONING PLAN

In conjunction with the Infrastructure Provider in respect of the relevant Line, and by agreement with **tie** and the **tie** Advisors, the Operator shall develop a Testing and Commissioning Plan in respect of

that Line, such plan to be finalised and agreed by the Operator and **tie** prior to the commencement of Project Phase C2 for such Line. This plan shall encompass at least the following:

- 37.1 programme and sequence for all testing and commissioning;
- 37.2 procedures for factory acceptance testing;
- 37.3 proposed pre-operational tests;
- 37.4 proposed soak testing of passenger interface equipment or elsewhere as agreed;

“Passenger Interface Equipment” shall comprise dynamic visual displays, public address systems and the like located Tramstops or on board Tram vehicles.
- 37.5 control and monitoring processes for the progression of the testing and commissioning programme;
- 37.6 method for reporting on completed testing and commissioning;
- 37.7 testing and commissioning documentation control procedures;
- 37.8 process for managing non-conformances and re-testing;
- 37.9 management of safety during testing and commissioning (including the training of staff and contingency provisions);
- 37.10 recruitment and training of Project Operations Staff to be coordinated with the commissioning of each Line and the subsequent commencement of the Transport Services on such Line; and
- 37.11 process for the acceptance for operational purposes of the Infrastructure and Equipment from the Infrastructure Provider to the Operator.

38. GATEWAY FROM PROJECT PHASE C1 TO PROJECT PHASE C2

- 38.1 **tie** will issue a certificate to the Operator (“**Pre-Mobilisation Certificate**”) to authorise mobilisation of those key staff required to initiate preparations (including but not exclusively planning and limited recruitment) for operational capability on the anticipated date for opening of the Line.
- 38.2 The Pre-Mobilisation Certificate for a Line shall be issued at a time to be agreed between **tie**, the Operator and the Infrastructure Provider(s) based upon the then current progress towards Planned

Service Commencement Date for the Line in accordance with the Project Programme and in sufficient time to permit an orderly process of staff recruitment.

- 38.3 **tie** will issue a certificate to the Operator (“**Mobilisation Certificate**”) when it considers that the Operator should proceed to commence full mobilisation of all necessary operational staff and the other activities pursuant to Project Phase C2.
- 38.4 The Mobilisation Certificate for a Line will be issued not less than nine months prior to the Planned Service Commencement Date for the Line in accordance with the Project Programme.

PROJECT PHASE C2

39. OPERATOR'S PROJECT DEVELOPMENT RESOURCES DURING PROJECT PHASE C2

39.1 In addition to the Operator Project Manager appointed pursuant to Clause 6.7, the Operator shall devise and provide a suitable management structure to deliver:

39.1.1 the Project Development Services during Project Phase C2; and

39.1.2 to prepare to deliver the Transport Services (together with any other Project Operations) during Project Phase D,

such management structure to be subject to the approval of **tie**, such approval not to be unreasonably withheld or delayed.

39.2 The Operator's management structure will be headed by the Operator Project Manager who will be assisted by experienced managers in all relevant disciplines, to include, as a minimum, operations, finance, quality assurance, human resources, marketing and safety.

39.3 The management structure plan devised pursuant to paragraph 39.2 may be amended during the progress of developments during Project Phase C2 to align with development of the System and its operations, such amendments to be subject to the approval of **tie**, such approval not to be unreasonably withheld or delayed.

39.4 The management structure plan shall define roles and responsibilities covering all aspects of the operation of the System including operations, maintenance, safety, customer services, public liaison, training and recruitment.

40. OPERATOR'S ROLE DURING TESTING AND COMMISSIONING

- 40.1 In addition to continued participation in the joint project management team as outlined in paragraph 39 above, the Operator shall also take specific responsibility for management of the testing and commissioning process, such responsibilities to be carried out in accordance with the Testing and Commissioning Plan.
- 40.2 The responsibilities of the Operator in relation to management of the testing and commissioning process shall include:
- 40.2.1 observation if necessary and appropriate of any factory acceptance tests on Equipment to be provided;
 - 40.2.2 attendance and certification of site acceptance tests on Infrastructure and/or Equipment not completed within Project Phase C1, if necessary and appropriate;
 - 40.2.3 coordinating the obtaining of all Necessary Consents for commissioning and public operation and complying with those which are relevant to the Operator;
 - 40.2.4 appointment and training of staff necessary for operation and maintenance of the System in public operation; and
 - 40.2.5 ensuring that all relevant operational subcontracts are in place and that appropriate subcontractor staff training programmes are implemented.

41. MOBILISATION OF STAFF FOR PROJECT PHASE C2 AND PROJECT PHASE D

- 41.1 The Operator shall comply with the provisions of Clause 14 (*Personnel Issues*) of the Agreement in relation to appointing staff to operate and maintain the System.
- 41.2 The Operator shall safeguard efficient engagement on Project Phase D of the Project through sufficiency and timeliness of staff mobilisation at all levels.
- 41.3 The Operator shall create a manual describing the roles of each member of the Project Operations Staff and providing specific instructions for the proper performance of their duties. The Operator shall maintain and keep such manual up to date throughout Project Phase C2 and Project Phase D. The Operator shall provide to the ~~tie~~ Project Manager a copy of such manual (and each successive update) as soon as reasonably practicable after its production.

42. STAFF TRAINING

The Operator shall comply with the terms of the Training Plan in relation to the training of all staff during Project Phase C and, without limitation, the Operator shall:

- 42.1 arrange for the necessary specialised training to ensure the competence of staff engaged in the provision of the Transport Services in relation to the operation of equipment, rapid fault finding and in the repair and maintenance of equipment provided; and
- 42.2 ensure that such training courses are coordinated with the commissioning of the System to ensure that trainees derive maximum benefit from progressive involvement.

43. MARKETING, PROMOTIONAL PUBLIC LIAISON AND MEDIA ACTIVITIES

The Operator shall comply with the terms of the Marketing Plan and the Public Liaison and Media Plan during Project Phase C.

44. CONSUMABLES, MATERIALS AND EQUIPMENT

The Operator shall comply with the provisions of paragraph 14 of the Operating Output Specification during Project Phase C2.



~~Director~~/Authorised Signatory
Transport Initiatives Edinburgh Limited



~~Director~~/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

SCHEDULE 3

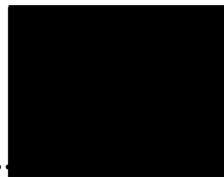
Key Personnel

The Key Personnel listed below shall be as identified in the Project Development and Operating Costs, and/or as may be notified by the Operator to tie in accordance with this Agreement or otherwise.

1. *Project Director*
2. *General Manager*
3. *Technical Engineer*
4. *Senior Commercial Manager*
5. *Operations Manager*
6. *Operator Project Manager*
7. *Deputy Operator Project Manager*
8. *Quality Manager*



~~Director~~/Authorised Signatory
Transport Initiatives Edinburgh Limited



~~Director~~/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

SCHEDULE 4

Financial Proposals

Schedule 4											
Financial Proposals											
Caps	Nominal										
Network Phase A & B Cap	1,655,680										
Network Phase C1 Cap	2,269,468										
Target Costs for Project Phase C2	Real										
	1-Apr-03										
Network	3,269,650										
Line 1	2,200,691										
Line 2	2,209,268										
Profit Element Project Phase C2	Real										
	1-Apr-03										
	TOTAL	28-Feb-09	31-Mar-09	30-Apr-09	31-May-09	30-Jun-09	31-Jul-09	31-Aug-09	30-Sep-09	31-Oct-09	
Network	331,789	13,983	13,983	12,522	39,002	46,161	39,915	43,298	44,642	78,283	

Line 1	219,549	13,006	13,006	11,569	24,275	30,919	24,819	27,480	28,271	46,204		
Line 2	220,449	13,008	13,008	11,572	24,772	31,403	25,226	27,887	28,554	45,019		
Profit Element Project Phase D	Real											
	1-Apr-03											
	TOTAL	31-Mar-10	31-Mar-11	31-Mar-12	31-Mar-13	31-Mar-14	31-Mar-15	31-Mar-16	31-Mar-17	31-Mar-18	31-Mar-19	31-Mar-20
Network	6,154,598	257,305	636,534	637,276	637,651	637,839	638,029	638,222	638,420	638,621	638,824	155,879
Line 1	3,874,806	160,555	400,956	401,301	401,493	401,606	401,722	401,841	401,966	402,094	402,224	99,048
Line 2	3,733,165	154,556	386,451	386,790	386,945	387,006	387,067	387,128	387,189	387,250	387,311	95,470
Project Return												
Project Phases A-C1	20.0%											
Project Phases C2- D	10.5%											

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Transport Initiatives Edinburgh Limited

[Redacted Signature]

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TRANSDEV Edinburgh Tram Limited

SCHEDULE 5

Operator Financial Model

The Operator Financial Model is contained in the CD signed as relative hereto.



**Director/Authorised Signatory
Transport Initiatives Edinburgh Limited**



**Director/~~Authorised Signatory~~
TRANSDEV Edinburgh Tram Limited**

SCHEDULE 6

Project Development and Operating Costs

Table 1

Phase A				
Staff Member	At Cost Rate	Project Return	Project Return	Core?
	£/day		Adjusted	
	1-Apr-03	20%	1-Apr-03	
General Manager (GM)	639 £/day		766 £/day	Core
Technical Engineer (TE)	559 £/day		671 £/day	Core
Snr Commercial Manager	1,050 £/day		1,260 £/day	Core
Transportation Consultant	910 £/day		1,092 £/day	Non Core
David Humphrey (DH)	718 £/day		862 £/day	Core
Assistant	137 £/day		164 £/day	Core
Network Rail Expert	910 £/day		1,092 £/day	Non Core
Daniel Danman	948 £/day		1,138 £/day	Non Core
Operations Manager	248 £/day		298 £/day	Core
Christian Buisson	1,305 £/day		1,566 £/day	Non Core
Engineering Manger	248 £/day		298 £/day	Core
Legal Advisor	1,400 £/day		1,680 £/day	Non Core
Financial Modelling Consultant	2,100 £/day		2,520 £/day	Non Core

Phase B				
Staff Member	At Cost Rate	Project Return	Project Return Adjusted	Core?
	£/day			
	1-Apr-03	20%		
General Manager (GM)	639 £/day		766 £/day	Core
Technical Engineer (TE - Jim Harris)	559 £/day		671 £/day	Core
Operations Manager	248 £/day		298 £/day	Core
Safety & Standards Manager	217 £/day		261 £/day	Core
David Humphrey	718 £/day		862 £/day	Core
Engineering Manager	248 £/day		298 £/day	Core
Assistant	137 £/day		164 £/day	Core
Snr Commercial Manager	1,050 £/day		1,260 £/day	Core
Technical Support Engineer (TSE)	186 £/day		224 £/day	Core
Transamo Director	1,305 £/day		1,566 £/day	Non Core
Transportation Consultant	910 £/day		1,092 £/day	Non Core
Legal Advisor	1,400 £/day		1,680 £/day	Non Core
Planning Supervisor	630 £/day		756 £/day	Non Core
Financial Modelling Consultant	2,100 £/day		2,520 £/day	Non Core

Phase C1				
Staff Member	At Cost Rate	Project Return	Project Return Adjusted	Core?
	£/day			
	1-Apr-03	20%		
General Manager (GM)	639 £/day		766 £/day	Core
Technical Engineer (TE)	559 £/day		671 £/day	Core
Operations Manager	248 £/day		298 £/day	Core
Safety & Standards Manager	217 £/day		261 £/day	Core
Test Engineer 1	600 £/day		720 £/day	Core
Test Engineer 2	600 £/day		720 £/day	Core
Technical Support Engineer (TSE)	186 £/day		224 £/day	Core
Engineering Manager	248 £/day		298 £/day	Core
Assistant	137 £/day		164 £/day	Core
Snr Commercial Manager	1,050 £/day		1,260 £/day	Core
Operations Assistant	87 £/day		104 £/day	Core
Finance Manager	248 £/day		298 £/day	Core
Accounts Assistant 1	124 £/day		149 £/day	Core
Accounts Assistant 2	124 £/day		149 £/day	Core
Transamo Director	1,305 £/day		1,566 £/day	Non Core
Legal Advisor	1,400 £/day		1,680 £/day	Non Core
David Humphrey	630 £/day		756 £/day	Non Core

Financial Modelling Consultant	2,100 £/day		2,520 £/day	Non Core

Other Items Phases A-C1	Annual sum 01-Apr-03	Project Return 20%	Project Return Adjusted £/year
Insurance			
Employers Liability	3,000		3,600
Professional Indemnity	90,000		108,000
Third Party	5,250		6,300
Management Fee	10,000		12,000

3a Line 1

ANTICIPATED JOB TITLE		NUMBER	At Cost (SPV) Rate k£/year	Profit Margin	TIE Rate		ANNUAL TIE COST £	MOBILISATION PHASE C2	TOTAL TIE COST C2 £	OPERATIONAL PHASE D
Scenario	Excluding Margin k£/year				Profit Margin £/month	PERIOD REQUIRED PRIOR TO FULL OPERATION MONTHS		TOTAL TIE ANNUAL COST £		
CORPORATE MANAGEMENT										
General Manager	Standard	1	148 k£/year	0.0%	148 k£/year	12,330 £/mth	147,960	9	110,970	147,960
Operations Manager	Standard	1	59 k£/year	0.0%	59 k£/year	4,950 £/mth	59,400	9	44,550	59,400
Commercial Manager	Standard	1	52 k£/year	0.0%	52 k£/year	4,363 £/mth	52,350	9	39,263	52,350
Part-time Test Engineer	Standard	1	173 k£/year		173 k£/year	14,400 £/mth	n/a	2	28,800	
OPERATIONS										
Duty Managers	Standard	11	31 k£/year	0.0%	31 k£/year	2,603 £/mth	343,530	9	257,648	343,530
Operations Supervisor	Standard	7	23 k£/year	0.0%	23 k£/year	1,952 £/mth	163,961	9	122,971	163,961
Operations Assistant	Standard	1	18 k£/year	0.0%	18 k£/year	1,518 £/mth	18,218	9	13,664	18,218
Drivers	Standard	48	22 k£/year	0.0%	22 k£/year	1,843 £/mth	1,061,808	6	530,904	1,061,808
Engineering Manager	Standard	1	59 k£/year	0.0%	59 k£/year	4,950 £/mth	59,400	9	44,550	59,400
Vehicle Engineer	Standard	1	42 k£/year	0.0%	42 k£/year	3,525 £/mth	42,300	9	31,725	42,300
Infrastructure Engineer	Standard	2	42 k£/year	0.0%	42 k£/year	3,525 £/mth	84,600	9	63,450	84,600
Safety and Standards Manager	Standard	1	52 k£/year	0.0%	52 k£/year	4,363 £/mth	52,350	9	39,263	52,350
Performance Regime Manager	Standard	1	49 k£/year	0.0%	49 k£/year	4,113 £/mth	49,350	9	37,013	49,350
Clerk	Standard	1	31 k£/year	0.0%	31 k£/year	2,585 £/mth	31,020	9	23,265	31,020
FINANCE										
Finance Manager	Standard	1	56 k£/year	0.0%	56 k£/year	4,700 £/mth	56,400	9	42,300	56,400
Accounts Assistant	Standard	2	28 k£/year	0.0%	28 k£/year	2,350 £/mth	56,400	9	42,300	56,400

COMMERCIAL										
Marketing Manager	Standard	1	29 k£/year	0.0%	29 k£/year	2,417 £/mth	29,000	6	14,500	29,000
Temp Cust Service - First 6 months of Phase D	Standard	10	147 k£/year	0.0%	147 k£/year	12,259 £/mth	n/a	1	122,588	
ADMINISTRATION										
Secretaries	Standard	1	31 k£/year	0.0%	31 k£/year	2,585 £/mth	31,020	9	23,265	31,020
Admin. Staff	Standard	1	21 k£/year	0.0%	21 k£/year	1,763 £/mth	21,150	6	10,575	21,150
Debt Recovery Staff	Standard	2	28 k£/year	0.0%	28 k£/year	2,333 £/mth	56,000	6	28,000	56,000
REVENUE PROTECTION STAFF										
Customer Service	Standard	24	22 k£/year	0.0%	22 k£/year	1,843 £/mth	530,904	1	44,242	530,904
Security Staff	Standard	4	28 k£/year	0.0%	28 k£/year	2,350 £/mth	112,800	1	9,400	112,800
Cashiers	Standard	2	21 k£/year	0.0%	21 k£/year	1,763 £/mth	42,300	1	3,525	42,300
Revenue Protection Manager	Standard	1	45 k£/year	0.0%	45 k£/year	3,750 £/mth	45,000	9	33,750	45,000
TOTAL									1,762,478	3,147,221

3a Line 2

ANTICIPATED JOB TITLE		NUMBER			TIE Rate		TIE Rate			MOBILISATION PHASE C2		OPERATIONAL PHASE D
			At Cost (SPV) Rate	Profit Margin	Excluding Profit Margin	Excluding Profit Margin	ANNUAL TIE COST	PERIOD REQUIRED PRIOR TO FULL OPERATION	TOTAL TIE COST C2	TOTAL TIE ANNUAL COST		
	Scenario		k£/year		k£/year	£/month	£	MONTHS	£	£		
CORPORATE MANAGEMENT												
General Manager	Standard	1	148 k£/year	0.0%	148 k£/year	12,330 £/mth	147,960	9	110,970	147,960		
Operations Manager	Standard	1	59 k£/year	0.0%	59 k£/year	4,950 £/mth	59,400	9	44,550	59,400		
Commercial Manager	Standard	1	52 k£/year	0.0%	52 k£/year	4,363 £/mth	52,350	9	39,263	52,350		
Part-time Test Engineer	Standard	1	173 k£/year		173 k£/year	14,400 £/mth	n/a	2	28,800			
OPERATIONS												
Duty Managers	Standard	11	31 k£/year	0.0%	31 k£/year	2,603 £/mth	343,530	9	257,648	343,530		
Operations Supervisor	Standard	7	23 k£/year	0.0%	23 k£/year	1,952 £/mth	163,961	9	122,971	163,961		
Operations Assistant	Standard	1	18 k£/year	0.0%	18 k£/year	1,518 £/mth	18,218	9	13,664	18,218		
Drivers	Standard	53	22 k£/year	0.0%	22 k£/year	1,843 £/mth	1,172,413	6	586,207	1,172,413		
Engineering Manager	Standard	1	59 k£/year	0.0%	59 k£/year	4,950 £/mth	59,400	9	44,550	59,400		
Vehicle Engineer	Standard	1	42 k£/year	0.0%	42 k£/year	3,525 £/mth	42,300	9	31,725	42,300		
Infrastructure Engineer	Standard	2	42 k£/year	0.0%	42 k£/year	3,525 £/mth	84,600	9	63,450	84,600		
Safety and Standards Manager	Standard	1	52 k£/year	0.0%	52 k£/year	4,363 £/mth	52,350	9	39,263	52,350		
Performance Regime Manager	Standard	1	49 k£/year	0.0%	49 k£/year	4,113 £/mth	49,350	9	37,013	49,350		
Clerk	Standard	1	31 k£/year	0.0%	31 k£/year	2,585 £/mth	31,020	9	23,265	31,020		
FINANCE												
Finance Manager	Standard	1	56 k£/year	0.0%	56 k£/year	4,700 £/mth	56,400	9	42,300	56,400		
Accounts Assistant	Standard	2	28 k£/year	0.0%	28 k£/year	2,350 £/mth	56,400	9	42,300	56,400		

COMMERCIAL										
Marketing Manager	Standard	1	29 k£/year	0.0%	29 k£/year	2,417 £/mth	29,000	6	14,500	29,000
Temp Cust Service - First 6 months of Phase D	Standard	10	147 k£/year	0.0%	147 k£/year	12,259 £/mth	n/a	1	122,588	
ADMINISTRATION										
Secretaries	Standard	1	31 k£/year	0.0%	31 k£/year	2,585 £/mth	31,020	9	23,265	31,020
Admin. Staff	Standard	1	21 k£/year	0.0%	21 k£/year	1,763 £/mth	21,150	6	10,575	21,150
Debt Recovery Staff	Standard	2	28 k£/year	0.0%	28 k£/year	2,333 £/mth	56,000	6	28,000	56,000
REVENUE PROTECTION STAFF										
Customer Service	Standard	16	22 k£/year	0.0%	22 k£/year	1,843 £/mth	353,936	1	29,495	353,936
Security Staff	Standard	4	28 k£/year	0.0%	28 k£/year	2,350 £/mth	112,800	1	9,400	112,800
Cashiers	Standard	2	21 k£/year	0.0%	21 k£/year	1,763 £/mth	42,300	1	3,525	42,300
Revenue Protection Manager	Standard	1	45 k£/year	0.0%	45 k£/year	3,750 £/mth	45,000	9	33,750	45,000
TOTAL									1,803,033	3,080,858

3a Network

ANTICIPATED JOB TITLE	NUMBER	At Cost (SPV) Rate	Profit Margin	TIE Rate	TIE Rate	ANNUAL TIE COST	MOBILISATION PHASE C2	TOTAL TIE COST C2	OPERATIONAL PHASE D	
				Excluding Profit Margin	Excluding Profit Margin		PERIOD REQUIRED PRIOR TO FULL OPERATION		TOTAL TIE ANNUAL COST	
	Scenario	k£/year		k£/year	£/month	£	MONTHS	£	£	
CORPORATE MANAGEMENT										
General Manager	Standard	1	148 k£/year	0.0%	148 k£/year	12,330 £/mth	147,960	9	110,970	147,960
Operations Manager	Standard	1	59 k£/year	0.0%	59 k£/year	4,950 £/mth	59,400	9	44,550	59,400
Commercial Manager	Standard	1	52 k£/year	0.0%	52 k£/year	4,363 £/mth	52,350	9	39,263	52,350
Part-time Test Engineer	Standard	1	173 k£/year		173 k£/year	14,400 £/mth	n/a	2	28,800	
OPERATIONS										
Duty Managers	Standard	11	31 k£/year	0.0%	31 k£/year	2,603 £/mth	343,530	9	257,648	343,530
Operations Supervisor	Standard	9	23 k£/year	0.0%	23 k£/year	1,952 £/mth	210,807	9	158,105	210,807
Operations Assistant	Standard	1	18 k£/year	0.0%	18 k£/year	1,518 £/mth	18,218	9	13,664	18,218
Drivers	Standard	106	22 k£/year	0.0%	22 k£/year	1,843 £/mth	2,344,826	6	1,172,413	2,344,826
Engineering Manager	Standard	1	59 k£/year	0.0%	59 k£/year	4,950 £/mth	59,400	9	44,550	59,400
Vehicle Engineer	Standard	1	42 k£/year	0.0%	42 k£/year	3,525 £/mth	42,300	9	31,725	42,300
Infrastructure Engineer	Standard	3	42 k£/year	0.0%	42 k£/year	3,525 £/mth	126,900	9	95,175	126,900
Safety and Standards Manager	Standard	1	52 k£/year	0.0%	52 k£/year	4,363 £/mth	52,350	9	39,263	52,350
Performance Regime Manager	Standard	1	49 k£/year	0.0%	49 k£/year	4,113 £/mth	49,350	9	37,013	49,350
Clerk	Standard	1	31 k£/year	0.0%	31 k£/year	2,585 £/mth	31,020	9	23,265	31,020

FINANCE										
Finance Manager	Standard	1	56 k£/year	0.0%	56 k£/year	4,700 £/mth	56,400	9	42,300	56,400
Accounts Assistant	Standard	2	28 k£/year	0.0%	28 k£/year	2,350 £/mth	56,400	9	42,300	56,400
COMMERCIAL										
Marketing Manager	Standard	1	29 k£/year	0.0%	29 k£/year	2,417 £/mth	29,000	6	14,500	29,000
Temp Cust Service - First 6 months of Phase D	Standard	20	147 k£/year	0.0%	147 k£/year	12,259 £/mth	n/a	1	245,175	
ADMINISTRATION										
Secretaries	Standard	1	31 k£/year	0.0%	31 k£/year	2,585 £/mth	31,020	9	23,265	31,020
Admin. Staff	Standard	2	21 k£/year	0.0%	21 k£/year	1,763 £/mth	42,300	6	21,150	42,300
Debt Recovery Staff	Standard	4	28 k£/year	0.0%	28 k£/year	2,333 £/mth	112,000	6	56,000	112,000
REVENUE PROTECTION STAFF										
Customer Service	Standard	36	22 k£/year	0.0%	22 k£/year	1,843 £/mth	796,356	1	66,363	796,356
Security Staff	Standard	7	28 k£/year	0.0%	28 k£/year	2,350 £/mth	197,400	1	16,450	197,400
Cashiers	Standard	2	21 k£/year	0.0%	21 k£/year	1,763 £/mth	42,300	1	3,525	42,300
Revenue Protection Manager	Standard	1	45 k£/year	0.0%	45 k£/year	3,750 £/mth	45,000	9	33,750	45,000
TOTAL									2,661,180	4,946,587

3b Phase C2 Line 1

PHASE C2		MOBILISATION PHASE C2	At Cost (SPV) Annual Rate	Profit Margin	TIE Annual Rate	TIE Monthly Cost	TOTAL TIE COST PHASE C2
		PERIOD REQUIRED PRIOR TO FULL OPERATION					
	Scenario	MONTHS	k£/year		k£/year	£/month	£
Travel, Hotels, etc.	Standard	6	5 k£/year	0.0%	5 k£/year	439 £/mth	2,636
External Training & Welfare	Standard	6	32 k£/year	0.0%	32 k£/year	2,626 £/mth	15,758
Office machinery rentals	Standard	6	6 k£/year	0.0%	6 k£/year	505 £/mth	3,030
Consumables & subscriptions	Standard	6	5 k£/year	0.0%	5 k£/year	455 £/mth	2,727
Health, Safety & Environmental costs	Standard	6	3 k£/year	0.0%	3 k£/year	250 £/mth	1,500
Legal Advice	Standard	9	5 k£/year	0.0%	5 k£/year	417 £/mth	3,750
Telephone expenses	Standard	6	22 k£/year	0.0%	22 k£/year	1,869 £/mth	11,212
Finance support	Standard	6	10 k£/year	0.0%	10 k£/year	833 £/mth	5,000
Uniforms	Standard	6	30 k£/year	0.0%	30 k£/year	2,458 £/mth	14,750
Recruitment	Standard	6	5 k£/year	0.0%	5 k£/year	455 £/mth	2,727
Medical examinations	Standard	6	7 k£/year	0.0%	7 k£/year	606 £/mth	3,636
Ticket Stock	Standard	6	5 k£/year	0.0%	5 k£/year	455 £/mth	2,727
Passenger information (Timetables etc.)	Standard	2	20 k£/year	0.0%	20 k£/year	1,667 £/mth	3,333
Launch Costs	Standard	3	320 k£/year	0.0%	320 k£/year	26,667 £/mth	80,000
Market Research	Standard	2	20 k£/year	0.0%	20 k£/year	1,667 £/mth	3,333
Training materials	Standard	6	2 k£/year	0.0%	2 k£/year	202 £/mth	1,212
Audit & Investors in People	Standard	6	5 k£/year	0.0%	5 k£/year	455 £/mth	2,727
Road vehicle costs 1	Standard	6	16 k£/year	0.0%	16 k£/year	1,333 £/mth	8,000
Maintenance IT system support	Standard	6	8 k£/year	0.0%	8 k£/year	707 £/mth	4,242
Other Power & Gas	Standard	6	36 k£/year	0.0%	36 k£/year	2,980 £/mth	17,879
Water & Sewerage	Standard	6	7 k£/year	0.0%	7 k£/year	606 £/mth	3,636
Tram cleaning	Standard	4	65 k£/year	0.0%	65 k£/year	5,455 £/mth	21,818
Tramstop and infrastructure cleaning	Standard	2	55 k£/year	0.0%	55 k£/year	4,596 £/mth	9,192
Provision of helpdesk	Standard	6	20 k£/year	0.0%	20 k£/year	1,667 £/mth	10,000

Accidental Damage --> standard	Standard	6	26 k£/year	0.0%	26 k£/year	2,200 £/mth	13,200
Accidental Damage --> risk element	Standard	6	14 k£/year	0.0%	14 k£/year	1,144 £/mth	6,865
Vanadalisation Damage --> standard	Standard	6	44 k£/year	0.0%	44 k£/year	3,652 £/mth	21,910
Vanadalisation Damage --> risk element	Standard	6	22 k£/year	0.0%	22 k£/year	1,848 £/mth	11,085
Graffiti Damage --> standard	Standard	6	18 k£/year	0.0%	18 k£/year	1,496 £/mth	8,975
Graffiti Damage --> risk element	Standard	6	10 k£/year	0.0%	10 k£/year	792 £/mth	4,750
One-off purchase of software	Standard	9	13 k£/year	0.0%	13 k£/year	1,111 £/mth	10,000

Other Items Phase C2	Annual sum 01-Apr-03	Project Return 10.5%	Project Return Adjusted £/year 01-Apr-03
Insurance			
Employers Liability: base	3,000		3,315
Employers Liability additional staff (per person)	50		55.25
Professional Indemnity	53,000		58,565
Third Party	5,250		5,801
Management Fee	80,000		88,400

3b Phase C2 Line 2

PHASE C2		MOBILISATION PHASE C2	At Cost (SPV) Annual Rate	Profit Margin	TIE Annual Rate	TIE Monthly Cost	TOTAL TIE COST PHASE C2
		PERIOD REQUIRED PRIOR TO FULL OPERATION					
	Scenario	MONTHS	k£/year		k£/year	£/month	£
Travel, Hotels, etc.	Standard	6	4 k£/year	0.0%	4 k£/year	366 £/mth	2,197
External Training & Welfare	Standard	6	26 k£/year	0.0%	26 k£/year	2,189 £/mth	13,131
Office machinery rentals	Standard	6	5 k£/year	0.0%	5 k£/year	421 £/mth	2,525
Consumables & subscriptions	Standard	6	5 k£/year	0.0%	5 k£/year	379 £/mth	2,273
Health, Safety & Environmental costs	Standard	6	3 k£/year	0.0%	3 k£/year	253 £/mth	1,515
Legal Advice	Standard	9	5 k£/year	0.0%	5 k£/year	417 £/mth	3,750
Telephone expenses	Standard	6	19 k£/year	0.0%	19 k£/year	1,557 £/mth	9,343
Finance support	Standard	6	9 k£/year	0.0%	9 k£/year	758 £/mth	4,545
Uniforms	Standard	6	29 k£/year	0.0%	29 k£/year	2,396 £/mth	14,375
Recruitment	Standard	6	5 k£/year	0.0%	5 k£/year	379 £/mth	2,273
Medical examinations	Standard	6	6 k£/year	0.0%	6 k£/year	505 £/mth	3,030
Ticket Stock	Standard	6	5 k£/year	0.0%	5 k£/year	379 £/mth	2,273
Passenger information (Timetables etc.)	Standard	2	17 k£/year	0.0%	17 k£/year	1,431 £/mth	2,862
Launch Costs	Standard	3	320 k£/year	0.0%	320 k£/year	26,667 £/mth	80,000
Market Research	Standard	2	17 k£/year	0.0%	17 k£/year	1,431 £/mth	2,862
Training materials	Standard	6	2 k£/year	0.0%	2 k£/year	168 £/mth	1,010
Audit & Investors in People	Standard	6	5 k£/year	0.0%	5 k£/year	379 £/mth	2,273
Road vehicle costs 1	Standard	6	16 k£/year	0.0%	16 k£/year	1,333 £/mth	8,000
Maintenance IT system support	Standard	6	7 k£/year	0.0%	7 k£/year	589 £/mth	3,535
Other Power & Gas	Standard	6	30 k£/year	0.0%	30 k£/year	2,483 £/mth	14,899
Water & Sewerage	Standard	6	6 k£/year	0.0%	6 k£/year	505 £/mth	3,030
Tram cleaning	Standard	4	55 k£/year	0.0%	55 k£/year	4,545 £/mth	18,182
Tramstop and infrastructure cleaning	Standard	2	46 k£/year	0.0%	46 k£/year	3,830 £/mth	7,660
Provision of helpdesk	Standard	6	17 k£/year	0.0%	17 k£/year	1,431 £/mth	8,586

Accidental Damage --> standard	Standard	6	22 k£/year	0.0%	22 k£/year	1,833 £/mth	11,000
Accidental Damage --> risk element	Standard	6	11 k£/year	0.0%	11 k£/year	953 £/mth	5,720
Vanadalisation Damage --> standard	Standard	6	37 k£/year	0.0%	37 k£/year	3,043 £/mth	18,255
Vanadalisation Damage --> risk element	Standard	6	18 k£/year	0.0%	18 k£/year	1,540 £/mth	9,240
Grafitti Damage --> standard	Standard	6	15 k£/year	0.0%	15 k£/year	1,247 £/mth	7,480
Grafitti Damage --> risk element	Standard	6	8 k£/year	0.0%	8 k£/year	660 £/mth	3,960
One-off purchase of software	Standard	9	13 k£/year	0.0%	13 k£/year	1,111 £/mth	10,000

Other Items Phase C2	Annual sum 01-Apr-03	Project Return 10.5%	Project Return Adjusted £/year 01-Apr-03
Insurance			
Employers Liability: base	3,000		3,315
Employers Liability additional staff (per person)	50		55.25
Professional Indemnity	53,000		58,565
Third Party	5,250		5,801
Management Fee	80,000		88,400

3b Phase C2 Network

PHASE C2	MOBILISATION PHASE C2	At Cost (SPV) Annual Rate	Profit Margin	TIE Annual Rate	TIE Monthly Cost Excluding Profit Margin	TOTAL TIE COST PHASE C2
	PERIOD REQUIRED PRIOR TO FULL OPERATION			Excluding Profit Margin	£/month	
	MONTHS	k£/year		k£/year		£
Travel, Hotels, etc.	6	9 k£/year	0.0%	9 k£/year	725 £/mth	4,350
External Training & Welfare	6	52 k£/year	0.0%	52 k£/year	4,333 £/mth	26,000
Office machinery rentals	6	10 k£/year	0.0%	10 k£/year	833 £/mth	5,000
Consumables & subscriptions	6	9 k£/year	0.0%	9 k£/year	750 £/mth	4,500
Health, Safety & Environmental costs	6	6 k£/year	0.0%	6 k£/year	500 £/mth	3,000
Legal Advice	9	5 k£/year	0.0%	5 k£/year	417 £/mth	3,750
Telephone expenses	6	37 k£/year	0.0%	37 k£/year	3,083 £/mth	18,500
Finance support	6	18 k£/year	0.0%	18 k£/year	1,500 £/mth	9,000
Uniforms	6	51 k£/year	0.0%	51 k£/year	4,271 £/mth	25,625
Recruitment	6	9 k£/year	0.0%	9 k£/year	750 £/mth	4,500
Medical examinations	6	12 k£/year	0.0%	12 k£/year	1,000 £/mth	6,000
Ticket Stock	6	9 k£/year	0.0%	9 k£/year	750 £/mth	4,500
Passenger information (Timetables etc.)	2	34 k£/year	0.0%	34 k£/year	2,833 £/mth	5,667
Launch Costs	3	400 k£/year	0.0%	400 k£/year	33,333 £/mth	100,000
Market Research	2	34 k£/year	0.0%	34 k£/year	2,833 £/mth	5,667
Training materials	6	4 k£/year	0.0%	4 k£/year	333 £/mth	2,000
Audit & Investors in People	6	9 k£/year	0.0%	9 k£/year	750 £/mth	4,500
Road vehicle costs 1	6	29 k£/year	0.0%	29 k£/year	2,417 £/mth	14,500
Maintenance IT system support	6	14 k£/year	0.0%	14 k£/year	1,167 £/mth	7,000
Other Power & Gas	6	59 k£/year	0.0%	59 k£/year	4,917 £/mth	29,500
Water & Sewerage	6	12 k£/year	0.0%	12 k£/year	1,000 £/mth	6,000
Tram cleaning	4	108 k£/year	0.0%	108 k£/year	9,000 £/mth	36,000
Tramstop and infrastructure cleaning	2	91 k£/year	0.0%	91 k£/year	7,583 £/mth	15,167
Provision of helpdesk	6	34 k£/year	0.0%	34 k£/year	2,833 £/mth	17,000

Accidental Damage --> standard	6	44 k£/year	0.0%	44 k£/year	3,629 £/mth	21,775
Accidental Damage --> risk element	6	23 k£/year	0.0%	23 k£/year	1,888 £/mth	11,325
Vanadalisation Damage --> standard	6	72 k£/year	0.0%	72 k£/year	6,025 £/mth	36,150
Vanadalisation Damage --> risk element	6	37 k£/year	0.0%	37 k£/year	3,049 £/mth	18,295
Graffiti Damage --> standard	6	30 k£/year	0.0%	30 k£/year	2,468 £/mth	14,810
Graffiti Damage --> risk element	6	16 k£/year	0.0%	16 k£/year	1,307 £/mth	7,840
One-off purchase of software	9	13 k£/year	0.0%	13 k£/year	1,111 £/mth	10,000

Other Items Phase C2	Annual sum 01-Apr-03	Project Return 10.5%	Project Return Adjusted £/year 01-Apr-03
Insurance			
Employers Liability: base	3,000		3,315
Employers Liability additional staff (per person)	50		55.25
Professional Indemnity	53,000		58,565
Third Party	5,250		5,801
Management Fee	80,000		88,400

3b Phase D Line 1

PHASE D		At Cost (SPV) Annual Rate	Profit Margin	TOTAL TIE ANNUAL COST PHASE D	OPERATIONAL PHASE D MONTHLY TIE COST
	Scenario	k£/year		k£/year	£/month
Travel, Hotels, etc.	Standard	5 k£/year	0.0%	5 k£/year	439 £/mth
External Training & Welfare	Standard	32 k£/year	0.0%	32 k£/year	2,626 £/mth
Cash collecting & counting	Standard	19 k£/year	0.0%	19 k£/year	1,616 £/mth
Office machinery rentals	Standard	6 k£/year	0.0%	6 k£/year	505 £/mth
Consumables & subscriptions	Standard	5 k£/year	0.0%	5 k£/year	455 £/mth
Health, Safety & Environmental costs	Standard	3 k£/year	0.0%	3 k£/year	250 £/mth
Legal Advice	Standard	5 k£/year	0.0%	5 k£/year	417 £/mth
Telephone expenses	Standard	22 k£/year	0.0%	22 k£/year	1,869 £/mth
Finance support	Standard	10 k£/year	0.0%	10 k£/year	833 £/mth
Uniforms	Standard	27 k£/year	0.0%	27 k£/year	2,250 £/mth
Recruitment	Standard	5 k£/year	0.0%	5 k£/year	455 £/mth
Medical examinations	Standard	7 k£/year	0.0%	7 k£/year	606 £/mth
Ticket Stock	Standard	5 k£/year	0.0%	5 k£/year	455 £/mth
Substitute Buses	Standard	18 k£/year	0.0%	18 k£/year	1,496 £/mth
Passenger information (Timetables etc.)	Standard	20 k£/year	0.0%	20 k£/year	1,667 £/mth
Advertising & Marketing Costs	Standard	60 k£/year	0.0%	60 k£/year	5,000 £/mth
Market Research	Standard	20 k£/year	0.0%	20 k£/year	1,667 £/mth
Training materials	Standard	2 k£/year	0.0%	2 k£/year	202 £/mth
Audit & Investors in People	Standard	5 k£/year	0.0%	5 k£/year	455 £/mth
Performance Monitoring Surveys	Standard	9 k£/year	0.0%	9 k£/year	750 £/mth
Road vehicle costs 1	Standard	16 k£/year	0.0%	16 k£/year	1,333 £/mth
Maintenance IT system support	Standard	8 k£/year	0.0%	8 k£/year	707 £/mth
Other Power & Gas	Standard	36 k£/year	0.0%	36 k£/year	2,980 £/mth
Water & Sewerage	Standard	7 k£/year	0.0%	7 k£/year	606 £/mth
Tram cleaning	Standard	65 k£/year	0.0%	65 k£/year	5,455 £/mth

Tramstop and infrastructure cleaning	Standard	55 k£/year	0.0%	55 k£/year	4,596 £/mth
Provision of helpdesk	Standard	20 k£/year	0.0%	20 k£/year	1,667 £/mth
Accidental Damage --> standard	Standard	26 k£/year	0.0%	26 k£/year	2,200 £/mth
Accidental Damage --> risk element	Standard	14 k£/year	0.0%	14 k£/year	1,144 £/mth
Vanadalisation Damage --> standard	Standard	44 k£/year	0.0%	44 k£/year	3,652 £/mth
Vanadalisation Damage --> risk element	Standard	22 k£/year	0.0%	22 k£/year	1,848 £/mth
Graffiti Damage --> standard	Standard	18 k£/year	0.0%	18 k£/year	1,496 £/mth
Graffiti Damage --> risk element	Standard	10 k£/year	0.0%	10 k£/year	792 £/mth
Miscellaneous costs	Standard	5 k£/year	0.0%	5 k£/year	455 £/mth

Other Items Phase D	Annual sum 01-Apr-03	Project Return 10.5%	Project Return Adjusted £/year 01-Apr-03
Insurance			
Employers Liability: base	3,000		3,315
Employers Liability additional staff (per person)	50		55.25
Professional Indemnity	53,000		58,565
Third Party:	0		0
RTA	2,500		2,762.5
Claims per month	3		3
Claims successful	40%		40%
Adjustment factor	75%		75%
Injuries	1,250		1,381.25
Claims	1.5 claims/ million passenger journeys		1.5 claims/ million passenger journeys
Claims successful	40%		40%
Management Fee	60,000		66,300
Bond 1% of £5million	50,000		55,250
Bank Charges	0.5% passenger revenue		0.5525% passenger revenue

3b Phase D Line 2

PHASE D		At Cost (SPV) Annual Rate	Profit Margin	TOTAL TIE ANNUAL COST PHASE D	OPERATIONAL PHASE D MONTHLY TIE COST
				k£/year	£/month
	Scenario	k£/year		k£/year	£/month
Travel, Hotels, etc.	Standard	4 k£/year	0.0%	4 k£/year	366 £/mth
External Training & Welfare	Standard	26 k£/year	0.0%	26 k£/year	2,189 £/mth
Cash collecting & counting	Standard	16 k£/year	0.0%	16 k£/year	1,347 £/mth
Office machinery rentals	Standard	5 k£/year	0.0%	5 k£/year	421 £/mth
Consumables & subscriptions	Standard	5 k£/year	0.0%	5 k£/year	379 £/mth
Health, Safety & Environmental costs	Standard	3 k£/year	0.0%	3 k£/year	253 £/mth
Legal Advice	Standard	5 k£/year	0.0%	5 k£/year	417 £/mth
Telephone expenses	Standard	19 k£/year	0.0%	19 k£/year	1,557 £/mth
Finance support	Standard	9 k£/year	0.0%	9 k£/year	758 £/mth
Uniforms	Standard	26 k£/year	0.0%	26 k£/year	2,188 £/mth
Recruitment	Standard	5 k£/year	0.0%	5 k£/year	379 £/mth
Medical examinations	Standard	6 k£/year	0.0%	6 k£/year	505 £/mth
Ticket Stock	Standard	5 k£/year	0.0%	5 k£/year	379 £/mth
Substitute Buses	Standard	15 k£/year	0.0%	15 k£/year	1,247 £/mth
Passenger information (Timetables etc.)	Standard	17 k£/year	0.0%	17 k£/year	1,431 £/mth
Advertising & Marketing Costs	Standard	50 k£/year	0.0%	50 k£/year	4,167 £/mth
Market Research	Standard	17 k£/year	0.0%	17 k£/year	1,431 £/mth
Training materials	Standard	2 k£/year	0.0%	2 k£/year	168 £/mth
Audit & Investors in People	Standard	5 k£/year	0.0%	5 k£/year	379 £/mth
Performance Monitoring Surveys	Standard	8 k£/year	0.0%	8 k£/year	673 £/mth
Road vehicle costs 1	Standard	16 k£/year	0.0%	16 k£/year	1,333 £/mth
Maintenance IT system support	Standard	7 k£/year	0.0%	7 k£/year	589 £/mth
Other Power & Gas	Standard	30 k£/year	0.0%	30 k£/year	2,483 £/mth
Water & Sewerage	Standard	6 k£/year	0.0%	6 k£/year	505 £/mth
Tram cleaning	Standard	55 k£/year	0.0%	55 k£/year	4,545 £/mth

Tramstop and infrastructure cleaning	Standard	46 k£/year	0.0%	46 k£/year	3,830 £/mth
Provision of helpdesk	Standard	17 k£/year	0.0%	17 k£/year	1,431 £/mth
Accidental Damage --> standard	Standard	22 k£/year	0.0%	22 k£/year	1,833 £/mth
Accidental Damage --> risk element	Standard	11 k£/year	0.0%	11 k£/year	953 £/mth
Vanadalisation Damage --> standard	Standard	37 k£/year	0.0%	37 k£/year	3,043 £/mth
Vanadalisation Damage --> risk element	Standard	18 k£/year	0.0%	18 k£/year	1,540 £/mth
Graffiti Damage --> standard	Standard	15 k£/year	0.0%	15 k£/year	1,247 £/mth
Graffiti Damage --> risk element	Standard	8 k£/year	0.0%	8 k£/year	660 £/mth
Miscellaneous costs	Standard	5 k£/year	0.0%	5 k£/year	379 £/mth

Other Items Phase D	Annual sum 01-Apr-03	Project Return 10.5%	Project Return Adjusted £/year 01-Apr-03
Insurance			
Employers Liability: base	3,000		3,315
Employers Liability additional staff (per person)	50		55.25
Professional Indemnity	53,000		58,565
Third Party:	0		0
RTA	2,500		2,762.5
Claims per month	2		2
Claims successful	40%		40%
Adjustment factor	75%		75%
Injuries	1,250		1,381.25
Claims	1.5 claims/ million passenger journeys		1.5 claims/ million passenger journeys
Claims successful	40%		40%
Management Fee	60,000		66,300
Bond 1% of £5million	50,000		55,250
Bank Charges	0.5% passenger revenue		0.5525% passenger revenue

3b Phase D Network

PHASE D	At Cost (SPV) Annual Rate	Profit Margin	TOTAL TIE ANNUAL COST PHASE D Excluding Profit Margin	OPERATIONAL PHASE D MONTHLY TIE COST Excluding Profit Margin
			k£/year	£/month
	k£/year		k£/year	£/month
Travel, Hotels, etc.	9 k£/year	0.0%	9 k£/year	725 £/mth
External Training & Welfare	52 k£/year	0.0%	52 k£/year	4,333 £/mth
Cash collecting & counting	32 k£/year	0.0%	32 k£/year	2,667 £/mth
Office machinery rentals	10 k£/year	0.0%	10 k£/year	833 £/mth
Consumables & subscriptions	9 k£/year	0.0%	9 k£/year	750 £/mth
Health, Safety & Environmental costs	6 k£/year	0.0%	6 k£/year	500 £/mth
Legal Advice	5 k£/year	0.0%	5 k£/year	417 £/mth
Telephone expenses	37 k£/year	0.0%	37 k£/year	3,083 £/mth
Finance support	18 k£/year	0.0%	18 k£/year	1,500 £/mth
Uniforms	46 k£/year	0.0%	46 k£/year	3,854 £/mth
Recruitment	9 k£/year	0.0%	9 k£/year	750 £/mth
Medical examinations	12 k£/year	0.0%	12 k£/year	1,000 £/mth
Ticket Stock	9 k£/year	0.0%	9 k£/year	750 £/mth
Substitute Buses	30 k£/year	0.0%	30 k£/year	2,468 £/mth
Passenger information (Timetables etc.)	34 k£/year	0.0%	34 k£/year	2,833 £/mth
Advertising & Marketing Costs	100 k£/year	0.0%	100 k£/year	8,333 £/mth
Market Research	34 k£/year	0.0%	34 k£/year	2,833 £/mth
Training materials	4 k£/year	0.0%	4 k£/year	333 £/mth
Audit & Investors in People	9 k£/year	0.0%	9 k£/year	750 £/mth
Performance Monitoring Surveys	16 k£/year	0.0%	16 k£/year	1,333 £/mth
Road vehicle costs 1	29 k£/year	0.0%	29 k£/year	2,417 £/mth
Maintenance IT system support	14 k£/year	0.0%	14 k£/year	1,167 £/mth
Other Power & Gas	59 k£/year	0.0%	59 k£/year	4,917 £/mth
Water & Sewerage	12 k£/year	0.0%	12 k£/year	1,000 £/mth
Tram cleaning	108 k£/year	0.0%	108 k£/year	9,000 £/mth

Tramstop and infrastructure cleaning	91 k£/year	0.0%	91 k£/year	7,583 £/mth
Provision of helpdesk	34 k£/year	0.0%	34 k£/year	2,833 £/mth
Accidental Damage --> standard	44 k£/year	0.0%	44 k£/year	3,629 £/mth
Accidental Damage --> risk element	23 k£/year	0.0%	23 k£/year	1,888 £/mth
Vanadalisation Damage --> standard	72 k£/year	0.0%	72 k£/year	6,025 £/mth
Vanadalisation Damage --> risk element	37 k£/year	0.0%	37 k£/year	3,049 £/mth
Graffiti Damage --> standard	30 k£/year	0.0%	30 k£/year	2,468 £/mth
Graffiti Damage --> risk element	16 k£/year	0.0%	16 k£/year	1,307 £/mth
Miscellaneous costs	9 k£/year	0.0%	9 k£/year	750 £/mth

Other Items Phase D	Annual sum 01-Apr-03	Project Return 10.5%	Project Return Adjusted £/year 01-Apr-03
Insurance			
Employers Liability: base	3,000		3,315
Employers Liability additional staff (per person)	50		55.25
Professional Indemnity	53,000		58,565
Third Party:	0		0
RTA	2,500		2,762.5
Claims per month	4		4
Claims successful	40%		40%
Adjustment factor	75%		75%
Injuries	1,250		1,381.25
Claims	1.5 claims/ million passenger journeys		1.5 claims/ million passenger journeys
Claims successful	40%		40%
Management Fee	60,000		66,300
Bond 1% of £5million	50,000		55,250
Bank Charges	0.5% passenger revenue		0.5525% passenger revenue

Director/Authorised Signatory
Transport Initiatives Edinburgh Limited

Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

SCHEDULE 7

Dispute Resolution Procedure

1. DISPUTE RESOLUTION PROCEDURE

- 1.1 Any Dispute shall be dealt with in accordance with the procedures contained in this Schedule 7.
- 1.2 Any Dispute shall, in the first instance, be referred to the **Internal Resolution Procedure** in accordance with paragraph 2 below.
- 1.3 Save as expressly provided for:
- 1.3.1 in paragraph 3 in respect of Disputes arising during Project Phases A or B (under exception of Disputes arising under or in relation to Clause 10.5 of the Agreement); and
- 1.3.2 in paragraph 4 in relation to Disputes arising during Project Phases C or D, or arising under or in relation to Clause 10.5 of the Agreement during any Project Phase;
- neither Party shall commence any court proceedings until the procedures in paragraphs 2 - 6 as appropriate of this Schedule 7 have been completed, under exception that the provisions of this Schedule 7 shall not apply so as to prevent either Party seeking an interim order, or interim relief, in the Scottish courts.
- 1.4 The provisions of this Schedule 7 shall not apply to matters expressly reserved to some other jurisdiction pursuant to the Scottish Private Bill(s).
- 1.5 In the event that any court proceedings whatsoever are initiated by either Party against the other, the Parties agree that the Court of Session, Scotland, shall have exclusive jurisdiction.
- 1.6 Neither Party shall be entitled to suspend the performance of its undisputed obligations under this Agreement merely by reason of the reference of any Dispute to the Dispute Resolution Procedure contained in this Schedule 7.
- 1.7 Subject to **tie's** discretionary rights set out in paragraph 6 to require that a Dispute and a Related Dispute (as defined in paragraph 6) be dealt with together at an appropriate

stage of the Dispute Resolution Procedure, the provisions of this Schedule 7 are mandatory and binding upon the Parties.

- 1.8 Unless a Party refers a Dispute to the Dispute Resolution Procedure contained in this Schedule 7 within three months of the date on which the event, matter or situation giving rise to the Dispute first occurred, such Party shall be deemed to have irrevocably waived any right to refer such Dispute to the Dispute Resolution Procedure contained in this Schedule 7, under exception that if such Party was not aware, and could not with reasonable diligence have been aware, that such event, matter or situation had occurred, this paragraph 1.8 shall have effect as if for the reference herein to the date on which such event, matter or situation occurred, there was substituted a reference to the date when such Party first became, or could with reasonable diligence have become, aware that such event, matter or situation had occurred. This paragraph 1.8 is without prejudice to the right of either Party to raise in defence to any Dispute any defence (including, without prejudice to the foregoing generality, any defence of retention, compensation or set-off) which would otherwise be available to it.
- 1.9 Except in relation to the matters provided for in paragraph 5 ("*Adjudication*"), and subject to the provisions of paragraph 1.10, in the event that either Party pursues any Dispute under the Dispute Resolution Procedure contained in this Schedule 7, and in the event that such Party fails to observe any time limit or timescale provided for in this Schedule 7 in relation to the pursuit or progression of such Dispute, such Party shall, immediately upon such failure occurring, be deemed to have irrevocably waived any right to pursue or progress such Dispute any further. In that event, such Party shall be deemed to have elected not to have referred such Dispute or to have withdrawn such Dispute from the Dispute Resolution Procedure contained in this Schedule 7 and shall be deemed to have irrevocably waived any right to refer the same or substantially the same Dispute to the Dispute Resolution Procedure contained in this Schedule 7 and shall be liable for payment of the whole fees incurred by any mediator or adjudicator who has acted in respect of such Dispute. This paragraph 1.9 is without prejudice to the rights of either Party to raise in defence to any Dispute any defence (including, without prejudice to the foregoing generality, any defence of retention, compensation or set-off) which would otherwise be available to it.
- 1.10 Notwithstanding the provisions of paragraph 1.9, in the event that a Party who pursues any Dispute under the Dispute Resolution Procedure contained in this

Schedule 7 fails to observe any time limit or timescale provided for in this Schedule 7 in relation to the pursuit or progression of the Dispute, the other Party may elect to waive such failure, in which event the time limit or timescale to which such failure relates shall be extended at the discretion of such other Party and the Dispute shall progress in accordance with the Dispute Resolution Procedure contained in this Schedule 7, subject that all other time limits and timescales provided for in this Schedule 7 which are affected by such extension shall be deemed to have been extended to give effect to such extension of the time limit or timescale to which such failure relates.

2. The following procedure is the Internal Resolution Procedure referred to in paragraph 1:
 - 2.1 In the event of any Dispute arising, the Operator Project Manager and the **tie** Project Manager shall seek to resolve the Dispute at a meeting to be convened within three Business Days of written notification by either Party to the other that it wishes to initiate the Internal Resolution Procedure in respect of that Dispute ("**Notification**"). Such Notification shall be given in accordance with the provisions of Clause 55 (*Notices*) of the Agreement.
 - 2.2 Further meetings may follow the meeting referred to in paragraph 2.1, but in any event, if the Dispute is not resolved within seven Business Days of Notification, each Party shall, before the expiry of the period of ten Business Days from Notification, serve, in accordance with the provisions of Clause 55 ("*Notices*") of the Agreement, a written position paper ("**Position Paper**") upon the other Party. Each Party's Position Paper shall state in reasonable detail that Party's position and required objectives in relation to the Dispute; any required redress, and, where possible, any comments on the other Party's position.
 - 2.3 Upon such service of a Position Paper by the Party initiating or pursuing the Dispute, the Chairman of the Operator's immediate parent company and the Chief Executive of **tie** (or their respective deputies in the event of their unavailability) shall seek to resolve the Dispute by meeting in good faith to discuss and negotiate upon the Dispute without recourse to legal or other proceedings.
 - 2.4 In the event that resolution of the Dispute is achieved by the Chairman of the Operator's immediate parent company and the Chief Executive of **tie**, the resolution shall be reduced to writing and, once it is signed by the duly authorised representatives of both Parties, shall be binding on the Parties.

- 2.5 Unless concluded by a written legally binding agreement, all discussions and negotiations connected with the Dispute shall be conducted in confidence and without prejudice to the rights of the Parties in any future legal or other proceedings. Nor may such matters be produced or relied upon in evidence in any such proceedings.
3. In the event that any Dispute arising during Project Phases A or B (under exception of Disputes arising under or in relation to Clause 10.5 of the Agreement) is not resolved by the Internal Resolution Procedure within a period of thirty Business Days from notification (or longer if so agreed by the Parties), such a Dispute shall be litigated before the Court of Session, Scotland, unless the Dispute is withdrawn by the Party initiating or pursuing the Dispute. The summons or petition in any such litigation shall be signetted and served within ten Business Days of the date of expiry of the period of thirty Business Days from notification (or longer if so agreed by the Parties).
4. In the event that any Dispute arising during Project Phases C or D, or arising under or in relation to Clause 10.5 of the Agreement during any Project Phase, is not resolved by the Internal Resolution Procedure within a period of thirty Business Days from notification (or longer if so agreed by the Parties) then the following provisions of this paragraph 4 shall apply;
- 4.1 The Chairman of the Operator's immediate parent company and the Chief Executive of **tie** (or their respective deputies in the event of their unavailability) shall, within a further period of five Business Days, seek to agree that the Dispute shall be resolved by any one of the following procedures:-
- 4.1.1 mediation in accordance with paragraphs 4.2 to 4.4; or
- 4.1.2 adjudication in accordance with paragraph 5, in which event the Referring Party must give its Notice of Adjudication to the other Party within five Business Days of the date of expiry of the period of thirty-five Business Days from Notification (or longer if so agreed by the Parties); or
- 4.1.3 litigation before the Court of Session, Scotland, in which event the Summons or Petition in any such litigation shall be signetted and served within ten Business Days of the date of expiry of the period of thirty-five Business Days from Notification (or longer if so agreed by the Parties).

In the event that the Chairman of the Operator's immediate parent company and the Chief Executive of tie (or their respective deputies in the event of their unavailability) are unable to agree that the Dispute be resolved by the procedures described in paragraphs 4.1.1 to 4.1.3, the Party initiating or pursuing the Dispute shall refer the Dispute to mediation (and thereafter, adjudication if necessary) in accordance with paragraphs 4.2 to 4.4.

- 4.2 The Parties shall attempt in good faith to resolve the Dispute by a procedure of mediation in accordance with the Centre for Effective Dispute Resolution mediation rules or Model Mediation Procedure in force at the commencement of the mediation, (or in the event that the Centre for Effective Dispute Resolution has ceased to exist as at the time of the commencement of the mediation, mediation rules or a model mediation procedure offered by any other body offering commercial mediation services which shall be selected by tie), which procedure shall be commenced within five Business Days of the date of expiry of the period of thirty-five Business Days from Notification (or longer if so agreed by the Parties). In the event that any provision of such mediation rules or model mediation procedure conflicts with any provision of this Schedule 7, the provision of this Schedule 7 shall take precedence. In the event that any timescales contained in such mediation rules or model mediation procedure conflicts with the timescales referred to in this Schedule 7, the timescales contained in such mediation rules or model mediation procedure shall be amended accordingly such that the timescales referred to in this Schedule 7 shall be adhered to;
- 4.3 In the event that resolution of the Dispute is achieved in consequence of such mediation procedure, such resolution shall be reduced to writing and, once it is signed by the duly authorised representatives of both Parties, shall be binding on the Parties. Unless concluded by a written legally binding agreement, all discussions and negotiations connected with the mediation procedure referred to in paragraph 4.2 shall be conducted in confidence and without prejudice to the rights of the Parties in any future legal or other proceedings. Nor may such matters be produced or relied upon in evidence in any such proceedings.
- 4.4 If any Dispute to which this paragraph 4 relates is not resolved by the mediation procedure referred to in paragraph 4.2 within a period of 55 Business Days from Notification (or longer if so agreed by the Parties), the mediation procedure shall be terminated and, unless the Party initiating or pursuing the Dispute withdraws the

Dispute, the Dispute shall, within a further 5 Business Days, be referred to adjudication in accordance with paragraph 5.

5. ADJUDICATION

In the event that either Party refers a Dispute to adjudication in terms of paragraphs 4.1 or 4.4, or exercises a statutory right available to it (if any) under the Housing Grants Regeneration and Construction Act 1996 to raise adjudication proceedings, such adjudication shall be conducted in accordance with the following conditions. In this paragraph 5, reference to "days" is a reference to calendar days.

Notice of intention to seek adjudication

- 5.1 Either Party may give written notice (the "**Notice of Adjudication**") of his intention to refer the Dispute to adjudication and the Party giving such notice shall be the "**Referring Party**".
- 5.2 The Notice of Adjudication shall be given to the other Party and the Party receiving the Notice of Adjudication shall be the "**Responding Party**".
- 5.3 The notice of adjudication shall set out briefly:
 - 5.3.1 the nature and a brief description of the Dispute and of the parties involved;
 - 5.3.2 details of where and when the Dispute has arisen;
 - 5.3.3 the nature of the redress which is sought; and
 - 5.3.4 the names and addresses of the Parties (including the addresses which the Parties have specified for the giving of notices).
- 5.4 The adjudicator selected to consider the Dispute shall be selected from one of the panels ("**Panels**") appointed by the Parties in accordance with the following:
 - 5.4.1 There shall be four Panels, one in respect of legal matters, ("**Legal Panel**") one in respect of construction matters and construction/operation interface matters ("**Construction Panel**"), one in respect of operational and maintenance matters ("**Operations Panel**") and one in respect of financial matters ("**Financial Panel**").

- 5.4.2 Each Panel shall be comprised of at least four members, who are listed in Schedule 15 (Panels for the Dispute Resolution Procedure) to the Agreement.
- 5.4.3 If any member of a Panel resigns or dies or becomes incapax or ill to the extent of being unable to reasonably discharge his duties as a member of the Panel, a replacement shall be appointed by the Parties as soon as practicable. Any such replacement shall be wholly independent of **tie**, the **tie** Advisors, any **tie** Party, CEC or any Relevant Authority associated with the Edinburgh Tram Network, Network Rail, the Operator, the Operator Parties, any Affiliate of the Operator, any Infrastructure Provider, any Affiliate, sub-contractor or other party connected to any Infrastructure Provider, any of the major competitors of any Infrastructure Provider or the Operator, any supplier of Trams or equipment appointed in respect of the Project, any Affiliate, sub-contractor or other party connected to any supplier of Trams or equipment appointed in respect of the Project, and any successor to or subsidiary or parent of any of the aforementioned parties. If the Parties are unable to agree on the identity of such replacement(s), the President for the time being of the Royal Institution of Chartered Surveyors in Scotland or the Institution of Civil Engineers shall appoint such replacement(s) within thirty days of any application for such appointment by either Party.
- 5.5 The Referring Party shall at the same time as giving the Notice of Adjudication to the Responding Party, send to each of the members of the relevant Panel a copy of the Notice of Adjudication and a request that each member of the relevant Panel advises both Parties within three days as to whether or not he is able and willing to act. The Parties shall attempt to agree within two further days as to which one of the members of the relevant Panel who responded indicating that they are able and willing to act shall be requested to act as adjudicator. In the event that such agreement is reached, the Referring Party shall, within a further period of one day, request the member of the relevant Panel upon whom agreement has been reached to act as adjudicator. In the event that such agreement is not reached, the Responding Party shall, within a further period of two days, select one of the members of the relevant Panel who responded indicating that they are able and willing to act and the Referring Party shall request that member to act as adjudicator.
- 5.6 If no member of the relevant Panel indicates that he is able and willing to act within three days of receiving a request to act as adjudicator, the Referring Party shall

request the Royal Institution of Chartered Surveyors in Scotland or the Institution of Civil Engineers to select a person to act as adjudicator.

- 5.7 The requests referred to in paragraphs 5.6 and 5.9 shall be accompanied by a copy of the Notice of Adjudication.
- 5.8 Any person appointed, requested or selected to act as adjudicator in accordance with paragraphs 5.5, 5.6 and 5.9 shall be a natural person acting in his personal capacity. A person appointed, requested or selected to act as an adjudicator shall be wholly independent of **tie**, the **tie** Advisors, the **tie** Inspectors, any **tie** Party, CEC or any Relevant Authority associated with the Edinburgh Tram Network, Network Rail, the Operator, the Operator Parties, any Affiliate of the Operator, any Infrastructure Provider, any Affiliate, sub-contractor or other party connected to any Infrastructure Provider, any of the major competitors of any Infrastructure Provider or the Operator, any supplier of Trams or equipment appointed in respect of the Project, any Affiliate, sub-contractor or other party connected to any supplier of Trams or equipment appointed in respect of the Project, and any successor to or subsidiary or parent of any of the aforementioned parties.
- 5.9 The Royal Institution of Chartered Surveyors in Scotland or the Institution of Civil Engineers must communicate the selection of an adjudicator to the Referring Party within three days of receiving a request to do so.
- 5.10 Where the Royal Institution of Chartered Surveyors in Scotland or the Institution of Civil Engineers fails to comply with paragraph 5.9, the referring Party may:
- 5.10.1 agree with the other Party to the Dispute to request a specified person to act as adjudicator; or
- 5.10.2 request any other adjudicator nominating body to select a person to act as adjudicator. An "adjudicator nominating body" shall mean a body (not being a natural person and not being a Party to the Dispute) which holds itself out publicly as a body which will select an adjudicator when requested to do by a Referring Party.
- 5.11 The person requested to act as adjudicator in accordance with the provisions of paragraph 5.5 or 5.6 shall indicate whether or not he is willing to act within two days of receiving the request.

- 5.12 Where an adjudicator has been selected in accordance with paragraphs 5.5, 5.6 or 5.9, the Referring Party shall, not later than seven days from the date of the Notice of Adjudication, refer the Dispute in writing the ("**Referral Notice**") to the adjudicator.
- 5.13 A Referral Notice shall be accompanied by copies of, or relevant extracts from the Agreement and such other documents as the Referring Party intends to rely upon.
- 5.14 The Referring Party shall, at the same time as he sends to the adjudicator the documents referred to in paragraphs 5.12 and 5.13, send copies of those documents to the Responding Party.
- 5.15 The adjudicator may, with the consent of the Parties to those Disputes, adjudicate at the same time on more than one Dispute under the Agreement.
- 5.16 The Parties may agree to extend the period within which the adjudicator may reach a decision in relation to all or any of these Disputes.
- 5.17 An adjudicator may resign at any time on giving notice in writing to the Parties.
- 5.18 An adjudicator must resign where the Dispute is the same or substantially the same as one which has previously been referred to adjudication, and a decision has been taken in that adjudication.
- 5.19 Where an adjudicator ceases to act under paragraph 5.17 or 5.18, or dies or becomes incapax or ill to the extent of being unable to reasonably discharge his duties;
- 5.19.1 the Referring Party may serve a fresh notice in accordance with paragraphs 5.1 to 5.4 and shall in accordance with paragraphs 5.5 to 5.14 request an adjudicator to act; and
- 5.19.2 if requested by the new adjudicator, the Parties shall supply him with copies of all documents which they had made available to the previous adjudicator.
- 5.20 The Parties to a Dispute may at any time agree to revoke the appointment of the adjudicator and in such circumstances the fees and expenses of that adjudicator shall, subject to paragraph 5.21, be determined and payable in accordance with paragraphs 5.37 and 5.38.

- 5.21 Where the revocation of the appointment of the adjudicator is due to the default or misconduct of the adjudicator, the Parties shall not be liable to pay the adjudicator's fees and expenses.

Powers of the adjudicator

- 5.22 The adjudicator shall:
- 5.22.1 act impartially in carrying out his duties and shall do so in accordance with any relevant terms of the Agreement and shall reach his decision in accordance with Scottish law; and
 - 5.22.2 avoid incurring unnecessary expense.
- 5.23 The adjudicator may take the initiative in ascertaining the facts and the law necessary to determine the Dispute, and shall decide on the procedure to be followed in the adjudication. In particular, he may
- 5.23.1 request either Party to supply him with such documents as he may reasonably require including, if he so directs, any written statement from either Party supporting or supplementing the Referral Notice and any other documents given under paragraphs 5.12 to 5.14;
 - 5.23.2 conduct the adjudication in the English language and decide whether a translation of any document is to be provided and, if so, by whom, by when, and at whose cost ;
 - 5.23.3 meet and question either Party and their representatives;
 - 5.23.4 subject to obtaining any necessary consent from a third party or the Parties, make such site visits and inspections as he considers appropriate, whether accompanied by the Parties or not;
 - 5.23.5 subject to obtaining any necessary consent from a third party or the Parties, procure the carrying out of any tests or experiments, and make directions as to the conditions for and responsibility for the cost of the same;
 - 5.23.6 obtain and consider such representations and submissions as he requires, and, provided he has notified the Parties of his intention, appoint experts, assessors or legal advisers;

- 5.23.7 give directions as to the timetable for the adjudication, any deadlines, or limits as to the length of written documents or oral representations to be complied with; and
- 5.23.8 issue other directions relating to the conduct of the adjudication.
- 5.24 The Parties shall comply with any request or direction of the adjudicator in relation to the adjudication.
- 5.25 If, without showing sufficient cause, a Party fails to comply with any request, direction or timetable of the adjudicator made in accordance with his powers, fails to produce any document or written statement requested by the adjudicator, or in any other way fails to comply with a requirement under these provisions relating to the adjudication, the adjudicator may:
 - 5.25.1 continue the adjudication in the absence of that Party or of the document or written statement requested;
 - 5.25.2 draw such inferences from that failure to comply as may, in the adjudicator's opinion, be justified in the circumstances;
 - 5.25.3 make a decision on the basis of the information before him, attaching such weight as he thinks fit to any evidence submitted to him outside any period he may have requested or directed;
 - 5.25.4 disqualify any part or parts of that Party's submissions affected by the failure to comply; and
 - 5.25.5 grant the other Party proper opportunity to consider and respond to any evidence or representation made late.
- 5.26 Subject to any agreement between the Parties to the contrary, either Party may be assisted by, or represented by, such advisers or representatives (whether legally qualified or not) as he considers appropriate.
- 5.27 The adjudicator shall consider any relevant information submitted to him by either Party and shall make available to them any information to be taken into account in reaching his decision.

5.28 The adjudicator and the Parties shall not disclose to any other person any information or document provided in connection with the adjudication which the Party supplying it has indicated is to be treated as confidential, except to the extent that disclosure is necessary for the purposes of, or in connection with, the adjudication, or the information is already in the public domain.

Adjudicator's decision

5.29 Unless otherwise agreed in accordance with paragraphs 6.2.1 or 6.3.1, the adjudicator shall reach his decision not later than:

5.29.1 twenty eight days after the date of the Referral Notice mentioned in paragraph 5.12;

5.29.2 forty two days after the date of the Referral Notice if the Referring Party so consents; or

5.29.3 such period exceeding twenty eight days after the Referral Notice as the Parties may, after the giving of that notice, agree.

5.30 Where the adjudicator fails, for any reason, to reach his decision in accordance with paragraph 5.29

5.30.1 either of the Parties to the Dispute may serve a fresh notice in accordance with paragraphs 5.1 to 5.4 and shall request an adjudicator to act in accordance with paragraphs 5.5 to 5.14; and

5.30.2 if requested by the new adjudicator the Parties shall supply him with copies of all documents which they had made available to the previous adjudicator.

5.31 As soon as possible after he has reached a decision, the adjudicator shall deliver a copy of that decision to each of the Parties.

5.32 The adjudicator shall decide the matters in Dispute and may make a decision on different aspects of the Dispute at different times.

5.33 The adjudicator may take into account any other matters which the Parties agree should be within the scope of the adjudication or which are matters under the Agreement which he considers are necessarily connected with the Dispute and, in particular, he may

- 5.33.1 open up, review and revise any decision taken or any notice certifying payment given by any person referred to in the Agreement, unless the Agreement states that the decision or notice certifying payment is final and conclusive;
- 5.33.2 decide that any of the Parties to the Dispute is liable to make a payment under the Agreement (whether in sterling or some other currency) and, subject to the terms of the Agreement, when that payment is due and the final date for payment;
- 5.34 The adjudicator shall provide written reasons for his decision.

Effects of the decision

- 5.35 In his decision, the adjudicator may, if he thinks fit, order either or both of the Parties to comply peremptorily with his decision or any part of it. In the absence of any directions by the adjudicator relating to the time for performance of his decision, the Parties shall be required to comply with any decision of the adjudicator immediately on delivery of the decision to the Parties in accordance with paragraph 5.31.
- 5.36 The decision of the adjudicator shall be binding on the Parties, and they shall comply with it, until the Dispute is finally determined by legal proceedings or by agreement between the Parties.
- 5.37 The adjudicator shall be entitled to the payment of such reasonable amount as he may determine by way of fees and expenses incurred by him and the Parties shall be jointly and severally liable to pay that amount to the adjudicator.
- 5.38 Without prejudice to the right of the adjudicator to effect recovery from either Party in accordance with paragraph 5.37, the Parties shall each be liable to pay one-half share of the adjudicator's fees and expenses.
- 5.39 The adjudicator shall not be liable for anything done or omitted in the discharge or purported discharge of his functions as adjudicator unless the act or omission is in bad faith, and any employee or agent of the adjudicator shall be similarly protected from liability.

6. RELATED DISPUTES

- 6.1 Notwithstanding the terms of paragraphs 1.2, 1.3, 1.7, 1.8, 1.9 and 1.10, in the event that a dispute or potential dispute under, or in connection with any of the Infrastructure Delivery Agreements (referred to in this paragraph 6 as ("**Related Contracts**")), has arisen or arises out of substantially the same issues of fact and/or law (as the case may be) as a Dispute under the Agreement (a "**Related Dispute**"), then providing that the Related Contract contains dispute resolution provisions in terms substantially the same as set out in this Schedule 7 (Dispute Resolution Procedure) (save for necessary changes), **tie** may require and direct that the Dispute and the Related Dispute be dealt with together at an appropriate stage of the Dispute Resolution Procedure.
- 6.2 In the event that a Related Dispute has already been referred to the decision of an adjudicator in accordance with the provisions of the Related Contract, and **tie** is of the opinion that a Dispute is to be (but has not yet been) referred to adjudication under this Schedule 7, **tie** may refer the Dispute, or may by notice in writing to the Operator require that the Dispute be referred (as the case may be) to the adjudicator appointed under the Related Contract to decide upon the Related Dispute, and:-
- 6.2.1 the adjudicator shall, if practicable, hear the Dispute at the same time as the Related Dispute and shall request such extension of time for producing his decision or award as he may require in order to reach a decision in respect of each of the Dispute and the Related Dispute at the same time. The Parties shall agree to such request for an extension of time, except in the event that the Dispute or the Related Dispute relates to "construction operations" within the meaning ascribed to that term by the Housing Grants, Construction and Regeneration Act 1996 (if applicable) (unless otherwise agreed by the Parties, all parties to the Related Dispute and the Adjudicator);
- 6.2.2 except in the event that the Dispute or the Related Dispute relates to "construction operations" within the meaning ascribed to that term by the Housing Grants, Construction and Regeneration Act 1996 (if applicable) (unless otherwise agreed by the Parties, all parties to the Related Dispute and the Adjudicator), the adjudicator shall have power (if so requested by **tie**) to make his decisions or awards in the Dispute and the Related Dispute in such a manner as if the rules applicable in the Court of Session, Scotland as to the

joining of one or more defenders or third parties or conjoining actions were applicable to the Parties to the Dispute and the Related Dispute, and to the adjudicator.

6.2.3 **tie** shall procure that, as soon as practicable, the other party or parties to the Related Dispute shall give the Operator copies of the Related Contract, the Referral Notice in the Related Dispute and any other documentation provided to the adjudicator by any party to the Related Dispute.

6.3 In the event that a Dispute has already been referred to the decision of an adjudicator, and **tie** is of the opinion that a Related Dispute is to be (but has not yet been) referred to adjudication, **tie** may refer the Related Dispute to the adjudicator appointed under this Schedule 7 to decide upon the Dispute, and:

6.3.1 the Adjudicator shall, if practicable, hear the Related Dispute at the same time as the Dispute and shall request such extension of time for producing his decision or award as he may require in order to reach a decision in respect of each of the Dispute and the Related Dispute at the same time. The Parties shall agree to such request for an extension of time, except in the event that the Dispute or the Related Dispute relates to "construction operations" within the meaning ascribed to that term by the Housing Grants, Construction and Regeneration Act 1996 (if applicable) (unless otherwise agreed by the Parties, all parties to the Related Dispute and the Adjudicator).

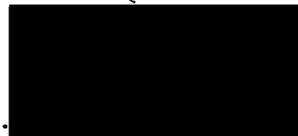
6.3.2 except in the event that the Dispute or the Related Dispute relates to "construction operations" within the meaning ascribed to that term by the Housing Grants, Construction and Regeneration Act 1996 (if applicable) (unless otherwise agreed by the Parties, all parties to the Related Dispute and the Adjudicator), the adjudicator shall have power (if so requested by **tie**) to make his decisions or awards in the Dispute and the Related Dispute in such a manner as if the rules applicable in the Court of Session, Scotland as to the joining of one or more defenders or third parties or conjoining actions were applicable to the Parties to the Dispute and the Related Dispute, and to the adjudicator.

6.3.3 as soon as practicable, **tie** shall give to the Operator copies of the Related Contract, the Referral Notice in the Related Dispute and any other

documentation provided to the adjudicator by any party to the Related Dispute.



~~Director~~/Authorised Signatory
Transport Initiatives Edinburgh Limited



~~Director~~/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

SCHEDULE 8

Project Programme

1. The following programme is **tie's** best estimate of the Project Programme as at the Effective Date. Lines may be introduced incrementally, in stages or independently.

2. The Project Programme will be developed in accordance with the terms of this Agreement and in accordance with the development of the strategy for the procurement of the Infrastructure Delivery Agreement and other associated agreements.

SCHEDULE 9

Review Procedure

1. Introduction

- 1.1 The provisions of this Schedule 9 (*Review Procedure*) shall apply whenever any item, document or course of action is required to be reviewed, approved or otherwise processed in accordance with Schedule 9 (*Review Procedure*).
- 1.2 Each submission by the Operator to **tie** under the Review Procedure shall be accompanied by a copy of the proposed document (in appropriate agreed format) to be reviewed or a statement of the proposed course of action (the entire contents of a submission being referred to as a "**Submitted Item**"). In relation to each Submitted Item, as soon as reasonably possible, the **tie** Project Manager shall return one copy of the relevant Submitted Item to the Operator endorsed "no objection", "clarification required" or "objection" as appropriate.
- 1.3 If the **tie** Project Manager makes an objection to any Submitted Item he shall state the ground upon which such objection is based but, for the avoidance of doubt, the **tie** Project Manager shall be entitled to make comments on any Submitted Item on any grounds as he sees fit.
- 1.4 Without limitation to paragraph 1.3, the **tie** Project Manager may object to any proposed change to the Operating Method Statements (or any part of them) on the grounds that the performance of the Project Operations in accordance with the proposed revision or substitution would, in **tie's** opinion, be:
- 1.4.1 materially inferior to the performance of the Project Operations in accordance with the Operating Method Statements prior to such proposed revision or substitution; or
- 1.4.2 be materially less likely to achieve compliance with the requirements of the Operating Output Specification.

2. Further Information

The Operator shall submit any further or other information, data and documents that the **tie** Project Manager reasonably requires pursuant to paragraph 1.3 to act in accordance with this

Schedule 9 (*Review Procedure*). If the Operator does not submit any such information, data and documents, the **tie** Project Manager shall be entitled to object to the Submitted Item:

- 2.1 on the basis of the information, data and documents which have been provided; or
- 2.2 on the grounds that insufficient information, data and documents have been provided to enable **tie** to act in accordance with this Schedule 9 (*Review Procedure*).

3. Effect of Review

- 3.1 Any Submitted Item which is returned by the **tie** Project Manager endorsed "no objection" shall be complied with and implemented by the Operator.
- 3.2 If the **tie** Project Manager returns the Submitted Item to the Operator endorsed "objection", the Operator shall comply with such Submitted Item after amendment in accordance with the objection.

4. Disclaimer

No review, objection, comment or silence by **tie** shall operate to (i) exclude or limit the Operator's obligations or liabilities under this Agreement (or **tie**'s rights under this Agreement) or (ii) bind **tie** with any express or implied obligations, duties or liabilities with respect to the Submitted Item.

5. Documentation Management

- 5.1 The Operator shall issue four copies (in appropriate agreed format) of all Submitted Items to **tie** and compile and maintain a register of the date and contents of the submission of all Submitted Items.
- 5.2 The Operator shall compile and maintain a register of the date of receipt and content of all Submitted Items that are returned by the **tie** Project Manager.

6. Variations

- 6.1 No review, objection or comment or any failure to make objection or comment under this Schedule 9 (*Review Procedure*) shall constitute a **tie** Change.
- 6.2 If, having received comments from the **tie** Project Manager, the Operator considers that compliance with those comments would amount to a **tie** Change, the Operator shall, before complying with the comments, notify **tie** of the same and, if it is agreed

by the Parties or determined pursuant to the Dispute Resolution Procedure that a Variation would arise if the comments were complied with, **tie** may, if it wishes, proceed with the matter in accordance with Clause 23 (Performance and Financial Adjustments) and Clause 24 (*tie Changes*) of the Operating Appendix.

6.3 Any failure by the Operator to notify **tie** that it considers compliance with any comments of the **tie** Project Manager would amount to a **tie** Change shall constitute an irrevocable acceptance by the Operator that any compliance with **tie's** comments shall be without amendment to the Fixed Costs, the Target Costs for Project Phase C2, Target Operating Costs or Target Revenues and without any extension of time or other relief.



~~Director~~/Authorised Signatory
Transport Initiatives Edinburgh Limited



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~~Director~~/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

SCHEDULE 10

Required Insurances

PART 1 - Required Insurances

1. PROFESSIONAL INDEMNITY INSURANCE

Insured Party: The Operator

Coverage: During Project Phases A, B and C, the legal liability of the Operator as a result of negligent act, error, or omission in the performance of its professional activities and duties in connection with the Project Development Services in respect of each Line.

Limit of Indemnity: Minimum £10,000,000 any one claim

Period of Insurance From the Effective Date for twelve months and thereafter each further twelve month period until 12 years from the issue of the last PPCN for Project Phase C2

Extensions: The insurance must include the following minimum extensions:

1. Mitigation costs.
2. Including coverage for the benefit of the Operator in respect of the activities of any Operator Party who provides any Project Development Services
3. Waiver of subrogation rights against tie during Project Phases A, B and C.

Maximum Permitted Deductible: £25,000 each and every claim.

2. THIRD PARTY LIABILITY INSURANCE (INCLUDING MOTOR VEHICLE LIABILITY)

Insured Parties: During Project Phases A, B and C2, the Operator.

Coverage: During Project Phases A, B, and C , the legal liability of the Operator for death, injury, illness, disease contracted by third party persons or loss of or damage to property arising out of or in connection with the Project Development Services in respect of each Line.

Limit of Indemnity: Unlimited as to the number of occurrences in each 12 month period in respect of death or injury to persons on highway sections of the Project. For all other occurrences, a minimum of £5,000,000 any one occurrence during Project Phases A, B and C (unlimited as to number of occurrences in the Period of Insurance stated below) in respect of third liability and £50,000,000 any one occurrence and in the aggregate in any one 12 month period of insurance in respect of products liability.

Period of Insurance: From the Effective Date for twelve months and thereafter each further twelve month period until the end of Project Phase C2.

Minimum Extensions: The insurance must include the following minimum extensions:

1. Worldwide jurisdiction.
2. Contractual liability.
3. Cross liabilities.
4. Costs and expenses in addition to limit of indemnity.
5. Financial loss (minimum limit of indemnity to be agreed and extension to take effect during Project Phases C2 and D only, if instructed as a **tie** Change).
6. Interference, trespass, loss of amenities, nuisance and obstruction.
7. Liability in respect of any agreement with Network Rail with regard to operations on, over or near the existing rail network (terms of extension to be agreed with **tie** once the terms of any Network Rail Agreements are known and extension shall take effect if instructed as a **tie** Change)
8. Sudden and accidental pollution and contamination.
9. Contingent motor liability.
10. Business activities extended to include the provision and management of canteen, sports, social and welfare activities, sponsorships, medical, dental, nursing, fire, first-aid, ambulance and security services, work by an employee for any fellow employee, participation in exhibitions, ownership and maintenance of own premises or property.
11. Indemnity to principal

12. Health and Safety at Work Etc. Act 1974 – legal costs and expenses in defending a prosecution brought under sections 2-8 of the Act.
13. Consumer Protection Act 1987 – legal costs and expenses in defending a criminal prosecution brought under Part II of the Act.
14. Data Protection Act 1998 – compensation in respect of damage and distress under sections 22 and 23 of the Act and defence costs in relation to section 19 of the Act.
15. Conflict of Interest – where conflict between the Insured and an employee, separate representation to be arranged for each party.
16. Motor tool of trade risk.
17. Liability for damage to leasehold premises.
18. Waiver of subrogation rights against **tie** during Project Phases A, B and C.

Maximum Permitted Deductible: £25,000 each and every loss in respect of property damage claims
 Nil excess for bodily injury claims.

3. EMPLOYERS LIABILITY INSURANCE

Insured Party: The Operator

Coverage: During Project Phases A, B, C and D, the legal liability of the Operator for death, injury, illness, disease contracted by employees of the Operator caused by or arising out of or in connection with the Project Development Services or the Project Operations in respect of each Line.

Limit of Indemnity: Minimum limit of indemnity of £10,000,000 any one occurrence or series of occurrences arising from one original cause or event.

Period of Insurance: From the Effective Date for twelve months and thereafter each further twelve month period until the earlier of the Expiry Date or the Termination Date.

Extensions: The insurance must include the following minimum extensions:

1. Contractual liability.
2. Cross liabilities.

3. Business activities extend to include the provision and management of canteen, sports, social and welfare activities, sponsorships, medical, dental, nursing, fire, first-aid, ambulance and security services, work by an employee for any fellow employee, participation in exhibitions, ownership and maintenance of own premises of property.
4. Costs and expenses in addition to the limit of indemnity.
5. Indemnity to principal.
6. Health and Safety at Work Etc. Act 1974 – legal costs and expenses in defending a prosecution brought under sections 2-8 of the Act.
7. Consumer Protection Act 1987 – legal costs and expenses in defending a criminal prosecution brought under Part II of the Act.
8. Data Protection Act 1998 – compensation in respect of damage and distress under sections 22 and 23 of the Act and defence costs in relation to section 19 of the Act.
9. Conflict of Interest – where conflict between the Operator and an employee, separate representation to be arranged for each party.
10. Employees' business liability.
11. Unsatisfied court judgements.
12. Compensation for court attendance.
13. Contingent Liability arising out of the transfer of employees under TUPE.

Maximum Permitted Deductible: Nil

4. **Other Insurances:** Any other insurances that are required by Law of the Operator itself.

PART 2 - Form of Brokers Letter of Undertaking

To: Transport Initiatives Edinburgh Ltd ("**tie**")

Dear Sirs

We confirm in our capacity as Insurance Brokers that the Required Insurances specified in Clause 26 (*Required Insurances*) and Schedule 10 (*Required Insurances*) of the Development Partnering and Operating Franchise Agreement (the "DPOF Agreement") dated ◆ between (◆) (the "Operator") and **tie** as defined therein are, as at the date hereof, in effect in respect of the risks set out in the attached cover notes.

We have arranged the Required Insurances on the basis of the information and instructions given by the Operator. We have not made any particular or special enquiries regarding the Required Insurances beyond those that we would normally make in the ordinary course of arranging the insurances on behalf of our insurance broking clients.

The confirmations set out in this letter are given by reference to our state of knowledge at the date hereof.

Pursuant to instructions received from the Operator and in consideration of the Operator approving, and **tie** confirming its approval of our appointment or continuing appointment as brokers to the Operator in connection with the Required Insurances covered by this letter, we hereby undertake in respect of the interests of the Operator and **tie** in the Required Insurances referred to in the attached cover notes:

1. to use reasonable endeavours to have endorsed on each and every policy evidencing the Required Insurances when the same is issued, endorsements substantially in the form set out in Clause 26 (*Required Insurances*) of the Agreement;
2. to ensure that all proceeds for the Required Insurances received by us from the insurers shall be applied in accordance with Clause 26.11 of the DPOF Agreement.
3. to advise **tie** :
 - 3.1 promptly after receiving notice of any insurer's cancellation or suspension of any of the Required Insurances or receiving notice of the intended cancellation or suspension of any of the Required Insurances;

- 3.2 promptly upon our receipt from the Operator of any notice of any changes proposed to be made to the Required Insurances which, if effected, would result in a material reduction in limits or coverage (including in respect of extensions of cover) or in an increase in deductibles, exclusions or exceptions;
 - 3.3 of any default in the payment of any premium for any of the Required Insurances;
 - 3.4 at least 20 days prior to the expiry of any of the Required Insurances if we have not received written renewal instructions from the Operator or if we receive written instructions to renew, to advise **tie** of the details thereof; and
 - 3.5 on receipt of notice of any act or omission of the Operator or any Operator Party which will invalidate or render unenforceable in whole or in part, any of the Required Insurances;
4. no later than 7 days (in respect of certificates) and as soon as reasonably practicable in respect of policies and other documents, to supply you and/or your insurance advisors (or your or their authorised representative) copies of all placing slips, certificates, cover notes, renewal receipts and confirmations of renewal and payment of premiums and all policy documents in respect of the Required Insurances, or upon request, to make available to you the originals of any or all such documents held by us;
 5. to disclose to the insurers any fact, change of circumstance or occurrence is material to the risks insured against under the Required Insurances;
 6. to treat as confidential all information in relation to the Required Insurances supplied to us by the Operator or any Operator Party or **tie** and not to disclose, without the written consent of **tie**, such information to any third party other than the insurers under the Required Insurances, unless required to do so by law or any regulatory authority; and
 7. to notify **tie** at least 30 days prior to our ceasing to act as brokers to the Operator, unless impracticable because of circumstances beyond our control, in which case we shall notify **tie** as soon as reasonably practicable upon becoming aware that we shall cease, or have ceased, so to act.

Where insurers wish any of the Required Insurances to be cancelled for reasons of non-payment of premium, we will request those insurers to give you a reasonable opportunity of paying such amounts outstanding before issuing notice of cancellation on behalf of such insurers.

The above undertakings are given subject to our continuing appointment for the time being as insurance brokers to the Operator in relation to the Required Insurances concerned and the monitoring and handling of claims in relation to the Operator, and our obligations set out in this letter shall automatically cease upon termination of our appointment.

For the avoidance of doubt all undertakings and other confirmations given in this letter relate solely to the Required Insurances. They do not apply to any other insurances and nothing in this letter should be taken as providing any undertakings or confirmations in relation to any other such insurance that ought to have been placed or may at some future date be placed by other brokers.

This letter is given by us on the instructions of the Operator and with the Operator's full knowledge and consent as to its terms as evidenced by the Operator's signature below.

This letter shall be governed by and shall be construed in accordance with Scots Law and any dispute as to its terms shall be submitted to the exclusive jurisdiction of the courts of Scotland.

Yours faithfully

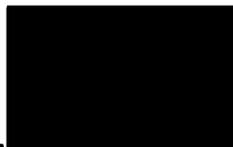
.....
For and on behalf of (Insurance Broker)

.....
For and on behalf of (The Operator)

[]



~~Director~~/Authorised Signatory
Transport Initiatives Edinburgh Limited



~~Director~~/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

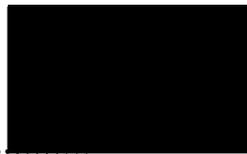
This is Schedule 11 referred to in the foregoing Development Partnering and Operating Franchise Agreement between Transport Initiatives Edinburgh Limited and TRANSDEV Edinburgh Tram Limited dated 14 May 2004

SCHEDULE 11

Schedule Not Used



~~Director~~/Authorised Signatory
Transport Initiatives Edinburgh Limited



~~Director~~/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

SCHEDULE 12

Performance Scoring

[This Schedule will be developed during Project Phases A - C, in accordance with Project Development Output Specification paragraphs 24 and 25]



Director/Authorised Signatory
Transport Initiatives Edinburgh Limited



Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

SCHEDULE 13

Form of Operator's Invoice

[to be developed during Project Phase A]



~~Director~~/Authorised Signatory
Transport Initiatives Edinburgh Limited



~~Director~~/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

This is Schedule 14 referred to in the foregoing Development Partnering and Operating Franchise Agreement between Transport Initiatives Edinburgh Limited and TRANSDEV Edinburgh Tram Limited dated 14 May 2004

SCHEDULE 14

Performance Bond

(1) ◆ [SURETY]

- in favour of -

(2) tie

PERFORMANCE BOND

PERFORMANCE BOND

BETWEEN

- (1) ◆ , a company incorporated in ◆ under company number [◆] whose registered office is at ◆ ("**the Surety**"); and
- (2) **TRANSPORT INITIATIVES EDINBURGH LIMITED**, a company incorporated in Scotland under number SC230949 and having its registered office at City Chambers, High Street, Edinburgh EH1 1YJ ("**tie**")

WHEREAS

- A. **tie** entered into a Development Partnering and Operating Franchise Agreement (hereinafter referred to as the "**DPOF Agreement**") dated ◆ with ◆ (the "**Operator**") to give project development assistance and services for commissioning and operation of a light rapid transit system in Edinburgh known as the Edinburgh Tram Network.
- B. Clause 8 (*Operator's Performance Security*) of the DPOF Agreement obliges the Operator to deliver to **tie** an unconditional irrevocable Performance Bond on the conditions and in the form set out in Schedule 14 (*Performance Bond*) to the DPOF Agreement, issued by a surety acceptable to **tie** and callable subject only to written notification by **tie**.
- C. In consideration of your accepting our obligations set out below in discharge of the Operator's undertaking to provide a performance bond under Clause 8 (*Operator's Performance Security*) of the DPOF Agreement, we, [*Name and address of Surety to be inserted*] hereby irrevocably and unconditionally agree and undertake to pay to you a sum not exceeding ◆ POUNDS (£◆) (the "**Bonded Amount**") and accordingly covenant with you and agree as follows:
1. Upon our receipt of a demand or demands ("**Demand Notice**") from you certifying that you have issued a notice to the Operator stating that an Operator Default has occurred, and without being entitled or obliged to make any enquiry or proof or contestation or further conditions on you (or the Operator) and without the need for you to take any legal action against or to obtain the consent of the Operator and without any right of set-off, abatement or counterclaim, we shall forthwith pay to you the amount or amounts specified in such Demand Notice(s) in immediately available funds by electronic transfer to the account nominated in

the Demand Notice, not exceeding in aggregate the Bonded Amount; it being confirmed that you may make as many separate demands hereunder as you think fit. You shall not be obliged to exercise any other right or remedy you may have before making a demand under this Performance Bond.

2. A Demand Notice received from you in accordance with paragraph 1 above shall be conclusive evidence of our liability to pay to you and of the amount of the sum or sums which we are liable to pay. Our obligation to make payment under this Performance Bond shall be a primary, independent and absolute obligation and we shall not be entitled to delay or withhold payment for any reason. Our obligation hereunder shall not be affected by any act, omission, matter or thing which, but for this provision, might operate to release or otherwise exonerate us from the obligations hereunder in whole or in part, including without limitation and whether or not known to us or to you:
 - 2.1 any time or waiver granted to you or to the Operator;
 - 2.2 the taking, variation, compromise, renewal or release of or the refusal or neglect to perfect or to enforce any rights, remedies or securities against you or the Operator;
 - 2.3 any legal limitation, disability or incapacity relating to you or the Operator;
 - 2.4 any variation of or amendment to the DPOF Agreement (or related documentation) or the works or services to be performed thereunder or any other document or security so that references to the DPOF Agreement in this Performance Bond shall include each such variation and amendment;
 - 2.5 any unenforceability, invalidity or frustration of any rights or obligations of you or the Operator under the DPOF Agreement or any other document or security; and
 - 2.6 any other fact, circumstance, provision of statute or rule of law which might, were our liability to be secondary rather than primary, entitle us to be released or discharged in whole or in part from our undertaking.
3. Until such time as **tie** has recovered all amounts due to it under or in connection with the DPOF Agreement, we shall not, without the prior written consent of **tie**, in respect of any payment made or liability under this Performance Bond, claim, rank or vote as a creditor in the liquidation of the Operator in competition with **tie**, or enforce any security over the assets of the Operator in respect of any such payment or liability in competition with **tie**, but this

Clause 3 shall not limit or restrict the exercise or enforcement by us of our rights against any other person after payment in full of the Bonded Amount.

4. We shall hold in trust any sums recovered by us contrary to the provisions of Clause 3:
 - 4.1 to pay to **tie** in full the unrecovered balance of any damages or other sums due from the Operator to **tie** under or in connection with the DPOF Agreement, to the extent set out in Clause 3; and
 - 4.2 subject thereto, for our benefit.
5. **tie** shall be entitled to enforce the provisions of Clauses 3 and 4 only so far as required to keep itself or to put itself in the position it would occupy if we had no rights of recourse against the Operator or its assets in respect of any payment made or liability arising under this Performance Bond, but no further; and any consent required of **tie** under Clause 3 above shall not be refused or delayed unreasonably.
6. Our liability under this Performance Bond shall not be affected or reduced by the insolvency of the Operator or its liquidation, receivership or other like temporary or permanent status.
7. **tie** shall be at liberty to compromise, release, waive or neglect any security as they see fit, without impairment of their rights under this Performance Bond.
8. This Performance Bond shall cease to have effect 90 days after the earlier of the Expiry Date or the Termination Date of the DPOF Agreement, save in connection with any Demand Notice issued to us in writing prior to the expiry of the said period of 90 days.
9. **tie** shall be entitled to assign this Performance Bond without our consent.
10. Any notice to be served under this Performance Bond must be in writing and must be delivered by hand or by registered post or recorded delivery at [*enter branch and address*]. Service shall take effect, if given by hand, on the date of delivery. If given by post, it shall take effect two days after posting, excluding Saturdays, Sundays and statutory holidays.
11. This Performance Bond shall be governed by and construed in accordance with the Laws of Scotland and we hereby agree to submit to the exclusive jurisdiction of the Court of Session over any claim arising out of this Performance Bond.
12. A person who is not a party to this Performance Bond shall have no right to enforce any of the terms of this Performance Bond.

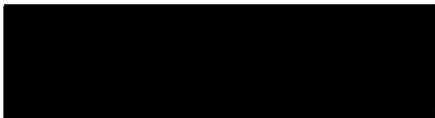
13. In this Performance Bond:

13.1 the words and expressions have the same meanings as in the DPOF Agreement and we shall be deemed to have full knowledge of the terms and conditions of the DPOF Agreement;

13.2 "person" includes any firm and any entity having legal capacity; and

13.3 the definitions given in the recitals apply to the rest of this Performance Bond:

IN WITNESS WHEREOF



Director/Authorised Signatory
Transport Initiatives Edinburgh Limited



Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

SCHEDULE 15

Panels for the Dispute Resolution Procedure

ENGINEERING / OPERATIONAL

Alan Wilson

[REDACTED]
Chesterfield
DERBYSHIRE
S42 [REDACTED]

Peter Chapman

Somersby House
Stokesheath Road
OXSHOTT
SURREY KT22 0PS

Tony Canham

[REDACTED]
[REDACTED]
Thorpe St Andrew
NORWICH
NR7 [REDACTED]

Guy Cottam

[REDACTED]
Upper Limpley Stoke
BATH
BA3 [REDACTED]

FINANCIAL

Nigel Lowe

Nigel Lowe Consulting Limited
27 Old Gloucester Street
LONDON
WC1N 3XX

John Hunter

Hunter Consulting
Commercial Centre
Stirling Enterprise Park
STIRLING
FK7 7BF

Bryan Porter

[REDACTED]
Newton Mearns
GLASGOW
G77 [REDACTED]

Eric Mouzer

[REDACTED]
Edgebaston
BIRMINGHAM
B11 [REDACTED]

LEGAL

Gordon Reid, QC

[REDACTED]
By St Andrews
FIFE
KY15 [REDACTED]

Robert Howie, QC

[REDACTED]
EDINBURGH
EH9 [REDACTED]

Lord Dervaird (Prof. John Murray QC)

[REDACTED]
EDINBURGH
EH3 [REDACTED]

Gordon Coutts, QC

[REDACTED]
EDINBURGH
EH3 [REDACTED]

Angus Glennie, QC

[REDACTED]
Oxton
Lauder
BERWICKSHIRE
TD2 [REDACTED]

[REDACTED]

Director/Authorised Signatory
Transport Initiatives Edinburgh Limited

[REDACTED]

Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

SCHEDULE 16

Outline Service Integration Plan

Edinburgh Tram Network

The purpose of this document is to state and reconfirm the commitment made the Operator in relation to Service Integration.

This document contains reference to the Operator's primary commitments to the development of the Service Integration Plan and includes those matters in relation to which the parties have agreed the objectives for performance of the Operator's obligations regarding Service Integration during each Project Phase.

1. The Operator shall comply with in particular Clauses 6, 7, 8 and 9 of the Operating Appendix.
2. The Operator shall comply with the Project Development Output Specification ("PDOS") requirements and specifically:
 - 2.1 Paragraph 12 requiring the Operator to:
 - 2.1.1 be fully conversant with the policies and strategies of CEC and other local authorities on transport and integration with other policies such as health, safety and environment;
 - 2.1.2 engage with other transport operators (bus, train, airport) to maximise public transport usage and transfer from cars;
 - 2.1.3 engage with park-and-ride facility managers proximate to the System;
 - 2.1.4 develop a Service Integration Plan in accordance with PDOS to address, not exclusively:
 - operating timetable;
 - hours of operation;
 - journey times;
 - integration of System as part of the wider public transport service;

- competing transport modes;
- 2.1.5 forward plan for Special Events in accordance with clause 9 (*Special Events*) of this Agreement and Clause 8 (*Special Events*) of the Operating Appendix;
- 2.1.6 contribute to the optimal layout and design (to include signage, lighting and weather protection) of interchange facilities to maximise ease of access for mode transfer;
- 2.1.7 ticket sales and ticketing arrangements to incentivise customer pre-payment. the Operator shall develop and agree with **tie** and other public transport operators measures for promoting integrated ticketing (through One Ticket or its successor scheme nominated by **tie**), through tickets, multi-journey tickets, bus and tram saver tickets, unlimited travel period tickets and pre-paid fares; investigation of congestion charging payment to cover travel by tram also;
- 2.1.8 maintenance of shared facilities with other operators;
- 2.1.9 incident management and provision of alternative service to ensure that passengers can continue journeys reliably during planned engineering or maintenance works and closures or restrictions in service operation or failure of due to unexpected incidents;
- 2.1.10 wherever practicable, passenger information presentation (particularly timetable and fares information) in a common format by the Operator and other public transport operators and the advertising of other operators' services where these form a complementary element of the local public transport network;
- 2.1.11 subject to compliance with the Law, best endeavours implementation (in a manner consistent with CEC's transport strategies) of timetable coordination measures. This may include coordination of feeder buses and train services with the Transport Services and late night or last Tram services at Edinburgh Park, Haymarket Station or Waverley Station stops providing advertised connections to and from main line services;
- 2.1.12 the planning for and provision of appropriate feeder bus services to tram/bus/rail/private car interchanges, termini or stops agreed with **tie**. Such feeder service frequency to be controlled and co-ordinated with tram arrivals

and departures through appropriate communication method (real time information sharing between bus and tram), tramway mimic board for bus operators and bus location screen in tram control room and vehicle location techniques;

- 2.1.13 the provision of real time information at all Tramstops, interchange facilities and key information points (at a minimum Help Desk/s, Airport Terminal, Waverley Station, Haymarket Station, Edinburgh Park and Ocean Terminal) and the provision of service timetables and fares information by leaflets onboard trams;
- 2.1.14 the location of help points for passengers on Tramstops and co-location of Help Desk facilities and lost property with other transport operators (in particular, Lothian Buses and First Scotland East) and the use of advertised websites; and
- 2.1.15 the application of control room communication facilities for bus - tram operational co-ordination ("hot" telephone links between control rooms and reciprocal vehicle location information).
- 2.1.16 the active promotion of interchange between tram and bus in relation to all public transport operators; the study of interchanges to include: West End, Haymarket Station, Roseburn Terrace, Crewe Toll, Ocean Terminal, Leith Walk, Balgreen Road, Broomhouse Road/South Gyle Access, Gyle Centre, Edinburgh Park Station and Ingliston Park and Ride.
- 2.1.17 provide CEC and any other relevant body with details of provisions that the Operator recommends for incorporation into tenders for bus services that will be operating in Phase D.

3.

- 3.1 The Service Integration Plan shall be regularly refined by the Operator as the System is further developed during Project Phases B, C and D. Any amendments to the Service Integration Plan during Project Phase C or Project Phase D shall be subject to Schedule 9 (*Review Procedure*).
- 3.2 the Operator shall be responsible for ensuring that its plans for and agreements with other transport operators to deliver integration of the Transport Services with bus,

train and park-and-ride operations in Edinburgh in accordance with the Service Integration Plan (as amended from time to time) are compliant with Law, including competition law.

- 3.3 The Operator shall keep **tie** informed from time to time of all actions being taken by the Operator to ensure compliance with the above paragraph, including the views of regulatory authorities and the provision of copies of any legal advice obtained by the Operator in relation to the impact of competition law on the proposed Service Integration Plan.
 - 3.4 The Operator will be required to give input on the development of the Fares Policy and adopt the Fares Policy by the end of Project Phase B for Project Phase D. Matters on which the Operator shall make proposals to **tie** shall include:
 - 3.4.1 ticket range and user group;
 - 3.4.2 fares levels and differentials throughout the day and week;
 - 3.4.3 special event pricing and travel incentives such as unlimited period travel;
 - 3.4.4 ticket integration and pricing
 - 3.4.5 revenue sharing principles between transport modes for integrated ticketing;
 - 3.4.6 pricing differentials between transport modes;
 - 3.4.7 fares zoning and relative pricing;
 - 3.4.8 penalty fares structure and relativity to normal fares;
 - 3.4.9 minimisation of fare evasion.
 - 3.5 The Operator hereby confirms participation of tram operations in the relevant Concessionary Travel Scheme (or its successor scheme).
4. The Operator has concluded the arrangements (or is seeking to conclude the same) with other operators as are appended to this document and agrees to secure these or to develop these into binding and enforceable agreements enjoying regulatory clearance within the timescale shown in each case.

Heads of Terms with Lothian Buses plc

Agreed and signed on January 20 2004

The Operator agrees to convert these commitments into a formal and binding agreement by no later than end of Phase C1.

Draft Heads of Terms with First Edinburgh

The Operator is pursuing closure no later than Effective Date

The Operator agrees to convert these commitments into a formal and binding agreement by no later than end of Phase C1.

Ticketing Agreements included in HOTs with Lothian Buses plc and in the draft HOTs currently with First Edinburgh.

The Operator agrees to develop these ticketing commitments (with these two bus operators and other transport operators) into formal and binding commitments prior to the end of Project Phase B.

Real time information sharing agreements

The Operator agrees to secure such agreements with all relevant parties prior to the end of Project Phase B.

Heads of Terms with other transport operators and commercial parties

The Operator intention is to utilise similar HOTs as those for Lothian Buses plc and First Edinburgh with other transport operator

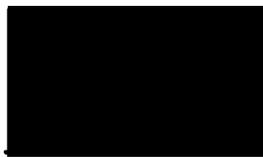
parties.

The Operator agrees to secure HOTs no later than the end of Project Phase B for development into formal and binding agreements no later than the end of Project Phase C1.

5. The Operator agrees to support and contribute to the establishment of a corporate framework to achieve public transport integration in Edinburgh, with the primary objectives of maximisation of mode transfer from private car to public transport and service integration between tram, bus, rail and park and ride such support and contribution to include appropriate engagement with Edinburgh public transport operators and relevant regulatory authorities.



~~Director~~/Authorised Signatory
Transport Initiatives Edinburgh Limited



~~Director~~/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

SCHEDULE 17

Setting of Fixed Costs

Part A Setting of Category Three Fixed Costs during Project Phase C1 and setting of the salaries of drivers at reset

In setting the Category Three Fixed Costs in respect of drivers' salaries to an external market value and resetting drivers' salaries pursuant to Clause 21 (*Reset of the Fixed Costs, Target Operating Costs and the Target Revenue*) of the Operating Appendix. to an external market value, the salaries of the following staff will be pegged to that of the drivers' salary, in the same ratios as in the Operator Financial Model. For ease of reference these ratios are shown below:

Role	Salary Ratio
Duty Managers	141.2%
Operations Supervisor	105.9%
Drivers	100.0%
Customer Service	100.0%
Temporary Customer Service	95.0%
Operations Assistant	82.4%

The total drivers' cost is obtained by multiplying the number of drivers by the individual driver's rate.

The salary figures in the Operator Financial Model are derived from a predicted salary plus:

- 10% for overtime and bonus, notionally 5% for each;
- 10.8% for national insurance; and
- 11.2% in respect of a non-contributory employee pension, assumes 100% take up of pension rights.

The Operator confirms that the number of drivers can be regarded as a fixed cost affected only by changes in service definition as defined in the paper "Tram Drivers 20Feb04".

The individual driver's rate as quoted in the the Operator's bid will be set and reset using the process set out below.

Such a review is necessary to ensure that drivers' rates correctly reflect the contemporary labour market in Edinburgh so that sufficient staff are recruited for the start of passenger service.

The drivers' target salary will be set using the following process.. It will take place during Project Phase C1, and will be completed three months before the start of Project Phase C2, when the first member of staff whose target salary will be set by this process starts work.

This process shall be conducted by **tie** and the Operator, taking into consideration the following elements:

1. the unemployment rate in Edinburgh
2. bus driver rates from local companies such as Lothian Bus and First Edinburgh.
3. Rates of similar jobs (e.g. delivery/distribution services) in Edinburgh

When considering the rates, this review will take into account the terms (hours, benefits, pension etc.) and working conditions attached to the staff positions.

This process shall then be repeated at each three yearly reset pursuant to Clause 21 (*Reset of the Fixed Costs, Target Operating Costs and the Target Revenue*) of the Operating Appendix.

For reference purposes, the following data may be referred to during the process:

Lothian bus drivers' rate as from 28/3/04, £330.74 per week.

First rate, £7.50 per hour.

Unemployment, May 2003, an extract from <http://www.parliament.uk/commons/lib/research/rp2003/rp03-055.pdf> on 29 March 2004:

Parliamentary Constituency	Party	Claimants			Rate		
		Male	Female	All	Male	Female	All
Edinburgh Central	LAB	1,117	339	1,456	4.1%	1.5%	3.0%
Edinburgh East & Musselburgh	LAB	953	251	1,204	4.3%	1.4%	3.0%
Edinburgh North & Leith	LAB	1,357	384	1,741	6.0%	2.1%	4.3%
Edinburgh Pentlands	LAB	880	290	1,170	3.8%	1.6%	2.9%

Edinburgh South	LAB	700	223	923	3.5%	1.3%	2.5%
Edinburgh West	LD	771	221	992	3.5%	1.3%	2.5%

At the end of Project Phase C2, a review as to the level of take up on pension rights will be undertaken. The assumed 100% take up level will be adjusted to the actual percentage take up level at the commencement of Project Phase D.

Part B Setting of Category Four Fixed Costs

The costings for “Bank Charges”, “Cash collecting & counting” “Security Staff” and “Cashiers” will be set in Project Phase C2, at about 6 months prior to Service Commencement of the first Line to become operational as part of setting the package of costs for Category Four Fixed Costs. This setting of Category Four Costs will be based on actual prices from potential suppliers through competitive tender and updated prices for carrying out this work in house.



Director/Authorised Signatory
Transport Initiatives Edinburgh Limited



Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

SCHEDULE 18

Base Case Assumptions

Base Case Assumptions

Contents:

1. Introduction
2. Cost Categorisation
3. General Assumptions
4. Operating Costs, Project Phases C2 and D
5. Staff, Project Phases A to D

1. Introduction

The Base Case Assumptions (BCAs) are predicated on the cost categorisation as outlined below. References to Line 1, Line 2 and the Network refer to the scope of the Project as at the Effective Date.

These BCAs assume that the System will be operated from one Depot.

2. Cost Categorisation

Cost Category	
1	Fixed at Effective Date
2	Fixed at end of Project Phase B (unit cost fixed at Effective Date)
3	Fixed before the end of Project Phase C1, as set out in Schedule 17 (<i>Setting of Fixed Costs</i>)
4	Fixed before the end of Project Phase C2, as set out in Schedule 17 (<i>Setting of Fixed Costs</i>)
5	Fixed at Effective Date and not reset
6	Target Operating Cost and/or Target Cost for Project Phase C2
7	tie “discretionary” items not fixed and not subject to pain/gain share, will be instructed as a tie Change if such items are required by tie .
8	During Project Phases A-C1, Non Core Staff Fixed Rates, called off basis at tie ’s discretion.
9	During Project Phases A-C1, Core Staff Fixed Rates.

3. General Assumptions

Item	Model reference	Comments	Scope Clarification	Cost Category	Base Case Assumptions
Project Phase A	Other Inputs, row 28				<p>Network Pessimistic Line 1 & 2 starts on 17/05/2004, ends on 31/05/2006.</p> <p>Network Optimistic Line 1 & 2 starts on 17/05/2004, ends on 31/10/2005.</p>
Project Phase B	Other Inputs, row 29				<p>Network Pessimistic Line 1 & 2 starts on 01/07/2004, ends on 31/10/2006.</p> <p>Network Optimistic Line 1 & 2 starts on 01/07/2004, ends on 31/10/2005.</p>
Project Phase C1	Other Inputs, row 30				<p>Network Pessimistic Line 1 & 2 starts on 01/11/2006, ends on 31/01/2009.</p> <p>Network Optimistic Line 1 & 2 starts on 01/11/2005, ends on 31/01/2009.</p>

Item	Model reference	Comments	Scope Clarification	Cost Category	Base Case Assumptions
Project Phase C2	Other Inputs, row 31	Some costs associated with setting up the Project Operations are within Project Phase C1 in the Operator Financial Model. This includes part of General Manager, Operations Manager, Safety and Standards Manager and Assistant			Starts on 01/02/2009, ends on 31/10/2009
Project Phase D	Other Inputs, row 32				Starts on 01/11/2009, ends on 16/05/2019
Programme and date adjustments					Dates and durations in these Base Case Assumptions will be amended by written agreement with tie .

Item	Model reference	Comments	Scope Clarification	Cost Category	Base Case Assumptions
Provision of staff during Project Phases A, B, C1 and C2 (insofar as staff time is spent on development work)					<p>The Operator will make available and tie will pay for staff as shown in the Base Case Assumptions for each cost line where appropriate in accordance with the terms of this Agreement.</p> <p>tie will be invoiced for the number of half days worked by the staff concerned. This will be based on a pragmatic approach, with the time charged rounded to the nearest half day. The Operator Financial Model was developed on the basis on 7 hour days, but the Operator's Core Team will be working for similar durations to the rest of tie's team. This is because the Operator's Core Team must be an integral part of tie's team. It is expected that the average working day will be longer than 7 hours, and this average longer day would be charged as a whole day, not as a 7 hour day plus additional time.</p>
RPIX	Other Inputs, row 252				Currently assumed to be 2.50%
KPI regime	n/a				<p>The staffing assumptions within this document and in the associated Operator Financial Model support the KPI regime as envisaged and discussed with tie on Thursday 5 Feb 2004.</p> <p>These discussions are documented in the "Performance Regime - Notes of Technical meeting at DLA offices 5 Feb 04.doc" (See Part A of this Schedule)</p>

Item	Model reference	Comments	Scope Clarification	Cost Category	Base Case Assumptions
Costs		<p>These have been built up from the following sources:</p> <p>1 Actual emerging costs on Sheffield Supertram, Manchester Metrolink and Nottingham Express Transit Systems,</p> <p>2 Operational costs on other tram systems operated by the Operator, and</p> <p>3 The specific environment in Edinburgh</p>			N/a
Staff rates	Tables 1 & 2, column Entitled "At cost Rate £/day"	These are shown within the Operator Financial Model on a daily rate basis for Project Phases A to C1 inclusive.			n/a
Project Return	Other Inputs, D65				<p>Project Phases A to C1 is 20%</p> <p>C2 and D 10.5%.</p>

Item	Model reference	Comments	Scope Clarification	Cost Category	Base Case Assumptions
Retention	Other Inputs, E50				10%
Office Accommodation	Other Inputs, row 100			N/A	During Project Phases A to C1, tie will provide office space. At the start of Project Phase C2, accommodation for all staff will be ready and available in the Depot.
Management Fees	other inputs, row 86			5	Project Phase A to C1, £10k/yr Project Phase C2, £80k/yr Project Phase D, £60k/yr
Performance Bond	other inputs, row 128			1	Project Phase D bond level set at £5.0 Million un-indexed , cost of the bond is 1% per annum of bonded amount
Employer Liability Insurance	other inputs, row 168			1	
Public Liability Insurance	other inputs, row 179			1	Excludes Public Liability for the System and its operation. In Project Phase D, no Public Liability Insurance premium is costed in Operator Financial Model, but deductible claims are included.

Item	Model reference	Comments	Scope Clarification	Cost Category	Base Case Assumptions
Public Liability Insurance - Costs of Claims and Deductibles	Semi calcs Row 103-104			6	<p>An allowance has been made for the cost of claims and deductibles based on the Required Insurances as set out in Schedule 10.</p> <p>Road Traffic Accidents</p> <p style="padding-left: 40px;">Average claim £2,500</p> <p style="padding-left: 40px;">Claims per month: Line 1, 3, Line 2, 2, Network, 4.</p> <p style="padding-left: 40px;">Claim success rate, 40%</p> <p>Personal Injuries:</p> <p style="padding-left: 40px;">Average claim £1,250</p> <p style="padding-left: 40px;">Claim rate per million passenger journeys, 1.5</p> <p style="padding-left: 40px;">Claim success rate, 40%</p> <p>The number of personal injury claims is calculated as</p> <p style="padding-left: 40px;">= passenger revenue / average fare * claim rate</p> <p>Note that the average fare has been assumed as Line 1 = £0.93, Line 2 = £1.20 and the Network is to be agreed</p>
Professional Indemnity Insurance	other inputs, row 174			1	

Item	Model reference	Comments	Scope Clarification	Cost Category	Base Case Assumptions
Bank Charges	other inputs, row 208	Fee per passenger revenue		4	0.5% of passenger revenue. All passenger revenue is assumed to be cash for the purposes of this assumption. Base assumption on revenue is in STAG.
Tools and equipment					It is assumed that others will provide a full initial supply of such items as points bars and keys that will be needed by the Operator's operations staff to access and operate defective equipment.
Maintenance response					The Operator's bid is on the basis that a third party will provide a timely and effective maintenance response, so the Operator does not need any tools.
Tram related items					The Operator assumes that all tram related items that may be considered as consumables such as screen wash, lubricants, OTMR memory cards, fire extinguishers, tyres and pantograph carbons are provided as part of the Infrastructure Provider Maintenance at no cost to the Operator.
Purchase of capital items					tie/Infrastructure Provider purchase all capital items that are not specifically identified in these assumptions

4. Operating Costs, C2 and D

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Travel, Hotels, etc.	97		Includes corporate hospitality and sundry minor expenses for visits to the Edinburgh system by others. Senior managers' expenses are included in their rates.	1	
External Training & Welfare	98		Includes First Aid, "Train the Trainer" and other staff development training courses, procured externally. Also includes miscellaneous welfare expenditure.	1	
Cash collecting & counting	99		This is based on the Operator carrying the work out in-house. It may be more cost effective to contract this out.	4	1 security van at £15k/year plus 1 cash counting machine @ £4k per year for either line 1 or line 2, giving a total of £19k/yr. For the Network, an additional road vehicle is needed, giving a total of £34k/yr.

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Office machinery rentals	100			1	Telephone and IT system provided by the Infrastructure Provider free of charge Lease of two photocopiers, fax, and other sundry office equipment.
Consumables & subscriptions	101			1	Stationery, postage, etc and necessary industry periodicals Includes the ongoing replacement of keys etc.
Health, Safety & Environmental costs	102			1	HMRI ongoing costs at £1.5k, external audit fees and other registration fees.
Legal Advice	103	£5k/yr	Employment matters, advice on byelaw issues, Competition Act and general ongoing legal issues.	1	Excludes legal advice on revenue recovery.

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Telephone expenses	104	<p>Actual emerging BT telephone costs at NET are about £3000 per month, plus £400 per month for 13 mobile telephones, say £3400 per month overall. These bills include the infrastructure maintenance function at NET, and are during a period of high activity leading up to opening. The steady state costs are likely to be less in the long term due to future competitive sourcing of telephony and less intense use of the telephone once the System is open.</p> <p>Translating this to the steady state operation of the Network in Edinburgh with a larger operation, but no infrastructure maintenance justifies the prices in the Operator Financial Model as being the same as for NTC now.</p>		1	Includes provision of mobile telephones and call charges for senior and on call staff.

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Finance support	106			1	Includes external senior finance advice and audit fees. Includes payroll administration, outsourced
Uniforms	107			2	Cost per person is fixed at £250 per uniformed employee per year. The following staff are, for the purpose of this calculation only, deemed to be not uniformed: <ul style="list-style-type: none"> • Part time test engineer(0) • Performance Regime Manager (1), • Performance Manager (1) • Clerk (1) • Finance Manager (1) • Accounts Assistant (2) • Debt Recovery Staff (4) • Cashiers (2) This is a total of 12 for the Network. Similarly this is 10 for Line 1 and 10 for Line 2, due to the changes in the number of Debt Recovery staff.
Recruitment	109		Recruitment advertisements in local and/or national press and other recruitment activities such as open days etc.	1	

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Medical examinations	110		Initial and ongoing employment medicals, plus costs of administering random drink/drug tests	1	
Ticket Stock	111		The actual number of tickets needed obviously varies with the number of passengers and the type of tickets used.	1	Assumes paper and card tickets only. 26m in length/roll 70mm wide paper 10,000 rolls = £6750 with security single colour printing 10 cm average length per ticket. 1 roll gives 26000/100 = 260 tickets 10,000 rolls is 2,600,000 tickets £9k will provide 3.45 million tickets per year. Excludes smartcards and magnetic stripe tickets.
Substitute Buses	112			6	

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Passenger information (Timetables etc.)	113			7	<p>If required, will be instructed as a tie Change.</p> <p>Timetables at tramstops plus printed timetables issued at help points</p> <p>Pocket Timetables: 170,000 timetable leaflets at £12k for the batch, 2 batches per year= £24k for the Network.</p> <p>Tramstop information for the Network: One size A0 timetable poster plus 2 A3 inserts or equivalent per platform every 6 months. Assume 36 tramstops, 72 platforms, so 144 sets per year at £65 per poster is £9k per year. One other identical A1 poster every 3 months at each tramstop is 4*36=144 posters per year. At £250 for each print run, the annual cost is £1k. For the tramstops this is £10k per year.</p> <p>For tramstops and timetables, this is £34k per year overall.</p>
Advertising & Marketing Costs	114			7	<p>If required, will be instructed as a tie Change.</p> <p>Covers costs of advertising and marketing the System.</p> <p>Also includes the costs of compensating customers as a result of customer complaints</p>

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Launch Costs	115		This is a budget for a full scale launch	7	If required, will be instructed as a tie Change. This is equivalent to a one off cost of £100k in C2 only
Market Research	116			7	If required, will be instructed as a tie Change. Excludes revenue apportionment surveys
Training materials	117		Includes classroom consumable equipment, training videos where needed (e.g. driver's view of the route)	1	
Audit & Investors in People	118			1	Includes non-financial external audits and IIP award and ongoing fees
Performance Monitoring Surveys	119			1	All official externally provided performance monitoring surveys are carried out by tie. Duty managers carry out internal audits of performance, and will "shadow" tie's surveys where appropriate. Excludes revenue apportionment surveys. Small amount included to enable some independent surveys to be carried by the Operator.
Road vehicle costs 1	126			1	One additional vehicle if two Depots. Vehicles are costed at £7.25kpa each.

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Maintenance IT system support	128			1	<p>Ongoing enhancements and changes to the office computer network.</p> <p>Office computer system, some 30 PCs plus software (Microsoft Office Professional or equivalent & Anti virus), cabling, internet access, configuration and printers is part of scope of the Infrastructure Provider.</p> <p>Maintenance and ongoing renewal of this is included in the Infrastructure Provider's scope.</p> <p>Provision of accounting, tram crew scheduling (see "One-off purchase of software") and maintenance management software is provided by the Operator.</p>
Other Power & Gas	130	Emerging gas bills at NET are about £4k for 3 months to 12 Dec 03. The following 3 months are likely to be more, say £6k due to colder weather. Annual costs are likely to be about £15k.		1	<p>Supply of gas to the Depot, assumed used to provide heating</p> <p>Excludes all electricity.</p>

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Water & Sewerage	131	Emerging costs are not available for NET as yet. Metrolink annual water costs were £10k in 1996. Adjusting for inflation, this is about £12k in 2003, also for 26 trams. This is the same as for the Network.		2	<p>Varies linearly with fleet size:</p> <p>Line 1, 14 trams</p> <p>Line 2, 12 trams</p> <p>Network, 26 trams</p> <p>Charges associated with the Depot.</p> <p>Includes disposal of tram wash effluent.</p>
Tram cleaning	147		<p>Tram Cleaning:</p> <p>Network:</p> <p>Based on outsourcing. The price is for a Manager plus 2 team leaders plus 4 operatives. This gives 3 people on duty each night (plus the manager).</p> <p>Lines 1 and 2 reduced prorata by fleet size.</p>	2	<p>Varies linearly with fleet size:</p> <p>Line 1, 14 trams</p> <p>Line 2, 12 trams</p> <p>Network, 26 trams</p> <p>This provides nightly, monthly and 6 monthly tram cleans, including nose end cleaning.</p> <p>Assumes that tram drivers drive trams through wash.</p>

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Tramstop and infrastructure cleaning	148			1	<p>Includes litter picking from trams.</p> <p>For Line 1: Team leader £15k plus 3 Cleaners at £10k each gives staff costs of £45k. Plus van £5k, plus materials £5k gives total of £55k</p> <p>This gives cover of one person on duty for most of the operational time.</p> <p>Line 2: As for line 1, but one less cleaner to reflect smaller workload</p> <p>Network: Team leader £15k plus 6 Cleaners at £10k each gives staff costs of £75k. Plus van £5k, plus materials £10k gives total of £90k</p> <p>This gives cover of one person on duty for most of the operational time</p> <p>Assumes that Tramstops are similar to NET in size, layout and equipment content</p>

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Provision of helpdesk	149			7	<p>If required, will be instructed as a tie Change.</p> <p>Varies with the number of help desk locations provided.</p> <p>We assume that 5 will be provided for the network; costs will vary with the number of help desk locations provided, and the eventual prices quoted by Lothian Buses plc and First Scotland East Limited.</p>
Accidental Damage --> standard	150			6	<p>Varies linearly with fleet size:</p> <p>Line 1, 14 trams.</p> <p>Line 2, 12 trams.</p> <p>Network, 26 trams</p> <p>Assumes a System that is similar to STAG.</p>
Accidental Damage --> risk element	151			6	<p>Varies linearly with fleet size:</p> <p>Line 1, 14 trams.</p> <p>Line 2, 12 trams.</p> <p>Network, 26 trams.</p> <p>Assumes a System that is similar to STAG.</p>

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Vandal Damage standard -->	153			6	Varies linearly with fleet size: Line 1, 14 trams. Line 2, 12 trams. Network, 26 trams. Assumes a System that is similar to STAG.
Vandal Damage risk element -->	154			6	Varies linearly with fleet size:Line 1, 14 trams. Line 2, 12 trams. Network, 26 trams Assumes a System that is similar to STAG.
Graffiti Damage standard -->	156			6	Varies linearly with fleet size: Line 1, 14 trams. Line 2, 12 trams. Network, 26 trams. Assumes a System that is similar to STAG.

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Graffiti Damage --> risk element	157			6	Varies linearly with fleet size: Line 1, 14 trams. Line 2, 12 trams. Network, 26 trams Assumes a System that is similar to STAG.
One-off purchase of software	159	Equivalent to a one off cost of £10k	Tram scheduling and driver rostering package	1	Assumes tie have commissioned the System Operational Model during Project Phase B upon which the scheduling and rostering package will be based. See paragraphs 16.3.6, 16.5 and 16.6 of the Project Development Output Specification.
Miscellaneous costs	161			1	These are other costs not covered elsewhere, and sand is included. Sand is based on £30/Tonne at the local quarry, £200 per 20 Tonne delivery, giving delivered to site cost of £40/Tonne. Usage rate of 7 Tonne per tram per year. Fleet size of 26 trams This is $£40 * 7 * 26 = £7820/yr$ for the Network.

5. Staff, Project Phases A to D

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
Salaries									<p>The salary figures in the Operator Financial Model are derived from a predicted salary plus:</p> <p>10% for overtime and bonus, notionally 5% for each.</p> <p>10.8% for national insurance</p> <p>10.2% in respect of a non-contributory employee pension, assumes 100% take up of pension rights.</p> <p>A 10% contingency / expenses has already been included in relation to staff whose salaries are not subject to the mechanism as set out in Schedule 17 (<i>Setting of Fixed Costs</i>).</p>

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
David Humphrey	Project Director	17 May 2004	End of Oct 05	Core	(See BCA)	n/a		9	Full time (billed to tie at 4 days per week) from 17 May 04 to 31 August 04, 2 days per week September 04, 2 days per month October 04 until end of October 05.
Andy Wood	General Manager	17 May 2004	End of Project Phase D	Core	(See BCA)	n/a		9 during Project Phases A to C1 1 during Project Phases C2 and D	2 days per week May 04, 2 days per week June, 2 days per week July, 3 days per week August, 4 days per week September 04 onwards to end of Project Phase C1
Jim Harries	Technical Engineer	17 May 2004	End of Project Phase C1	Core	(See BCA)	n/a		9	3.5 days/wk, then 4 days/wk from Nov 06
	Senior Commercial Manager	Start of July 2004	End Project Phase C1	Core	(See BCA)	n/a		9	approx 1 day/week July 4 to Dec 04, about 2 days/wk Jan 05 to Oct 05, about 2 days/month Nov 05 to end of Project Phase C1

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Secretary/ Assistant	17 May 2004	End of Project Phase D	Core	Yes	60		9 during Project Phases A to C1 1 during Project Phases C2 and D	
	Transportation Consultant	17 May 2004	End of Project Phase B	Non Core	(See BCA)	n/a	Patronage/revenue forecasting validation.	8	Project Phase A, 30 days Project Phase B, 20 days Project Phase C1, zero
	Network Rail Expert	see comments	End of Project Phase A	Non Core	(See BCA)	n/a		8	Project Phase A, 5 days per week for 26 weeks
Daniel Daman	Public Consultation Assistance	N/A	End of Project Phase A	Non Core	(See BCA)	n/a		8	40 days in Project Phase A only
Christian Buisson (Project Phase A only)	Transamo Director	N/A	End of Project Phase C1	Non Core	(See BCA)	n/a		8	5 days in Project Phase A. From Project Phase B onwards, named person TBC Project Phase B 4 days Project Phase C1 5 days/yr = 16.25 days

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Operations Manager	Nov 05	End of Project Phase D	Core	Yes	18		9 during Project Phases B to C1 1 during Project Phases C2 and D	227 days/yr
	Engineering Manager	Nov 05	End of Project Phase D	Core	Yes	31		9 during Project Phases B to C1 1 during Project Phases C2 and D	227 days/yr
	Safety & Standards Manager	Nov 06	End of Project Phase D	Core	Yes	34		9 during Project Phase C1 1 during Project Phases C2 and D	227 days/yr

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Legal Adviser	start of Project Phase A	End of Project Phase D	Non Core	(See BCA)	n/a		8	Continuing legal support for e.g. OFT submissions. Project Phase A, 7 days Project Phase B, 3 days Project Phase C1, 10 days For Project Phase C2, see "Operating Expenses, Project Phases C2 and D"
	Financial Modelling consultant	Start of Project Phase A	End of Project Phase C1	NonCore	(See BCA)	n/a	Further iterations of the Operator Financial Model will need to be undertaken.	8	Fee to be agreed with tie. Based on about 3 days per remodelling and 2 remodelling per year.
	Technical Support Engineer	Aug 04	End of April 06	Core	(See BCA)	n/a		9	4 days/wk until end Oct 05, then 2 days/week Support for Technical Engineer in detail design review, testing and commissioning programmes, including documentation and control.
	Test Engineers 1 and 2	Dec 07 and Aug 08	In Project Phase C2 as Operator Financial Model	Core	(See BCA)	21		9 during Project Phase C1 1 during Project Phase C2	Additionally, in Operator Financial Model, table 3A, 2 months of Test Engineer is included.

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Operations Assistant	3 months prior to Project Phase C2	End of Project Phase D	Core	Yes	27		3	
	Finance Manager	12 months prior to Project Phase C2	End of Project Phase D	Core	Yes	49		9 during Project Phases C1 1 during Project Phases C2 and D	
	Accounts Assistants 1 and 2	10 months prior to Project Phase C2	End of Project Phase D	Core	Yes	50		9 during Project Phase C1 1 during Project Phases C2 and D	
	Commercial Manager	Start of Project Phase C2	End of Project Phase D	Core	Yes	19		1	

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Duty Managers	Start of Project Phase C2	End of Project Phase D	Core	Yes	25		3	<p>Provide 24/7 cover in the Control Centre, plus mobile incident response, security response (also provided by customer service staff), supervision and audit on the System.</p> <p>During pre-operations, provide driver and other operations training</p> <p>Assumes one Control Centre for the System, even if there is more than one Depot</p>
	Operations Supervisors	Start of Project Phase C2	End of Project Phase D	Core	Yes	26		3	<p>Provide 24/7 cover in the Control Centre to support duty manager in customer information (PA, cctv, help point response, routine radio contact with trams and booking staff on and off duty.)</p> <p>During pre-operations, provide driver and other operations training</p> <p>Assumes there is only one control room for the System, even if there is more than one Depot.</p> <p>If there is a second Depot, then an additional 6 people are needed to provide supervision at the second Depot</p>

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Drivers	6 months before start of Project Phase D	End of Project Phase D	Core	Yes	29		3	<p>As set out in the paper "Tram Drivers 20Feb04". (See Parts D and E of this Schedule)</p> <p>The start date assumption is for financial modelling purposes. In practice, the employment of drivers will be progressive, and will be a function of the system delivery, commissioning and completion programme. This is still to be defined.</p> <p>The recruitment profile may support the Infrastructure Provider's need for tram drivers, but this will need to be reviewed once the degree of testing required is established and the detailed commissioning programme can be considered.</p>

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions												
									<p>Determination of tram drivers' salaries in the Operator Financial Model</p> <p>Lothian bus driver rate on 28 March 2004 was £330.74 per week, thus £17,246 pa.</p> <p>RPIX for March 2004 was 182.5, and March 2003 was 178.7</p> <p>Lothian bus driver rate adjusted by RPIX to 1 April 2003 prices is $£17,246 * 178.7 / 182.5 = £16,887$</p> <p>This gives the salary for drivers as</p> <table> <tr> <td>Base salary</td> <td></td> <td>£16887</td> </tr> <tr> <td>Bonus/overtime</td> <td>10%</td> <td>£1689</td> </tr> <tr> <td>NI + pension</td> <td>21%</td> <td>£3546</td> </tr> <tr> <td>Total annual cost</td> <td></td> <td>£22121</td> </tr> </table> <p>This cost is factored according to the ratios set out in Schedule 17 (<i>Setting of Fixed Costs</i>) to determine the costs for the other staff who are in Cost Category 3.</p>	Base salary		£16887	Bonus/overtime	10%	£1689	NI + pension	21%	£3546	Total annual cost		£22121
Base salary		£16887																			
Bonus/overtime	10%	£1689																			
NI + pension	21%	£3546																			
Total annual cost		£22121																			
	Vehicle Engineer	Project Phase C2	End of Project Phase D	Core	Yes	32 & 35		1													

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Infrastructure Engineer	Project Phase C2	End of Project Phase D	Core	Yes	33 & 37		1	
	Performance Regime Manager	Project Phase C2	End of Project Phase D	Core	Yes	41 & 42		1	Manages performance regime deductions primarily with the Infrastructure Provider, where the Operator expects that the allocation of responsibility for performance failures between the Operator and the Infrastructure Provider will require a full time resource.
	Storeman	Project Phase C2	End of Project Phase D	Core	Yes	43		1	
	Clerk	Project Phase C2	End of Project Phase D	Core	Yes	45	To support the engineering team	1	
	Marketing Manager	3 months after start of Project Phase C2	End of Project Phase D	Core	Yes	54		1	
	Admin. Staff	3 months after start of Project Phase C2	End of Project Phase D	Core	Yes	61	General admin and office support for the whole	1	

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Customer Service	1 month prior to Project Phase D	End of Project Phase D	Core	Yes	72		3	<p>Full details of staff numbers are set out in the document "Revenue Protection 23 Feb 04". (See Parts B and C of this Schedule). For ease of reference, some key features follow: Line 1, 24 staff Line 2, 16 staff Network, 36 staff.</p> <p>Based on 20% ticket inspection rate, 3 checks/hr, 2 staff/tram</p> <p>Salary is same as for drivers.</p>

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Temporary Customer service	1 month prior to start of Project Phase D	6 months after start of Project Phase D	Core	Temporary fulltime	55		3	<p>Full details of the assumptions are set out in the document "Revenue Protection 23 Feb 04". (See Parts B and C of this Schedule).</p> <p>Cost varies directly with the number of staff and the duration, at tie's discretion.</p> <p>The salary will be 5% below the drivers' salary.</p> <p>20 temporary customer services staff for 6 months at start of Project Phase D, for the Network, or 10 for either Line. 1 month to train them at end of C2</p> <p>In addition to the full time customer services staff, additional staff will be deployed during the first 6 months after opening.</p> <p>The costs of this temporary resource are included in the Operator Financial Model for Project Phase C2, table 3A.</p>
	Temporary Customer service (continued)								Note that the costs associated with their employment in Project Phase D are shown in Project Phase C2. This is due to the difficulties in modeling a staff resource that changes during Project Phase D. The costs are correct, but the allocation between Project Phases and the timing is not.

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Security Staff (cash Collection only)	1 month before Project Phase D	End of Project Phase D	Core		73	To collect cash from ticket machines and bring it to the Depot for counting, then to deliver the cash to the bank.	4	Staffing for Lines 1, 2 and network based upon 20 minutes per stop including travel time, number of stops and ticket machines per STAG, then rounded to nearest whole person on 7 day per week roster. Will be outsourced after competitive tenders if better value for money.
	Cashiers	1 months before Project Phase D	End of Project Phase D	Core		74		4	To count the cash from the ticket machines and from customer service staff
	Debt Recovery Staff	3 months after start of Project Phase C2	End of Project Phase D	Core		62	These people support the customer service staff and operate the debt recovery process up to and including prosecutions	1	
	Revenue Protection Manager	Start of Project Phase C2	End of Project Phase D	Core		75	To manage the revenue protection and minimise lost revenue.	1	

Part A Performance Regime - Notes of Technical Meeting at DLA Offices 5 February 2004

Present

Jim Harries
David Hand
Doug Blenkey
Ian Kendall

1.	KPI – punctuality
	Agreed that there could be different penalties at different times of day, e.g. greater weighting off peak than during peaks, as it is generally easier to control the service off peak
2.	Agreed to measure adherence to timetable at headways greater than 10 minutes, and to measure headways at timetabled headways below or equal to 10 minutes. Adherence to headways would be OK if actual headways are less than timetabled headways plus an allowance. No penalties for short headways!
3.	All data gathered and reported automatically, generating daily exception report. Summary figures only to be transferred into the daily reports. Operations Assistant is the Operator’s resource for this task.
4.	JH introduced the concept of being able to bank some allowance for “bad days” and being able to roll this over from one month to the next. Ian believes that this is covered by being able to carve out the bad disruptions from the overall performance counting. Concept still open to be discussed later.
5.	IK sought a service recovery time after an incident. Post meeting, TRANSDEV suggests: 1. If trams not turned or diverted, the end to end run time 2. If trams turned or diverted, this time multiplied by 2.5
6.	Fit trams could be fitted with an indicator to show the driver if he is early or late, as fitted to some buses? TRANSDEV pointed out need for Rugby clocks in trams and everywhere in the system.
7.	Weighting of first/last tram as proposed is too high – eg on line 2, there are 200 trips/day earning 25% of the performance, and the 1% of these that are the first/last ones would earn 15%. Agreed to reassess the weightings of the indicators later.
8.	Revenue Protection KPIs Measure ticket machine availability, availability of full range of tickets through sales points elsewhere, customer surveys and complaints. Customer complaints are closed out by the Operator’s Marketing Manager.
9.	Passenger Information KPI Check tramstop signage and posted information weekly at each tramstop against spec and drawings. To be done by roving Duty manager. Tie may audit. Ticklists lead to performance indicator. Consider NET concept of if reported and rectified within a period, then no penalty. Performance of PID system monitored automatically as on NET. Use customer surveys and complaints also for KPI.
10.	Graffiti removal Proposed as on NET - % of reported removed within timescale.
11.	Revenue Protection KPIs Proposal agreed was to measure customer service staff “time in the field” against the plan. Agreed that other PIs for revenue protection can act as perverse incentives. Further discussion needed.
12.	Revenue Protection Incentives Tie would like CS staff to be incentivised by bonus – eg for every £15 penalty fare actually paid, CS staff get £1 bonus. Further discussions needed

13.	<p>Revenue Protection Management Information Agreed totally open book, with</p> <ul style="list-style-type: none"> • % passengers without valid ticket • % of these sold a ticket and % issued with penalty fare (+ % of those that got away!) • % of penalty fares paid on the spot • % of penalty fares within [] weeks • % prosecuted • Data on results of prosecutions
14.	<p>Cleaning KPI Measure what the cleaners have signed off as clean compared with what is required. Audit by Duty Manager – each stop checked weekly but at random. This audit checks standards against the contract, results to be shared with tie. Tie expects us to fire the cleaning contractor quickly if they are not performing.</p>
15.	<p>Security KPIs Apart from the availability of PIDs, CCTV, PA and help points, all were struggling to suggest what can be sensibly measured without perverse incentives. Needs further discussion. Tie promote a proactive response to incidents, by security staff or others. TRANSDEV suggested monitoring trends or absolutes in the customer surveys on passenger perception of security.</p>

Ends

Part B Revenue Protection 8 March 2004

This paper set out TRANSDEV's strategy on revenue protection for Lines 1 and 2. The strategy is supported by data drawn from other systems. A concluding section on the possible provision of placing a customer service member of staff on all trams is included.

The calculations that support this document are in a separate spreadsheet called "Revenue Protection 08 Mar 04"

Background

The overall evasion rate has been set at 5% in the modelling carried out for tie by their consultants. TRANSDEV believes that this is slightly optimistic, based on information obtained from other tram systems. TRANSDEV proposes a rigorous revenue protection and enforcement regime to protect the revenue base for the system.

Preferred Philosophy

The system will have ticket vending machines located at tramstops, and period passes and other integrated tickets will also be valid on the system. Revenue protection will be carried out by a team of Customer Service staff. They will implement random checks on the validity of tickets by a variety of processes including spot checks on trams and station blocks at tramstops. This team will also provide a response to security incidents as directed by the Duty Manager in the Control Room, assist in crowd control at special events, and provide customer service during periods of disruption.

When passengers are unable to present a valid ticket, the customer services staff will make a judgement about the intent of the passenger to avoid payment. They may sell a valid ticket or issue a Penalty Fare. Payment of the penalty fares will be enforced to the extent that the overall long term balance of revenue against the cost of collection is maximised.

There are particular issues associated with revenue recovery where passengers are travelling on concessionary or free tickets. Data on these is likely to need to be collected by survey, and the proposed revenue collection staff would be able to carry out survey work as part of their ticket checking role.

Fare Evasion

Under this type of revenue protection regime, fare evasion rates on systems are difficult to measure accurately. The Metrolink enforcement regime is rigorous, and their evasion rate is internally identified as between 4% and 11%. The revenue protection staff find about 4%, and about twice this on station blocks. It is TRANSDEV's view that the real fare evasion rate is likely to be about 8%. This figure is likely to be appropriate for use in Edinburgh system modelling work developed to predict fare evasion and revenue protection costs.

Penalty Fare recovery

Issuing Penalty Fares

Rigorous and effective recovery of penalty fares is essential. If this is not carried out, it will soon become known that buying tickets to travel on the system is an unnecessary expense. It is vital to the long term revenue base of the system that random ticket inspection is backed up by rigorous recovery of penalty fares. A dedicated team for recovering penalty fares can also support the customer services staff on the system in providing electoral role checks in order to validate the identity of information provided by people who are issued with penalty fares. To some extent, this support can also be

provided by the operations supervisors in the control room. This proposal assumes that most identity checks will be carried out by the customer services staff who will carry with them mobile computing that can be used to interrogate the necessary databases. It is assumed that it will only be necessary to contact a central depot based support resource on rare occasions, and consequently no marginal cost has been attached the operations supervisors to carry out this function. It is assumed that the operations supervisors in the control room will be able to carry out this task as par of their duties.

Payment of Penalty Fares

Information on how Metrolink manages penalty fares follows. Metrolink carries 13,000,000 passengers per year and issues about 1200 penalty fares each month, or 300 a week. This is a rate of 1.1% of passengers. About 10% of penalty fares are paid on the spot and about 40% are paid without recourse to legal action within 21 days. The remaining 50% are passed to a dedicated debt recovery team at Metrolink, processing 150 per week through prosecutions. About 85% of prosecutions are successful. Court and Metrolink administration costs are generally covered by the award of costs and fines by the court against the offenders.

TRANSDEV propose a similar arrangement for Edinburgh in this document.

Debt Recovery Resources

A dedicated team is proposed to manage and administer the recovery of unpaid penalty fares. The proposed number of people in this team is shown in the Excel worksheet titled “Staff numbers” in the file “Revenue Protection”. This team will be supported by a database system that will have the following functions:

1. Record details of all penalty fares issued
2. Control the workflow of the process to recover the fares
3. Issue standard letters to the recipients of penalty fares
4. Record the payment of penalty fares
5. Support the prosecution of offenders
6. Identify repeat offenders
7. Provide management information

Ticket checking – Determination of resource levels

The resource needed to establish the checking of tickets is established below, and the core calculations are within the associated Excel spreadsheet. The model below assesses how many passengers can be checked by a team of two customer service staff. Once this has been established, the number of staff needed to check 10% and 20% of tickets is established scaling.

It is assumed that a team of two customer services staff will be able to check a tram every 20 minutes on average. During off peak periods, the staff will be waiting for the next tram for longer than during peak periods. During peak times, checking a full tram every 20 minutes will be challenging but achievable, provided that the estimate of workload in this paper for processing those who do not have valid tickets is sound.

In the analysis below, the word “trip” is used for

- a tram movement that is one complete circuit of the loop of line 1 in one direction only, and
- a tram movement that is between the City and the Airport on the Airport line

The analysis considers the percentage of trips that the team of two can check. This is not the same as the percentage of passengers, because checking a trip at a random point in the journey will not check all passengers who travel on the trip. Some will have already left the tram, and others have not boarded it yet. The proportion of passengers checked on the trip relates to the average journey length. If all passengers travel the full length of the trip, then the checking will be 100%. If they only travel

for half the length of the trip, then, on average, half of the passengers will be checked. The proportion of passengers checked is approximately equal to the average length of the journey divided by the length of the trip. The proportions used in the model are explained below for each line:

1. Line 1. Because the route is circular, the average length journeys will be less than half the length of the loop. This calculation assumes that the average length of journeys is a third of the length of the loop. Consequently the multiplying ratio used is 3.
2. Line 2, Airport. It is assumed that on average, the passengers travel over 2/3 of the end to end length of the route. This means that the ratio is used is 1.5.
3. Line 2, Newbridge Shuttle. A different approach to the shuttle is used, and this is explained below.

Newbridge shuttle

The end to end run time is 10 minutes, and 3 trams provide the peak service. The relatively light passenger loadings on this route mean that one pair of inspectors who are continuously on duty can check all passengers on one tram that is providing part of this service. This is 1/3 of the peak passengers when there are 3 trams in service, and half of the off peak passengers when there are two trams in the service. This gives an overall checking rate of about 40%, and would require about 10 people to cover the operating hours and including allowance for holidays and so on.

To achieve an inspection rate of 10%, the 10 people can be reduced by the ratio of 40% to 10%, giving 2.5 people.

Most passengers are expected to travel further on the Airport route, and consequently they will be subject to a further random check. This means that checking on the Newbridge shuttle can be reduced whilst maintaining the overall checking rate. A further factor of about 2 is used to reflect this, so the 2.5 people can be reduced to about 1. For a system wide 20% check, this would double to 2 people.

Please refer to the separate Excel file called Revenue Protection, worksheet "Staff numbers".

Network staff numbers

There will be some economies of scale for the Network. These are

1. The number of staff needed to achieve the ticket inspection rates for the Network will be less than the sum of the number of staff needed for Line 1 and Line 2. This is mainly due to passengers whose journeys start on one Line and finish on the other line. Their tickets do not need to be checked twice as the checking rate is on a per journey, not a per line basis.
2. Other economies of scale, of a less significant nature exist due to more efficient working with a larger group of staff

A percentage reduction factor has been included in the calculations to reflect this economy of scale, and it is stated in section of the spreadsheet headed "NETWORK".

Security

The time that the Customer services staff will need to spend on security incidents is addressed by adding an additional 2 members of staff to all options. These people are called "Customer Service (security)" in the associated spreadsheet, and they are included in the "Staff Summary" section.

Cost of employing Customer Services Staff

The task is relatively stressful due to potential confrontation with passengers. The role is often used as a promotional step to tram driver on other systems, and this promotes a large turnover of staff in the customer service role.

TRANSDEV intends that the customer service staff's initial salary will be 5% below that of the drivers. Although this will be above the market rate for the role, it will control staff turnover and

allow the employment of quality staff. All Customer Service Staff will ultimately be trained as drivers and will then become entitled to the rate of pay for drivers. Consequentially the financial model sets the salary for the Customer Services staff to be the same as for the drivers. Drivers will also be trained in the Customer Service role.

The salary for the temporary Customer Services Staff is set out in the section headed “Temporary Customer Service Staff” below.

Equipment Required

The revenue protection staff will require the following equipment:

1. Secure and reliable communication with the control room to enable an appropriate response to a threatening or abusive incident.
2. Secure communications to enable electoral roll and other checks on identities – this could be hand held computers
3. Penalty fare documentation
4. Survey data capture equipment

Most of the above tasks can currently be carried out by mobile computers, and TRANSDEV envisage that this will be the most cost effective solution. Outline costs for the provision of this equipment are presented in the associated Excel worksheet. TRANSDEV assume that all of this equipment will be provided by Infrastructure Company.

Station Blocks

In order to establish an effective and rapid station block during peak hours, the experience of Metrolink is that about 8 customer service staff are needed, plus an additional 2 for verification of identity checks. The proposed number of staff would be able to support station blocks adequately unless the Line 2 only option is selected with a 10% checking rate. In this case, a further analysis of the options would be needed, to include using part time to replace full time staff and consequently allow more people on duty for station blocks at the expense of reduced staff levels at other times.

The operator’s staff will not have the powers to detain people on the highway. Station blocks can only be carried out at tramstops that are on the highway by controlled entry and exit at each tram door. A large number of customer services staff is needed if the tram is not to be delayed.

Setting the Penalty Fare

The price of the Penalty Fare is a compromise between

1. A reasonable amount in the perception of the public – too much and the public and media will not support the concept
2. Small enough to be reasonably recoverable from the majority of passengers
3. Large enough to act as a deterrent
4. A round number (e.g. £20)
5. Not subject to frequent change due to inflation or changes in revenue protection policy
6. A discounted price for payment on the spot is a useful incentive

The deterrent aspect can be expressed in analytical terms, and many people will either consciously or unconsciously carry out this analysis.

The penalty fare will act as a deterrent if the normal fare for the journey is less than the penalty fare times the chance of being checked.

A fare of £1 and a checking rate of 10% would equate to a penalty fare of at least £10.

It is TRANSDEV's view that a penalty fare of £30 would be an appropriate starting point, with a discount to £15 if paid on the spot. This price should be able to be held for several years from the start of operations.

Temporary Customer Service Staff

TRANSDEV have included a group of temporary Customer services staff to provide enhanced customer service and revenue protection for a period of 6 months at the start of Phase D. An allowance of 1 month has been included for training them at the end of Phase C2, and they are retained for a further 6 months from the start of Phase D. This group will work as an integral part of the Customer Service team. They will provide a high profile regime to new users of the system that will ensure that fare avoidance is rigorously controlled from the start of the system.

TRANSDEV have included 20 temporary staff to support the opening of the Network, and 10 for Line 1 or Line 2.

It is assumed that the temporary staff will not require any equipment to perform their role. It is assumed that the equipment provided for the permanent staff will suffice during the period that they are deployed.

Most of the costs for these people should be included in Phase D of the financial model. However, the Tango financial model is not configured to support changes to the base costs during Phase D, and consequently all of the costs associated with the temporary staff have been shown in the last month of Phase C2. Row 55 of Table 3A in the model contains these costs.

Strategy Development after opening

Experience on other systems is that it is easy to allow fare evasion to increase, and hard to bring the system back under control and force evasion rates down. Consequently a rigorous initial approach that can be gently scaled down later is the recommended strategy. This also brings the following advantages:

1. A relatively large number of customer service staff available to support the opening of each stage in the opening of the system will enhance the attractiveness of the system to new users and encourage the initial revenue growth.
2. Their presence in the long term will help to provide enhanced security of passengers on the system, both real and perceived
3. They will provide a useful response to disruptions and incidents when required
4. Once the system has opened, some initial turnover of operational staff is anticipated. The customer services staff can be given opportunities to fill these vacancies and they will act as a useful buffer resource to allow longer term staff resource planning to be developed once the real operation of the system becomes known

Costs

The outline costs associated with this proposal are outlined in the second worksheet in the associated Excel file named "Revenue Protection", worksheet "Costs".

TRANSDEV assume that hardware and software needed to support the Customer Service Staff will be provided by the Infrastructure Company.

Placing a customer service member of staff on all trams

This is not the initial strategy that is outlined in this paper. It is an option that may follow once the system has set its initial strategy. The option would provide the equivalent of a conductor, but with a significantly

enhanced customer service role. The on board member of staff will be able to sell tickets, but this would probably be at higher prices than at ticket machines at tramstops to provide an incentive for pre purchase of tickets. The prime role will include checking all tickets, and customer care. Secondary roles would be incident response and crowd management at events. Experience at Sheffield was that revenue increased by 9% as a result of the presence of conductors. This was due to reduced fare evasion and an increased sense of passenger security leading to patronage growth. The number of people in the separate security staff group could also be reduced with this option.

Part C Revenue Protection Spreadsheet 8 March 2004

Line 1

Day	Days /wk	frequency per hr	Duration hr	Trips per day	Trips per wk
Weekday	5	8	12	192	960
Weekday	5	4	7	56	280
Saturday	1	8	9	144	144
Saturday	1	4	10	80	80
Sunday	1	4	16	128	128
Total trips per week					1592

two members of staff can check 21 journeys in a shift

In a working week they can check

per person, this is

Allowing for holidays and sickness this is

105 journeys/week

52.5 journeys/person/week

43.75 journeys/person/week

ratio of length trip to average length of journey (see text above)

3

The percentage of passengers that one member of staff can check is

0.92%

The number of staff needed to check 10% of passengers is

11

The number of staff needed to check 20% of passengers is

22

LINE 2

Airport

Day	Days /wk	frequency	Duration		Trips	Trips
		per hr	hr		per day	per wk
Weekday	5	6	20		240	1200
Weekend	2	6	20.5		246	492

Total trips per week 1692

two members of staff can check 21 journeys in a shift

In a working week they can check 105 journeys/week

per person, this is 52.5 journeys/person/week

Allowing for holidays and sickness this is 43.75 journeys/person/week

ratio of length trip to average length of journey (see text above) 1.5

The percentage of passengers that one member of staff can check is 1.72%

The number of staff needed to check 10% of passengers is 6

The number of staff needed to check 20% of passengers is 12

Newbridge

The following numbers are derived in the text above

The number of staff needed to check 10% of passengers is 1

The number of staff needed to check 20% of passengers is 2

NETWORK

economies of scale, see text above 8%

Staff Summary

10% Checking rate

	Line 1	Line 2		Network
		Airport	Newbridge	
Customer Service Staff	11	6	1	17
Customer Service Staff (security)	2	2		2
Total Customer Service Staff	13	9		19
Debt recovery	2	2		4
Manager	1	1		1
Total	29	21		43

20% Checking rate

	Line 1	Line 2		Network
		Line 2	Newbridge	
Customer Service Staff	22	12	2	34
Customer Service Staff (security)	2	2		2
Total Customer Service Staff	24	16		36
Debt recovery	2	2		4
Manager	1	1		1
Total	27	19		41

Staff numbers are given in the previous worksheet

Annual or initial	heading	detail	tie rate	units	remarks
Annual costs	Staff Costs	Customer Service Staff	26 k£/year	per person	same as driver rate in Tango models
		Debt recovery	23 k£/year	per person	same as admin rate in Tango models
		Manager	32 k£/year	per person	same as Marketing Manager rate in Tango models
		unproductive time	excluded		This relates to staff our staff who are required to attend court
	Consultancy	Legal costs	25 k£/year	per line	estimated
	IT	Support and system upgrades	10 k£/year	fixed	estimated
	IT provision	Mobile computing	1 k£/year	per person	Includes set up, and replacement, ongoing development
	Court	Fines imposed by court	excluded		
		Costs awarded by court	excluded		
Court fees		excluded			
Initial Costs	IT	Central system	50k£	fixed	includes central hardware and software development

Part D Tram Drivers 20 February 2004 and Tram Driver Staff Calculator

In this paper TRANSDEV explains the method used to predict the number of drivers in the bid, and how these assumptions have been refined with the benefit of the further information from the STAG reports for the two lines.

The way in which the required number of drivers may change in the future is defined. The run times are one factor that could cause such a change.

The assumptions in this paper are based on the information in the STAG reports.

This paper also defines the assumptions made that support the driver training during phase C2.

This paper should be read in conjunction with the associated spreadsheet that carries out all of the associated calculations. This is the file called "Driver Staff Calculator 11Feb04.xls".

Methodology used in the bid

The information available for the bid provided peak vehicle requirements for each line. These are 12 trams for Line 1 and 10 trams for Line 2. Information on the proposed off peak service and the durations of peak and off peak services was not available. The TRANSDEV bid assumed that the service patterns required for Edinburgh would have reduced levels of service in the inter-peak period, and further reductions in the evening peak. Consequently the number of drivers required for Edinburgh could be derived from standard scheduling benchmarking for such service profiles.

Revised Methodology

The STAG reports for lines 1 and 2 give some further details of the envisaged off peak services and durations. The number of trams required to be in service at any time is known to a much greater degree of certainty than during the bidding process. The attached calculation builds up the required number of drivers from the service patterns. A detailed explanation of how the model works is below.

Uncertainties within the attached calculations

An uncertainty remains within the attached calculation. The peak and off peak timings for the Newbridge shuttle have been assumed. TRANSDEV have made assumptions about this in the attached model that echo the peak service durations on Line 1. Because the difference between the peak and off peak services on the Newbridge is only one tram, the impact of these assumptions should be low. TRANSDEV have identified this assumption as a base case assumption.

Changes in service patterns

A change in service pattern is usually made at point in the route, usually a terminus, and the changed service pattern moves along the route with the trams and arrives at the other end of the route later, the delay in the propagation of the changed service pattern being equal to the run time. TRANSDEV have assumed that the service patterns given in the STAG reports define the minimum service frequencies on all parts of the route concerned in each time band.

For example, the service pattern for Line 1 is given in STAG page C-10 and this shows a change of 4 trams per hour to 8 trams per hour at 07:00 on weekdays. It is TRANSDEV's assumption that tie require 8 trams per hour operating on all parts of the route from 07:00. In order to achieve this, the additional 6 trams that are needed to provide the more frequent service must all be in the correct positions at 07:00. These positions will be uniformly spread around the route. If all of these additional trams are injected into the service by leaving the depot and travelling around the loop in the same direction that they needed in service, then on average each tram will have to travel half of the distance around the loop in order to reach the correct starting point. This is $45/2$ or 22.5 minutes. However, some trams will have the choice of travelling either more than half way around the loop or setting out in the opposite direction and then using a crossover to reach the correct position to enter service. Any tram that moves into position by using a crossover will slightly reduce the 22.5 minutes average figure, so the model uses 20 minutes or 0.33 hours for this purpose. This number is in the table "Time

to add or remove a tram from the service” in the “Productivity” worksheet of the spreadsheet model. This value is used to calculate the driving time under the “Positioning of trams” heading for each line.

At a change in service pattern where there is a reduction in service, the same allowance in terms of tram positioning time will be required to remove the trams from service. This is included in the model under the “Positioning of trams” heading for each line.

The Airport service is assumed to be served from the Gogar depot, which is almost at the Airport end of the route. Additional trams required in the eastbound direction will travel into position from the depot. The maximum time for this will be about 25 minutes, and the minimum will be zero. An average time of $25/2=12$ minutes is appropriate for this move. For trams that need to be positioned westbound on the route, the positions of crossovers influences the time taken for this move. To reach towards the City end of the route, trams will have to travel to St Andrew Square, turn in the loop, and return. It is assumed that other trams will be able to use a crossover positioned about half way between Gogar and the City. This gives an average positioning time of 28 minutes for westbound trams. The average for both east and westbound trams is $(12.5+28)/2= 20$ minutes. This number is in the table “Time to add or remove a tram from the service” in the “Productivity” worksheet of the spreadsheet model.

The Newbridge shuttle has Gogar depot at one end of the line. The run time of 9:07 means that an average positioning time from the depot will be about 10 minutes. This is 0.17 hours, and this figure is in the table “Time to add or remove a tram from the service” in the “Productivity” worksheet of the spreadsheet model.

Separate calculations are given for both the Line 2 services being served from the Leith Depot and from our Depot. Similarly the Line 1 services are shown being served from either Leith or Gogar depots. The Network is also shown served from either Leith or Gogar depots. In each case, the associated times for positioning trams between the depot and the route are shown in the “Time to add or remove a tram from the service” columns of the tables.

Depot Location

The choice of Depot location(s) will impact on the resource required in several complex ways. The model shows all realistic combinations of routes and depots, but does not show the effect of a main depot plus a separate stabling depot. If the Network is operated from a two separate depots, then the model will need to be recast once the appropriate split of workload between the two depots is established. Some tram positioning time will be saved, but there will also be the need to duplicate some resources. The overall effect has not been established, but could be modelled in a similar way once the options are understood better.

Explanation of the model

The model consists of six worksheets. Please refer to the worksheet for Line 1 first. This calculates the number of driving hours needed each week to support the declared service pattern. Particular points to note are:

1. The week is divided into sets of rows that relate to days with the same service pattern. In addition to the service pattern rows, the row towards the bottom of the worksheet relates to the provision of drivers who are on duty overnight. These drivers will prepare all of the trams for the following day’s service, and position trams as required for both maintenance and cleaning purposes. TRANSDEV have assumed that a tram can be prepared for service by a single driver. This validity of this assumption will depend on the tram design. For example, it may not be possible to check that the brake lights or fog lights are working on some designs of tram with only one person.

2. Hours are calculated in two groups as shown on the column headings. These are “Trams in service” and “Tram positioning”. “Trams in service” relates to passenger carrying services. “Tram positioning” is the resource needed to drive trams from the depot to where they are needed to start service. Each row in the table calculates the change in the number of trams from the previous service and allows a time to position these trams. The positioning times used for each tram are drawn from the “Productivity” worksheet, please see below.
3. The three totals from the bottom of the “Line 1” worksheet are used in the summary sheet
4. A separate calculation is carried out for the operation of Line 1 from Gogar depot. The effect of tram positioning time when operating from a depot that is not on the route concerned is included. These times are drawn from the “Time to add or remove a tram from the service” table in the “Productivity” sheet. The time needed to transfer drivers between the depot and a remote route is not included here. This is addressed as part of the productivity factor. Please see later in the “Productivity sheet”.

The “Airport” and “Newbridge” worksheets” follow the same logic as the “Line 1” worksheet.

The “Productivity” worksheet serves several purposes listed below:

1. The basic assumptions about the necessary allowance for holidays, training and sickness are declared. Holiday entitlement and the length of the working week are included. This leads to a key ratio or multiplier that is used in the summary sheet to make the appropriate allowance for holidays and sickness. This allowance also includes for staff turnover by including a period of time for each new driver to be trained. This period of time is spread over the average time that a driver is expected to work as a driver.
2. The “Time to add or remove a tram from the service” is used in the calculations for each line as explained above
3. The “rostering efficiency” section considers an average driver’s shift and the necessary activities that are not driving. An allowance to include for parts of duties that will not align with the shifts is included. The rostering efficiencies are used in the summary sheet, please see later.
4. Where drivers have to book on at the depot and then travel as a passenger to relieve another driver, and/or travel back as a passenger at the end of their shift, this travelling time is calculated in the “Correction factor for drivers who have to travel between the depot and a remote line to relieve others” table.
5. A separate column is used for the rostering efficiency where drivers have to travel as a passenger between the depot and the route concerned. It is assumed that drivers on the Airport Line have meal breaks at the Airport and that they do not travel back to the depot during their break, and that drivers on Line 1 have a break at a mess room that is provided on Line 1. Ocean Terminal is a possible location for this.

The “Summary” sheet calculates the number of drivers required for each route and line.

1. The final numbers of drivers are rounded to the nearest whole number, and a row is included at the bottom of the summary table to show the number of drivers that was submitted in the bid.
2. The model provides cover for sickness and leave, and this is done on by considering the total requirements over a full year. On a minute to minute basis, the driver resource will not exactly balance the requirements. There is a small allowance in the financial model for overtime for the drivers. This overtime will provide the additional cover needed during periods of high leave and sickness. It will also provide the necessary cover for special events.

Commentary on the number of drivers required

The summary table shows the results of the calculations and the number of drivers required. Comments on the results for each line follow:

1. Line 1 shows a reduction in the number of drivers needed when compared with the bid. The further detail from the STAG report has resulted in this change.
2. Line 2 shows an increase in the number of drivers. This results from the longer daily duration of service and extended peak service that is shown in the STAG report for Line 2, together with splitting Line 2, none of which were incorporated in the bid.
3. Network shows an increase in the number of drivers needed, a function of splitting Line 2 and operating both sections remotely from Leith depot.

Further refinement

The number of drivers for the system will be continually refined during phase A and beyond. A complete scheduling exercise will establish the appropriate turns of duty and the number of drivers needed to support the system. This task is an ongoing operating requirement. TRANSDEV’s bid incorporates the cost a vehicle and crew scheduling software package. Pre-operations iterations of schedules, as well as the scheduling of ongoing operations, will be carried out on an open book basis to give tie visibility of changes to drivers’ costs.

The effects of run time

The run time of the system is not yet defined. The estimates in the STAG reports are brought into question in the separate paper titled “Run Time Review” that TRANSDEV sent to tie on 30 January. The actual run time achieved on the system will be affected by a wide range of factors, and will not be known with certainty until the system is commissioned.

Variations from the STAG estimates will affect the number of drivers (beyond say +/- 2%, a variance which is a function of scheduling in reality compared to forward estimates) if either

1. the number of trams has to change in order to maintain the timetable parameters, or
2. the timetable parameters (start and finish time, duration and/or level of peak/off peak/evening/weekend services) have to be changed.

On Line 1 the estimated run time of 41 minutes can vary up to 45 minutes or down to 37.5 minutes without unduly affecting the driver numbers. At either ends of these two extremes, decisions on the number of trams and level of timetable will have to be made.

Summary

1. The model shows changes in the number of drivers from the bid. The summary follows. The Tango financial model is being amended to show the following changes:

	Line 1	Line 2	Network
Number of drivers	48	53	106
Predicted number of drivers from bid	53	44	97
Change from bid	-5	9	9

2. Future reductions in the number of drivers will probably be achieved for Line 2 by refining how the service changes during each day. All of the peak services are probably not needed for the full periods of time that are included in the models. Likewise the assumptions about the initial ramp up and final ramp down of the services can also be refined.
3. Future reductions for Line 1 are unlikely to be achievable without significant reductions in service pattern and/or frequency. There may be scope at little or no additional driver cost for extending the daytime frequency a bit longer, or operating 8 trams per hour up to 1900, 6 trams per hour 1900-2100 before stepping down to the evening frequency of 4 trams per hour.
4. Depot locations and their use will affect the number of drivers, but the driver cost savings will have to be balanced against the additional overhead costs (capital, staffing, and running costs) of a second depot. The saving of drivers is likely to be more than outweighed, by a considerable margin, by the additional costs of a second depot.

Base Case Assumptions related to the number of drivers

These follow in summary as described above:

1. Service patterns, number of peak vehicles, timetable pattern and frequencies are as described in this paper and the associated spreadsheet
2. Peak and off peak service durations on the Newbridge shuttle service is as assumed by TRANSDEV in the attached model
3. Separate depots are used for Lines 1 and 2 at Leith and Gogar respectively if the Network is not built.
4. Leith Depot is used for the whole Network, but the model also considers using Gogar Depot for the Network. The model can be used to assess other permutations of depots and lines.
5. Trams can be prepared for service by a single driver
6. Salary, overtime, holiday and sickness levels for drivers are as set out in this paper
7. Driver numbers are as set out in the above summary. Note that driver number will change with two depots.
8. The sensitivity on run times for Line One is that variations within 38 minutes minimum and 45 minutes maximum round trip times will vary driver numbers by no more than $\pm 3\%$; outside those parameters, peak vehicle numbers will change and driver numbers will vary pro-rata to the number of peak vehicles, $\pm 5\%$ to the nearest whole number above, assuming no change to the service frequency or pattern.
9. For Line Two, the parameters are (airport service) 21 minutes minimum and 27 minutes maximum single journey time, with the same variation ratios applying. For the Newbridge shuttle, the parameters are 6 mins and 13 mins.
10. If the Network expands, the methodology set out above will still apply

Base Case Assumptions related to driver training during Phase C2

The following assumptions apply:

1. there is a 13 week shadow running period prior to start of passenger service, prior to which sufficient drivers to operate the opening service timetable will have been trained;
2. the phasing of the infrastructure will enable driver training to be completed in eight weeks per driver;
3. drivers will be employed in tranches of twelve at a time, on a rolling two weekly basis;
4. that there will be a failure/drop-out rate of 5% during the training period;
5. that instructor training will take three weeks (in addition to the driver training content), and will be able to start eight weeks before the start of the driver training period (1 December 2008 on the timescale issued on 04/02/04);
6. the tram delivery and commissioning programme, together with infrastructure programme will provide either (i) 12 fully serviceable trams and the infrastructure continuously available for 16 hours per day, or (ii) 24 fully serviceable trams and the infrastructure continuously available for 8 hours per day throughout the training period to support the driver training.

Number of Tram Drivers

This spreadsheet supports the Microsoft Word document called "Number of Tram Drivers 11Feb04". The Word document explains how this spreadsheet operates.

Line 1 from Leith Depot

Day	Days per week	Period	From	To	Duration	Duration	Service Frequency	Trams in service			Positioning trams			Total
								Trams in service	Tram hours /day in service	Tram hours /week in service	Change in no. of trams in service	Tram positioning hours /day	Tram positioning hours /week	Tram hours /week
					(h:m:s)	(hrs)	(trams/hr)	(No.)	(hrs/day)	(hrs/wk)	(No.)	(hrs/day)	(hrs/wk)	(hrs)
Monday - Friday	5	early morning	5:00:00	7:00:00	2:00:00	2.00	4	6	12	60	6	2	10	70
	5	AM peak	7:00:00	9:30:00	2:30:00	2.50	8	12	30	150	6	2	10	160
	5	Inter-peak	9:30:00	16:30:00	7:00:00	7.00	8	12	84	420	0	0	0	420
	5	PM peak	16:30:00	19:00:00	2:30:00	2.50	8	12	30	150	0	0	0	150
	5	evening	19:00:00	24:00:00	5:00:00	5.00	4	6	30	150	-6	2	10	160
	5	overnight	24:00:00	29:00:00	5:00:00	5.00	0	0	0	0	-6	2	10	10
		Total					24.00			186.00	930.00		8.00	40.00
Saturday	1	early	5:00:00	9:00:00	4:00:00	4.00	4	6	24	24	6	2	2	26
	1	shopping hours	9:00:00	18:00:00	9:00:00	9.00	8	12	108	108	6	2	2	110
	1	evening	18:00:00	24:00:00	6:00:00	6.00	4	6	36	36	-6	2	2	38
	1	overnight	24:00:00	29:00:00	5:00:00	5.00	0	0	0	0	-6	2	2	2
		Total					24.00			168.00	168.00		8.00	8.00
Sunday	1	early	8:00:00	10:00:00	2:00:00	2.00	4	6	12	12	6	2	2	14
	1	daytime	10:00:00	18:00:00	8:00:00	8.00	4	6	48	48	0	0	0	48
	1	evening	18:00:00	24:00:00	6:00:00	6.00	4	6	36	36	0	0	0	36
	1	overnight	24:00:00	32:00:00	8:00:00	8.00	0	0	0	0	-6	2	2	2
		Total					24.00			96.00	96.00		4.00	4.00

All	7	Overnight tram movement and preparation	22:00:00	30:00:00	8:00:00	8.00		1				8	56	56
Total										1194.00			108.00	1302.00

Line 1 from Gogar Depot

Day	Days per week	Period	From	To	Duration	Duration	Service Frequency	Trams in service			Positioning trams			Total
								Trams in service	Tram hours /day in service	Tram hours /week in service	Change in no. of trams in service	Tram positioning hours /day	Tram positioning hours /week	Tram hours /week
					(h:m:s)	(hrs)	(trams/hr)	(No.)	(hrs/day)	(hrs/wk)	(No.)	(hrs/day)	(hrs/wk)	(hrs)
Monday - Friday	5	early morning	5:00:00	7:00:00	2:00:00	2.00	4	6	12	60	6	4.5	22.5	82.5
	5	AM peak	7:00:00	9:30:00	2:30:00	2.50	8	12	30	150	6	4.5	22.5	172.5
	5	Inter-peak	9:30:00	16:30:00	7:00:00	7.00	8	12	84	420	0	0	0	420
	5	PM peak	16:30:00	19:00:00	2:30:00	2.50	8	12	30	150	0	0	0	150
	5	evening	19:00:00	24:00:00	5:00:00	5.00	4	6	30	150	-6	4.5	22.5	172.5
	5	overnight	24:00:00	29:00:00	5:00:00	5.00	0	0	0	0	-6	4.5	22.5	22.5
		Total					24.00			186.00	930.00		18.00	90.00
Saturday	1	early	5:00:00	9:00:00	4:00:00	4.00	4	6	24	24	6	4.5	4.5	28.5
	1	shopping hours	9:00:00	18:00:00	9:00:00	9.00	8	12	108	108	6	4.5	4.5	112.5
	1	evening	18:00:00	24:00:00	6:00:00	6.00	4	6	36	36	-6	4.5	4.5	40.5
	1	overnight	24:00:00	29:00:00	5:00:00	5.00	0	0	0	0	-6	4.5	4.5	4.5
		Total					24.00			168.00	168.00		18.00	18.00
Sunday	1	early	8:00:00	10:00:00	2:00:00	2.00	4	6	12	12	6	4.5	4.5	16.5
	1	daytime	10:00:00	18:00:00	8:00:00	8.00	4	6	48	48	0	0	0	48
	1	evening	18:00:00	24:00:00	6:00:00	6.00	4	6	36	36	0	0	0	36
	1	overnight	24:00:00	32:00:00	8:00:00	8.00	0	0	0	0	-6	4.5	4.5	4.5
		Total					24.00			96.00	96.00		9.00	9.00
All	7	Overnight tram movement and preparation	22:00:00	30:00:00	8:00:00	8.00		1				8	56	56

Total											1194.00			173.00	1367.00
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Airport from Gogar Depot

Day	Days per week	Period	From	To	Duration	Duration	Service Frequency	Trams in service			Positioning trams			Total
								Trams in service	Tram hours /day in service	Tram hours /week in service	Change in no. of trams in service	Tram positioning hours /day	Tram positioning hours /week	Tram hours /week
					(h:m:s)	(hrs)	(trams/hr)	(No.)	(hrs/day)	(hrs/wk)	(No.)	(hrs/day)	(hrs/wk)	(hrs)
Monday - Friday	5	Peak	4:30:00	24:30:00	20:00:00	20.00	6	7	140	700	7	2.33	11.67	711.67
	5	overnight	24:30:00	28:30:00	4:00:00	4.00	0	0	0	0	-7	2.33	11.67	11.67
		Total					24.00			140.00	700.00		4.67	23.33
Weekend	2	Peak	4:30:00	25:00:00	20:30:00	20.50	6	7	143.5	287	7	2.33	4.67	291.67
	2	overnight	25:00:00	28:30:00	3:30:00	3.50	0	0	0	0	-7	2.33	4.67	4.67
		Total					24.00			143.50	287.00		4.67	9.33
All	7	Overnight tram movement and preparation	22:00:00	30:00:00	8:00:00	8.00		1				8.00	56.00	56.00
Total										987.00			88.67	1075.67

Airport from Leith Depot

Day	Days per week	Period	From	To	Duration	Duration	Service Frequency	Trams in service			Positioning trams			Total
								Trams in service	Tram hours /day in service	Tram hours /week in service	Change in no. of trams in service	Tram positioning hours /day	Tram positioning hours /week	Tram hours /week
					(h:m:s)	(hrs)	(trams/hr)	(No.)	(hrs/day)	(hrs/wk)	(No.)	(hrs/day)	(hrs/wk)	(hrs)
Monday - Friday	5	Peak	4:30:00	24:30:00	20:00:00	20.00	6	7	140	700	7	4.32	21.58	721.58
	5	overnight	24:30:00	28:30:00	4:00:00	4.00	0	0	0	0	-7	4.32	21.58	21.58
		Total				24.00			140.00	700.00		8.63	43.17	743.17
Weekend	2	Peak	4:30:00	25:00:00	20:30:00	20.50	6	7	143.5	287	7	4.32	8.63	295.63
	2	overnight	25:00:00	28:30:00	3:30:00	3.50	0	0	0	0	-7	4.32	8.63	8.63
		Total				24.00			143.50	287.00		8.63	17.27	304.27
All	7	Overnight tram movement and preparation	22:00:00	30:00:00	8:00:00	8.00		1				8.00	56.00	56.00
Total										987.00			116.43	1103.43

Newbridge from Gogar Depot

Day	Days per week	Period	From	To	Duration	Duration	Service Frequency	Trams in service			Positioning trams			Total
								Trams in service	Tram hours /day in service	Tram hours /week in service	Change in no. of trams in service	Tram positioning hours /day	Tram positioning hours /week	
					(h:m:s)	(hrs)	(trams/hr)	(No.)	(hrs/day)	(hrs/wk)	(No.)	(hrs/day)	(hrs/wk)	(hrs)
Monday - Friday	5	early morning	5:30:00	7:00:00	1:30:00	1.50	3	2	3	15	2	0.33	1.67	16.67
	5	AM peak	7:00:00	9:30:00	2:30:00	2.50	6	3	7.5	37.5	1	0.17	0.83	38.33
	5	Inter-peak	9:30:00	16:30:00	7:00:00	7.00	6	3	21	105	0	0.00	0.00	105.00
	5	PM peak	16:30:00	19:00:00	2:30:00	2.50	6	3	7.5	37.5	0	0.00	0.00	37.50
	5	evening	19:00:00	24:30:00	5:30:00	5.50	3	2	11	55	-1	0.17	0.83	55.83
	5	overnight	24:30:00	29:30:00	5:00:00	5.00	0	0	0	0	-2	0.33	1.67	1.67
		Total				24.00			50.00	250.00		1.00	5.00	255.00
Saturday	1	early	5:30:00	9:00:00	3:30:00	3.50	3	2	7	7	2	0.33	0.33	7.33
	1	shopping hours	9:00:00	18:00:00	9:00:00	9.00	6	3	27	27	1	0.17	0.17	27.17
	1	evening	18:00:00	25:00:00	7:00:00	7.00	3	2	14	14	-1	0.17	0.17	14.17
	1	overnight	25:00:00	29:30:00	4:30:00	4.50	0	0	0	0	-2	0.33	0.33	0.33
		Total				24.00			48.00	48.00		1.00	1.00	49.00
Sunday	1	early	5:30:00	10:00:00	4:30:00	4.50	3	2	9	9	2	0.33	0.33	9.33
	1	daytime	10:00:00	18:00:00	8:00:00	8.00	3	2	16	16	0	0.00	0.00	16.00
	1	evening	18:00:00	25:00:00	7:00:00	7.00	3	2	14	14	0	0.00	0.00	14.00
	1	overnight	25:00:00	29:30:00	4:30:00	4.50	0		0	0	-2	0.33	0.33	0.33
		Total				24.00			39.00	39.00		0.67	0.67	39.67
All	7	Overnight tram movement and preparation	22:00:00	30:00:00	8:00:00	8.00		0				0.00	0.00	0.00

Total											337.00				6.67	343.67
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Newbridge from Leith Depot

Day	Days per week	Period	From	To	Duration	Duration	Service Frequency	Trams in service			Positioning trams			Total
								Trams in service	Tram hours /day in service	Tram hours /week in service	Change in no. of trams in service	Tram positioning hours /day	Tram positioning hours /week	Tram hours /week
					(h:m:s)	(hrs)	(trams/hr)	(No.)	(hrs/day)	(hrs/wk)	(No.)	(hrs/day)	(hrs/wk)	(hrs)
Monday - Friday	5	early morning	5:30:00	7:00:00	1:30:00	1.50	3	2	3	15	2	1.57	7.83	22.83
	5	AM peak	7:00:00	9:30:00	2:30:00	2.50	6	3	7.5	37.5	1	0.78	3.92	41.42
	5	Inter-peak	9:30:00	16:30:00	7:00:00	7.00	6	3	21	105	0	0.00	0.00	105.00
	5	PM peak	16:30:00	19:00:00	2:30:00	2.50	6	3	7.5	37.5	0	0.00	0.00	37.50
	5	evening	19:00:00	24:30:00	5:30:00	5.50	3	2	11	55	-1	0.78	3.92	58.92
	5	overnight	24:30:00	29:30:00	5:00:00	5.00	0	0	0	0	-2	1.57	7.83	7.83
		Total				24.00				50.00	250.00		4.70	23.50
Saturday	1	early	5:30:00	9:00:00	3:30:00	3.50	3	2	7	7	2	1.57	1.57	8.57
	1	shopping hours	9:00:00	18:00:00	9:00:00	9.00	6	3	27	27	1	0.78	0.78	27.78
	1	evening	18:00:00	25:00:00	7:00:00	7.00	3	2	14	14	-1	0.78	0.78	14.78
	1	overnight	25:00:00	29:30:00	4:30:00	4.50	0	0	0	0	-2	1.57	1.57	1.57
		Total				24.00				48.00	48.00		4.70	4.70
Sunday	1	early	5:30:00	10:00:00	4:30:00	4.50	3	2	9	9	2	1.57	1.57	10.57
	1	daytime	10:00:00	18:00:00	8:00:00	8.00	3	2	16	16	0	0.00	0.00	16.00
	1	evening	18:00:00	25:00:00	7:00:00	7.00	3	2	14	14	0	0.00	0.00	14.00
	1	overnight	25:00:00	29:30:00	4:30:00	4.50	0		0	0	-2	1.57	1.57	1.57
		Total				24.00				39.00	39.00		3.13	3.13
All	7	Overnight tram movement and preparation	22:00:00	30:00:00	8:00:00	8.00		0				0.00	0.00	0.00

Summary

	Units	Line 1 from Leith Depot	Line 1 from Gogar Depot	Line 2 from Gogar Depot			Line 2 from Leith Depot			Network from Leith Depot	Network from Gogar Depot
				Airport	Newbridge	Total	Airport	Newbridge	Total		
Driving trams in service	hrs/week	1194.00	1194.00	987.00	337.00	1324.00	987.00	337.00	1324.00	2518.00	2518.00
Positioning trams	hrs/week	108.00	173.00	88.67	6.67	95.33	116.43	31.33	147.77	255.77	268.33
Total driving time	hrs/week	1302.00	1367.00	1075.67	343.67	1419.33	1103.43	368.33	1471.77	2773.77	2786.33
Theoretical number of shifts	/week	166.92	175.26	137.91	44.06		141.47	47.22			
rostering efficiency	%	85.42%	80.36%	85.42%	85.42%		80.61%	76.60%			
number of shifts required	/week	195.42	218.08	161.45	51.58		175.50	61.65			
Drivers before allowance for holidays etc		39.08	43.62	32.29	10.32		35.10	12.33			
Ratio to allow for holidays and sickness etc		1.23	1.23	1.23	1.23		1.23	1.23			
theoretical number of drivers		48.12	53.70	39.76	12.70		43.22	15.18			
number of drivers		48	54	40	13	53	43	15	58	106	107
Predicted number of drivers from bid		53	n/a	n/a	n/a	44	n/a	n/a	n/a	97	97
Change from bid		-5	n/a	n/a	n/a	9	n/a	n/a	n/a	9	10

Productivity

Allowance for holidays, sickness training etc

Average length of employment, yrs =	5
Duration of initial training, working days =	40
Average initial training per year, days =	8

days/year =	365.25
holidays =	25
bank holidays =	8
sickness =	5
ongoing training =	3
initial training from above =	8
total weekdays paid but not worked =	49
days in weekends =	104.36
days paid =	260.89
days worked =	211.89
Ratio =	1.231

Length of working week, hours =	39
Average length of working day, hours =	7.8

Time to add or remove a tram from the service (hrs)

Depot

	Leith	Gogar	units
Line 1	0.33	0.75	hours
Airport	0.62	0.33	hours
Newbridge	0.78	0.17	hours

Rostering efficiency

	Route	All	Airport	Newbridge	Line 1
	Dept	Adjacent	Leith	Leith	Gogar
Average paid shift length		08:00	08:00	08:00	08:00
book on		00:10	00:10	00:10	00:10
walk to stop and reach tram		00:05	00:16	00:26	00:26
walk from stop or dispose of tram		00:05	00:05	00:05	00:05
Unpaid meal break		00:00	00:00	00:00	00:00
walk to stop and reach tram		00:05	00:05	00:05	00:05
dispose and book off		00:05	00:16	00:26	00:26
Lost time due to rostering inefficiencies		00:40	00:40	00:40	00:40
Total lost time		01:10	01:33	01:52	
Time for driving		06:50	06:26	06:07	
Efficiency		85.42%	80.61%	76.60%	

**Correction factor for drivers who have to travel between the depot and a remote line to relieve others
Mon-Fri only: it is assumed that the same factor can be applied to Weekends**

	Route	Airport	Newbridge	Line 1
	Depot	Leith	Leith	Gogar
Off peak trams		7	2	6
Peak only trams		0	1	6
Peaks/day		2	2	2
peak tram positioning moves included in model		0	4	24
off peak tram positioning moves included in model		14	4	12
total tram positioning moves included in model		14	8	36

driver shifts/off peak tram	3	3	3
off peak tram driver shifts	21	6	18
off peak tram driver positioning moves	42	12	36
off peak driver only positioning moves	28	8	24
total driver positioning moves	42	16	60
proportion of driver positioning moves that are not included in tram positioning moves	0.67	0.50	0.40
times in mins from depot to line			
running time from depot to route	12	37	25
mean waiting time for next tram on route	5	5	6
total	17	42	31
total (mins)	00:17	00:42	00:30
Applying correction factor from above (mins)	00:11	00:21	00:12
from route to depot			
mean waiting time for next tram to depot	6	6	5
running time from depot to route	12	37	25
total	18	43	30
total (mins)	00:17	00:42	00:30
Applying correction factor from above (mins)	00:11	00:21	00:12

Data from Tango financial models v3

This data is only for reference purposes

Route	No of drivers
line 1	53
line 2	44
network	97

Michael D Howell

Director/Authorised Signatory
Transport Initiatives Edinburgh Limited

Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

SCHEDULE 19

Additional Costing Assumptions

Cost Item	Line 3
Travel, Hotels, etc.	Line 3 requires 50% increment
External Training & Welfare	Line 3: varies linearly with increased number of staff for Line 3 at £500 per person.
Cash collecting & counting	Line 3 requires additional van only
Office machinery rentals	No increment for Line 3
Consumables & subscriptions	30 % increase for Line 3
Health, Safety & Environmental costs	Line 3 30% increment
Legal Advice	Line 3, no increment.
Telephone expenses	30 % increase for Line 3
Finance support	30 % increase for Line 3
Uniforms	Logic for Network applies to Line 3
Recruitment	Line 3: 50% increase
Medical examinations	Line 3: pro rata for increased number of staff required for Line 3
Substitute Buses	Line 3: 50% increase
Passenger information (Timetables etc.)	Line 3: prorata for additional tramstops in Line 3
Training materials	Line 3: 30% increase
Audit & Investors in People	Line 3: 30% increase
Performance Monitoring Surveys	Line 3: 30% increase
Road vehicle costs 1	One additional vehicle for Line 3. Vehicles are costed at £7.25kpa each.
Maintenance IT system support	Line 3: 20% increase

Name	Role	Base Case Assumptions
David Humphrey	Project Director	50% additional time required for Line 3 et seq each.
Andy Wood	General Manager	System operates a fleet of no more than 50 Trams; thereafter job regrading and salary review required.
Jim Harries	Technical Engineer	System operates a fleet of no more than 50 Trams; thereafter additional time and/or additional technical support required.
	Senior Commercial Manager	System operates a fleet of no more than 50 Trams; thereafter additional time and/or additional technical support required.
	Secretary/ Assistant	System operates a fleet of no more than 50 Trams, at which point the cost of the role will need to be reviewed
	Operations Manager	System operates a fleet of no more than 50 Trams, at which point the cost of the role will need to be reviewed
	Engineering Manager	System operates a fleet of no more than 50 Trams, at which point the cost of the role will need to be reviewed
	Safety & Standards Manager	System operates a fleet of no more than 50 Trams, at which point the cost of the role will need to be reviewed
	Legal Adviser	To be called off at tie's discretion. If Fleet size increases to more than 30 Trams, then costs increase linearly with fleet size above this point
	Financial Modelling consultant	Line 3 will require a complete re-run of model.
	Technical Support Engineer	A further Line will increase the input/cost by 50%.
	Operations Assistant	Fleet size not more than 30 Trams. At this point two people will be needed in this role up to 100 Trams
	Finance Manager	Fleet size not more than 50 Trams. Salary will then need to be reviewed
	Accounts Assistants 1 and 2	Fleet size not more than 30 Trams. At this point one additional person is needed for every 20 Trams in the fleet
	Commercial Manager	Fleet size not more than 50 Trams. Salary will then need to be reviewed
	Duty Managers	These will operate a system of up to 50 Trams. More may be needed for an even larger fleet. Assumes one Control Centre for the System, even if there is more than one Depot

Name	Role	Base Case Assumptions
	Operations Supervisors	<p>Any Network Expansion will require up to an additional 5 people. These will operate a System of up to 50 Trams. More may be needed for an even larger fleet.</p> <p>Assumes there is only one Control Centre for the System, even if there is more than one Depot.</p> <p>If there is a second Depot, then an additional 6 people are needed to provide supervision at the second Depot</p>
	Drivers	As set out in the paper "Tram Drivers 20Feb04".
	Vehicle Engineer	Will require an additional assistant and a salary increase of 10% if there are more than 30 Trams in the fleet.
	Infrastructure Engineer	Will require an additional assistant and a salary increase of 10% if the System is more than 10% longer than the Network.
	Performance Regime Manager	Fixed up to a fleet total of 50; thereafter, a clerical assistant will be needed.
	Storeman	Further storeman needed for Line 3.
	Performance Manager	Fixed up to a fleet total of 50; thereafter, a clerical assistant will be needed.
	Clerk	Fixed up to a fleet total of 30, after which a further clerk will be required
	Marketing Manager	Fixed up to a fleet total of 50; thereafter a salary review required.
	Admin. Staff	Additional post required for Line 3.
	Customer Service	<p>Full details of staff numbers are set out in the document "Revenue Protection 23 Feb 04"</p> <p>Staffing for Line 3 to be based on same methodology</p>
	Temporary Customer service	<p>Full details of the assumptions are set out in the document "Revenue Protection 23 Feb 04".</p> <p>Cost varies directly with the number of staff and the duration, at tie's discretion.</p> <p>For Line 3, 10 people on the same basis are proposed to support the opening of Line 3</p> <p>The salary will be 5% below the drivers' salary.</p>
	Security Staff (cash Collection only)	<p>Same methodology to be applied for Line 3 et seq.</p> <p>Will be outsourced after competitive tenders if better value for money.</p>
	Cashiers	Fixed up to a fleet total of 30, thereafter a further cashier will be required.

Name	Role	Base Case Assumptions
	Debt Recovery Staff	Line 3, 2 additional staff.
	Revenue Protection Manager	Fixed up to fleet total of 50; thereafter regrading of job and/or additional assistance required.



~~Director/Authorised Signatory~~
Transport Initiatives Edinburgh Limited



~~Director/Authorised Signatory~~
TRANSDEV Edinburgh Tram Limited

APPENDIX 1

**OPERATING APPENDIX
RELATING TO THE
EDINBURGH TRAM
NETWORK**

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PART I - PRELIMINARY MATTERS

1. DEFINITIONS AND INTERPRETATION

Terms and expressions defined in Schedule 1 (*Definitions and Interpretation*) of the Agreement will have the same meanings in this Appendix.

2. CONDITIONS PRECEDENT

2.1 The obligations of the Parties under this Appendix shall be conditional upon the occurrence of the Operating Effective Date, save for the provisions listed in Clauses 2.1.1 to 2.1.2 below which shall have effect as from the Effective Date:

2.1.1 the provisions of this part I (*Preliminary Matters*); and

2.1.2 Clause 23 (*Performance and Financial Adjustments*), Clause 24 (*tie Changes*) Clause 25 (*Operator Changes*) and Clause 28 (*Transition on Termination or Expiry*) of this Appendix;

2.2 **tie** may by notice in writing to the Operator (without the consent of the Operator) waive satisfaction of some or all of the Operator Conditions Precedent.

2.3 On the date that each of the Operator Conditions Precedent (with the exception of any Operator Conditions Precedent that have been expressly waived by **tie** in writing) have in **tie's** opinion been satisfied, **tie** shall notify the Operator of the same.

2.4 The Operator shall use its reasonable endeavours to satisfy or procure the satisfaction of the Operator Conditions Precedent prior to the date scheduled for the Operating Effective Date in the Project Programme.

2.5 Following notification by **tie** pursuant to Clause 2.3 of this Appendix, the Operator shall notify a date (being as soon as reasonably possible) when it intends to commence providing the Transport Services on the relevant Line, such date to be subject to the approval of **tie**, such approval not to be unreasonably withheld or delayed.

3. SATISFACTION OF REQUIREMENTS FOR SERVICE COMMENCEMENT

- 3.1 The Operator shall give the **tie** Project Manager not less than 20 Business Days' notice of the date upon which the Operator considers that Service Commencement in respect of a Line (or part of a Line) can be achieved so that the tests to be undertaken in accordance with the **tie** Completion Requirements may be carried out.
- 3.2 The **tie** Project Manager shall be entitled to inspect the System in operation on the date or dates reasonably specified by the Operator in accordance with this Clause 3 (*Satisfaction of Requirements for Service Commencement*), and to attend any of the tests to be carried out. The Operator shall procure that such of the Project Operations Staff and Project Development Staff as **tie** may reasonably request shall accompany the **tie** Project Manager on any such inspection.
- 3.3 The **tie** Project Manager shall, within 7 Business Days of any inspection made pursuant to Clause 3.2 above, notify the Operator of any outstanding matters (including the repetition of any of the tests which are required to be carried out and passed in accordance with the **tie** Completion Requirements) which must be attended to before Service Commencement can occur in respect of the relevant Line (or part of such Line) in accordance with this Appendix. The Operator shall attend to all such matters and shall, if necessary, give **tie** further notices in accordance with Clause 3.1 above (but dealing only with matters raised in **tie's** notification under this Clause 3.3) so that the procedures in Clauses 3.1 and 3.2 above and this Clause 3.3 are repeated as often as may be necessary to ensure that all outstanding matters in relation to the **tie** Completion Requirements are attended to.
- 3.4 **tie** shall, when it is satisfied that Service Commencement can occur in accordance with this Appendix, issue a Certificate of Service Commencement to that effect stating the date upon which Service Commencement can occur. To the extent that Service Commencement is to be in relation to part of a Line, the Certificate of Service Commencement shall also specify details of the relevant part of such Line.
- 3.5 Where the Certificate of Service Commencement is issued in relation to part of a Line:
- 3.5.1 the provisions of this Appendix relating to Project Phase D (including Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*)) shall

apply to that part of the Line in respect of which the Certificate of Service Commencement has been issued; and

- 3.5.2 the provisions of the Agreement relating to Project Phase C2 shall continue to apply to the remaining part of such Line.
- 3.6 Where it has been agreed between the Parties that Service Commencement and Full Service Commencement shall occur at the same time, the Certificate of Service Commencement shall be deemed to be also a Certificate of Full Service Commencement.
- 3.7 **tie** may issue the Certificate of Service Commencement, notwithstanding that there are Operator Snagging Matters. Where there are Operator Snagging Matters, **tie** shall, within 7 Business Days of the date of issue of the Certificate of Service Commencement, issue a Snagging Notice which shall specify the Operator Snagging Matters.
- 3.8 Following the issue of a Snagging Notice and in consultation with the **tie** Project Manager and in such manner as to cause as little disruption to the provision of the Transport Services by the Operator and to the use and enjoyment of the System and Transport Services by the public (and as little general inconvenience) as reasonably practicable, the Operator shall rectify or shall procure rectification of each Operator Snagging Matter within such time as is reasonably practicable after the service of the Snagging Notice.
- 3.9 The issue of the Certificate of Service Commencement shall in no way affect the obligations of the Operator under the Agreement.
- 3.10 For the avoidance of doubt, the issue of any Certificate of Service Commencement pursuant to Clause 3.4 above shall be conditional upon **tie** being satisfied that all Necessary Consents in relation to the Project Operations for the relevant Line have been obtained, are in full force and effect and are unconditional.
- 3.11 In the event that the Operator is dissatisfied with the decision of **tie**, the provisions of Clause 42 (*Dispute Resolution Procedure*) of the Agreement shall apply and pending resolution of the matter in accordance with Schedule 7 (*Dispute Resolution Procedure*) of the Agreement, the provisions of Clause 17 (*Payment during Project Phase C2*) of the Agreement shall continue to apply.

3.12 From the Service Commencement Date of the first Line to become operational until the earlier of the Expiry Date or termination of this Agreement, **tie** shall provide all electrical power to the System. The Operator shall assist **tie** in the procurement of contracts for the provision of such electrical power. Such contracts should offer value for money to **tie** and the Operator shall continue to assist **tie**, as required, to ensure that such contracts continue to offer value for money to **tie**.

4. SATISFACTION OF REQUIREMENTS FOR FULL SERVICE COMMENCEMENT

- 4.1 To the extent that the Parties have agreed that there will be a time interval between the Service Commencement Date and the Full Service Commencement Date in respect of a Line, the following provisions of this Clause 4 (*Satisfaction of Requirements for Full Service Commencement*) will apply. Without limitation, such an interval may occur where **tie** issues a Certificate of Service Commencement pursuant to Clause 3.4 above in relation to only part of a Line.
- 4.2 The Operator shall give the **tie** Project Manager not less than 20 Business Days' notice of the date upon which the Operator considers that Full Service Commencement in respect of a Line can be achieved so that the tests to be undertaken in accordance with the relevant **tie** Completion Requirements may be carried out.
- 4.3 The **tie** Project Manager shall be entitled to inspect the System in operation on the date or dates reasonably specified by the Operator in accordance with this Clause 4 (*Satisfaction of Requirements for Full Service Commencement*), and to attend any of the tests to be carried out. The Operator shall procure that such of the Project Operations Staff and Project Development Staff as **tie** may reasonably request shall accompany the **tie** Project Manager on any such inspection.
- 4.4 The **tie** Project Manager shall, within 7 Business Days of any inspection made pursuant to Clause 4.3 above, notify the Operator of any outstanding matters (including the repetition of any of the tests which are required to be carried out and passed in accordance with the relevant **tie** Completion Requirements) which must be attended to before Full Service Commencement can be considered to have occurred in respect of the relevant Line in accordance with this Appendix. The Operator shall attend to all such matters and shall, if necessary, give **tie** further notices in accordance with Clause 4.2 above (but dealing only with matters raised in **tie**'s

notification under this Clause 4.4) so that the procedures in Clauses 4.2 and 4.3 above and this Clause 4.4 are repeated as often as may be necessary to ensure that all outstanding matters in relation to the tie Completion Requirements are attended to.

- 4.5 tie shall, when it is satisfied that Full Service Commencement can occur in accordance with this Appendix, issue a Certificate of Full Service Commencement to that effect stating the date upon which Full Service Commencement can occur.

PART II: PROJECT OPERATIONS

5. THE TRANSPORT SERVICES

- 5.1 Throughout the Service Period in respect of each Line, the Operator shall provide the Transport Services (and all other Project Operations):
- 5.1.1 in accordance with the Agreement;
 - 5.1.2 in accordance with the Operating Method Statements;
 - 5.1.3 in accordance with the Operating Output Specification;
 - 5.1.4 in accordance with all applicable Law and Necessary Consents (and so as not to prejudice the renewal of any such Necessary Consents); and
 - 5.1.5 in compliance with the Environmental Statement.
- 5.2 To the extent that the Parties have agreed that there will be a time interval between the Service Commencement Date and the Full Service Commencement Date in respect of any Line, the Parties acknowledge that the Operating Output Specification shall specify a reduced level of requirement in respect of that period, as compared with the period following the Full Service Commencement Date.
- 5.3 To avoid doubt, the obligations in Clauses 5.1.1, 5.1.2, 5.1.3, 5.1.4 and 5.1.5 above are independent obligations. For example:
- 5.3.1 the fact that the Operator has provided the Transport Services in accordance with the Operating Method Statements shall not be a defence to an allegation that the Operator has not satisfied the Operating Output Specification; and

- 5.3.2 the fact that the Operator has provided the Transport Services in accordance with the Operating Output Specification shall not be a defence to an allegation that the Operator has not satisfied the Operating Method Statements.
- 5.4 Without prejudice to Clauses 5.1 and 5.3 above, if it should be found that the Operating Method Statements do not fulfil the Operating Output Specification, the Operator shall amend the Operating Method Statements. Such amendment shall be made in accordance with Schedule 9 (*Review Procedure*) of the Agreement and shall ensure that the Operating Method Statements shall satisfy the Operating Output Specification.
- 5.5 The Operator may at any time submit to the **tie** Project Manager in accordance with Schedule 9 (*Review Procedure*) of the Agreement proposals for amendments to or substitution of the Operating Method Statements or any part of them. If **tie** makes no comment on such proposed amendment or substitution (on the grounds set out in Schedule 9 (*Review Procedure*) of the Agreement), then the Operating Method Statements as so amended or substituted shall be the Operating Method Statements for the purposes of this Appendix, subject to any further amendment or substitution to which there has been no comment in accordance with Schedule 9 (*Review Procedure*) of the Agreement.
- 5.6 The Operator shall not be entitled to implement or procure the implementation of any amendment to the Operating Method Statements unless it is entitled to proceed with such implementation pursuant to Schedule 9 (*Review Procedure*) of the Agreement.
- 5.7 An amendment to or substitution for the Operating Method Statements pursuant to Clauses 5.4 or 5.5 above shall not be a **tie** Change and shall not entitle the Operator to:
- 5.7.1 any adjustment to the Target Operating Costs, Fixed Costs, Target Revenues or Profit Element; or
- 5.7.2 any relief from the performance of its obligations under the Agreement.

6. TRANSPORT SERVICES TIMETABLE

- 6.1 In accordance with the terms of the Project Development Output Specification, the Timetable shall be agreed between the Operator and the **tie** Project Manager not less

than 60 days (unless otherwise agreed in writing by **tie**) prior to the Planned Service Commencement Date in respect of a Line.

6.2 Subject to Clause 8 (*Special Events*) of this Appendix, the Operator shall not be entitled to alter the Timetable unless:

6.2.1 any such alteration complies with the Operating Output Specification; and

6.2.2 the Operator provides a copy of the proposed alterations to the **tie** Project Manager for **tie's** approval at least 56 days (unless otherwise agreed in writing by **tie**) before the proposed alteration is to take effect.

6.3 The Operator shall not implement any Timetable for the provision of Transport Services on the System or alteration of any such Timetable without the prior written consent of the **tie** Project Manager.

7. PUBLICATION OF INFORMATION RELATING TO THE SYSTEM

The Operator shall comply with the requirements of the Public Liaison and Media Plan, including in relation to:

7.1 the display of information at Tramstops; and

7.2 the availability of paper copies of the Timetable.

8. SPECIAL EVENTS

8.1 Where at any time during the Term:

8.1.1 a Special Event is scheduled to take place which in the opinion of **tie** will, or may, affect the Project Operations, **tie** shall give notice in writing to the Operator of such Special Event;

8.1.2 an event is scheduled to take place which the Operator considers requires an amendment to the Project Operations (including, the Timetable), the Operator shall give notice in writing to **tie** of such event together with details of its proposed amendments to the Project Operations in accordance with Clause 8.2 or Clause 8.11 (as appropriate). To the extent that **tie** agrees that such event should give rise to an amendment to the Project Operations, such

event shall be a Special Event for the purposes of this Clause 8 (*Special Events*).

8.2 Any Special Event Notice given by either Party pursuant to Clause 8.1 above shall:

8.2.1 be given as far in advance as is reasonably practicable, but in any event at least one month prior to the date of commencement of the relevant Special Event;

8.2.2 set out the following details (whichever are relevant) in relation to Special Event:

8.2.2.1 the date(s), time(s) and duration of the event;

8.2.2.2 the route(s) of the event;

8.2.2.3 those parts of the System likely to be affected by the event and the likely effects;

8.2.2.4 any modifications or restrictions which the Party serving the Special Event Notice considers should be placed upon the Project Operations (including an amendment to the Timetable) and the relevant time periods for such restrictions; and

8.2.2.5 any requirement for an increase in the provision of the Transport Services before, during and/or after the period of Special Event;

8.3 The Operator shall, within two weeks after (i) the date of the Special Event Notice (if served by **tie**); or (ii) the date on which **tie** agrees that the event specified in a Special Event Notice served by the Operator is a Special Event, forward to **tie** a plan ("**Special Event Plan**") in respect of the relevant Special Event which plan shall include the Operator's reasoned and detailed proposals in relation to:

8.3.1 any modifications to or restrictions to be placed upon the Project Operations (including the Timetable):

(a) in the period immediately prior to the commencement of the Special Event; and/or

(b) during the period of the Special Event; and/or

- (c) in the period immediately following the end of the Special Event;
- 8.3.2 any required increase in the Project Operations (including the Timetable) during the periods listed in Clause 8.3.1 above;
- 8.3.3 any third party interests which may be adversely affected by the Special Event Plan and the involvement of the Emergency Services; and
- 8.3.4 the estimated costs arising out of the Special Event (the "**Special Event Estimate**")
- 8.4 Following receipt by **tie** of the Special Event Plan, the Parties (acting reasonably) shall:
- 8.4.1 liaise fully and frequently with each other in order to agree any relevant arrangements in respect of the Special Event (including any amendments to the Timetable). Following such liaison, **tie** shall have the final authority to determine any modifications or restrictions in respect of the Project Operations (including the Timetable) as a result of the Special Event Plan; and
- 8.4.2 the Parties shall discuss and agree the Special Event Estimate. If the Special Event Estimate is expected to exceed £10,000 (Indexed) and it is practicable for the Operator to do so, **tie** may require the Operator to seek and evaluate competitive tenders. The Operator shall, as soon as reasonably practicable, and, in any event not more than 14 days after seeking any competitive tenders, update the Special Event Estimate accordingly.
- 8.5 The Operator, following consultation with **tie**, will undertake appropriate action to ensure public safety in respect of any Special Events which affect Project Operations. The Operator Project Manager will attend any Special Event planning meetings, comprising also members of organisations and representatives from the Emergency Services involved in planning for Special Events.
- 8.6 The Operator shall use all reasonable endeavours to:
- 8.6.1 mitigate any increase or maximise any saving in the Operating Costs likely to be incurred as a result of a Special Event; and

- 8.6.2 mitigate any reduction or maximise any increase to the Operating Revenues likely to be received as a result of a Special Event.
- 8.7 On no more than ten occasions in any calendar year during the Service Period, **tie** may give notice in writing to the Operator ("**tie Full Service Notice**") requiring the Operator to provide a full peak period service ("**Full Service**") for a Full Service Day over all or part of the System.
- 8.8 Any notice given by **tie** pursuant to Clause 8.7 above shall:
- 8.8.1 be given at least three months prior to the date of the relevant Full Service Day;
- 8.8.2 set out the following details in relation to the relevant Full Service Day:
- 8.8.2.1 the date and the reason for the request;
- 8.8.2.2 whether **tie** requires Full Service over all or part of the System and (where relevant) the relevant parts of the System; and
- 8.8.2.3 any other modifications or restrictions which **tie** consider should be placed upon the Full Service for the duration of the Full Service Day.
- 8.9 **tie** may serve a **tie Full Service Notice** upon the Operator in respect of any Special Event, but subject always to the limitation in Clause 8.7 above concerning the number of occasions in any calendar year during the Service Period upon which **tie** may serve such notice.
- 8.10 In respect of any day in respect of which (i) **tie** and the Operator have agreed to amend the Timetable for the period before, during and/or after a Special Event, or (ii) **tie** has served a **tie Full Service Notice** upon the Operator the Operator shall publicise details of the relevant change to the Timetable in accordance with the Public Liaison and Media Plan.
- 8.11 Where at any time during the Services Period it is agreed by **tie** that the procedure for agreeing a Special Event set out in Clauses 8.2, 8.3 and 8.4 cannot be followed in accordance with the said Clauses, the Operator shall recommend to **tie** what steps need to be taken to facilitate such Special Event (including as far as reasonably

practicable, the preparation of a Special Event Plan). The Operator shall also give a Special Event Estimate.

- 8.12 tie shall pay the actual costs of any agreed Special Event to the Operator in accordance with Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) to the Operating Appendix.

9. FARE SETTING AND PARTICIPATION IN INTEGRATED TICKETING SCHEME

- 9.1 The Initial Fares (including details of fares zones) shall be as developed during Project Phases A, B and C1. All increases in Fares during the Service Period shall be in accordance with the Fares structure developed during Project Phases A, B and C1 and the prevailing CEC Fares Policy.
- 9.2 The Operator shall comply with the CEC Fares Policy in relation to the Fares for the Transport Services. Any amendments to the CEC Fares Policy requiring a change to the Fares shall be a **tie** Change in accordance with Clause 24 (*tie Changes*) of this Appendix.
- 9.3 tie shall establish a consultation process whereby the Operator shall be given reasonable opportunity, in advance of any amendments being made to the CEC Fares Policy, to comment upon any proposed amendments to the CEC Fares Policy and meet with tie and other key decision makers (if tie is able arrange such meeting) to discuss any proposed amendments to the CEC Fares Policy.
- 9.4 The Operator shall implement the Service Integration Plan in relation to an integrated ticketing scheme for the System, together with other public transport providers in Edinburgh and South East Scotland, which will be compatible with One Ticket.
- 9.5 The Operator shall participate in the Concessionary Travel Scheme in accordance with all terms and conditions which apply to such Scheme from time to time. The Parties acknowledge that the Target Revenues shall take account of any material adverse impact on the level of revenue collected by the Operator as a result of the Operator's participation in the Concessionary Travel Scheme, except to the extent that such material adverse impact is already mitigated under the terms and conditions of the Concessionary Travel Scheme. The Operator shall fully participate in the Concessionary Travel Scheme (or any superseding scheme) in accordance with the

terms and conditions of such Scheme and shall ensure that its participation in the same is in accordance with the applicable Law.

- 9.6 The Operator shall ensure that persons entitled to travel at concessionary fares or at no cost under the Concessionary Travel Scheme are able to do so without inconvenience on the System at all times.
- 9.7 The Operator shall be responsible for the availability (and acceptable form and content) of any information, data necessary to permit calculation of Revenue Foregone (by reason of being a participant in the Concessionary Travel Scheme).
- 9.8 Any dispute between the Parties arising from or in connection with the Operator's participation in the Concessionary Travel Scheme shall be referred to the Dispute Resolution Procedure pursuant to Clause 42 (*Dispute Resolution*) of the Agreement, notwithstanding any provision to the contrary contained in the terms and conditions of the Concessionary Travel Scheme.
- 9.9 The Operator shall ensure that:
- 9.9.1 the System (including all fare collection equipment) and Project Operations are or will be Euro Compliant before the introduction of the single European currency in the United Kingdom and Project Operations will not be affected by the introduction of the single European currency in the United Kingdom;
- 9.9.2 the Operator's own internal systems and procedures are or will be Euro Compliant before the introduction of the single European currency in the United Kingdom and the continuity of supply of the Project Operations will not be affected by the introduction of the single European currency in the United Kingdom; and
- 9.9.3 the System (including all fare collection equipment) and Project Operations shall at all times throughout the Term be compliant with all Law applicable in relation to the Euro in the United Kingdom, including the rules on conversion, triangulation and rounding set out in EU Regulation Number 1103/97 and any subsequent or similar regulations or Laws.

provided that to the extent that the Infrastructure Provider(s) are responsible for fare collection equipment, such Infrastructure Provider(s) shall be responsible for ensuring that the fare collection equipment complies with the requirements of this Clause 9.9.

9.10 For the purposes of Clause 9.9 above "**Euro Compliant**" means that (i) the introduction of the Euro within the United Kingdom or any part thereof shall not affect the performance or functionality of any relevant items nor cause such items to malfunction, end abruptly, provide invalid results or adversely affect business, and (ii) all currency reliant and currency related functions (including all calculations concerning financial data) of any relevant items to enable the introduction and operation of the Euro, and (iii) in particular (but without limitation) each and every relevant item shall, to the extent it performs or relies upon currency related functions (including all calculations concerning financial data):

9.10.1 be able to perform all such functions in both the national currency of the United Kingdom and in Euros;

9.10.2 during any transition phase applicable to the United Kingdom, be able to deal with the dual denominations of the Euro and national currency of the United Kingdom;

9.10.3 recognise, accept, display and print all the Euro currency symbols and alphanumeric codes which may be adopted by any government and other European Union body in relation to the Euro;

9.10.4 incorporate protocols for dealing with rounding and currency conversion;

9.10.5 recognise data expressed in, and express any output data in, the national currency of the United Kingdom and the Euro; and

9.10.6 permit the input of data in Euros and display an outcome in Euros where such data, supporting **tie**'s normal business practices, operates in Euros and/or the national currency in the UK.

10. SYSTEM BYELAWS AND REGULATIONS UNDER THE PUBLIC PASSENGER VEHICLES ACT 1981

10.1 **tie** shall:

10.1.1 if it considers necessary for the regulation of conduct of passengers or lost property in respect of the System, give effect to such regulations made (or having effect as if made) under section 25 or 60(1)(k) of the Public

Passenger Vehicles Act 1981 as it considers appropriate as if Trams were public service vehicles used in the provision of Local Services; and

- 10.1.2 subject to the confirmation of the Scottish Ministers (if required), if **tie** considers it necessary for the regulation of the use, or operation of, or travel on, the System or the maintenance of order on the System or on facilities provided in connection with the System, request CEC to make byelaws regulating such matters.
- 10.2 The Operator shall be responsible for the enforcement of all regulations and byelaws referred to in Clause 10.1 above including the prosecution of offences thereunder.
- 10.3 **tie** shall consult with the Operator when considering the matters referred to in Clause 10.1 above.
- 10.4 The Operator shall propose draft regulations and draft byelaws to **tie** as the Operator considers are necessary for the regulation of the use, or operation of, or travel on, the System or the maintenance of order on the System or on facilities provided in connection with the System,
- 10.5 For the avoidance of doubt, the provisions of Clauses 10.1 and 10.3 above shall not apply to any penalty fare regime and the Operator shall be entitled to request **tie** to approach CEC (subject to the confirmation of the Scottish Ministers) to make such orders as may be appropriate in relation to a penalty fare regime and prescribing the amount of penalty fares as the Operator and **tie** may consider appropriate.

11. OPERATION AND MAINTENANCE PROCEDURES

- 11.1 The Operator shall be responsible for Operator Maintenance of the System and in relation to such maintenance, the Operator shall comply with the Maintenance Plan.
- 11.2 The Infrastructure Provider shall be responsible for all Infrastructure Provider Maintenance. The Operator and **tie** agree to work in mutual cooperation to ensure that the Infrastructure Provider performs such maintenance in accordance with the terms of the relevant IDA with a view to ensuring that the System as a whole and each part of it are continuously available.
- 11.3 **tie** and the Operator may agree from time to time the extent to which the exercise of **tie's** contractual rights under the IDA are delegated to the Operator.

- 11.4 The Operator shall work together with the Infrastructure Provider, both through the exercise of contractual rights delegated to the Operator pursuant to Clause 11.3 above and generally, with the intention that the Transport Services be delivered in accordance with the Operating Output Specification without interruption for maintenance purposes. Without limitation:
- 11.4.1 the Operator shall promptly notify the relevant Infrastructure Provider of any requirement for Infrastructure Provider Maintenance of which the Operator becomes aware; and
 - 11.4.2 the Operator shall co-operate with the Infrastructure Provider in relation to the planning of Infrastructure Provider Maintenance .
- 11.5 If, at any time, it appears to the Operator likely that any planned maintenance to be carried out by the Operator or by any Infrastructure Provider will necessitate interruption to or restriction of the Transport Services on the System, the Operator shall:
- 11.5.1 notify **tie** not less than four weeks prior to such planned interruption to or restriction of the Transport Services, and take all reasonable steps to notify passengers as soon as reasonably practicable in advance of the carrying out of such planned maintenance, of the nature of such work and the likely disruption to the Transport Services; and
 - 11.5.2 take all steps which are reasonably practicable to minimise the adverse consequences of such work to passengers, such steps to include an alternative means of transportation being in service where the Transport Services will not be provided in accordance with the Operating Output Specification for a continuous period of 1 hour or more.
- 11.6 In the event of any unplanned maintenance or repair works to be carried out by the Operator or any Infrastructure Provider as a result of a system failure, breakdown or an emergency, the Operator shall:
- 11.6.1 notify **tie** as soon as possible of the nature of such work and the likely disruption to the Transport Services;
 - 11.6.2 take all reasonable steps to notify passengers as soon as reasonably practicable of the nature of such work and the likely disruption to the

Transport Services, and where possible such notification shall be in advance of the carrying out of such work; and

11.6.3 take all steps which are reasonably practicable to minimise the adverse consequences of such work to passengers. Where the Operator considers that such work will result in the Transport Services not being provided in accordance with the Operating Output Specification for a continuous period of 2 hours or more, such steps shall include an alternative means of transportation being in service as soon as reasonably practicable. For the purposes of this Clause 11.6.3, the Parties acknowledge that it will generally be reasonably practicable for the Operator to arrange for an alternative means of transportation to be in service within 90 minutes of becoming aware of the requirement for it.

12. SERVICE PERFORMANCE AND QUALITY MONITORING

12.1 The Operator shall comply with the provisions of the KPI Regime and the Performance Monitoring Regime and shall send such representatives as **tie** may reasonably require to a monthly performance meeting convened on notice by **tie** and such other meetings as **tie** may reasonably require from time to time to discuss the performance by the Operator of the Project Operations in accordance with the Agreement.

12.2 The Operator shall throughout the Service Period provide a helpdesk ("**Helpdesk**") accessible to the public and third parties in person at a central Edinburgh location and by use of a freephone or local call rate number, e-mail address and postal address (such number, e-mail address and postal address to be published by the Operator at each Tramstop and on each Tram). The Helpdesk shall accurately record all communications and calls made to it. The Operator shall ensure throughout the Service Period that the Helpdesk is responsible for dealing with enquiries from the public with regard to lost property. The Operator shall store such lost property for such reasonable period agreed with **tie**.

Service Quality Report

12.3 The Operator shall submit a Service Quality Report to **tie** no later than three Business Days following the end of each Reporting Period. Such report shall contain the KPI Monitoring Report referred to at paragraph 8 of Schedule 3 (*Project Phase D*

Payment Mechanism and KPI Regime) to this Appendix and, in a form to be agreed with the **tie** Project Manager, data showing consolidated Operating Revenues and Operating Costs. For the avoidance of doubt, **tie** shall not be obliged to process any invoice submitted by the Operator during Phase D in the absence of the Service Quality Report pertaining to the relevant Reporting Period. The Operator shall be responsible for ensuring that the data contained in the Service Quality Report is generated automatically and, to the extent practicable, electronically.

- 12.4 In addition to the Service Quality Reports to be submitted by the Operator pursuant to Clause 12.3 above, the Operator shall prepare and submit to **tie** an Annual Service Report on or about 31 March in each year during the Service Period in accordance with Clause 16.5 of this Appendix.

PART III: GENERAL OBLIGATIONS

13. GENERAL STANDARDS

- 13.1 The Operator shall (each as a distinct and separate obligation):

- 13.1.1 perform the Transport Services and the Project Operations:

- 13.1.1.1 in accordance with the requirements of Clause 5 (*Transport Services*) of this Appendix
- 13.1.1.2 in accordance with Good Industry Practice from time to time with regard to the activity concerned;
- 13.1.1.3 in such manner so as not wilfully to detract from the image and reputation of **tie** CEC;
- 13.1.1.4 in a manner that shall ensure that the safety of persons working on, using, or in contact with the System shall not be compromised;
- 13.1.1.5 in accordance with the Environmental Statement, and the mitigation measures contained in it; and

- 13.1.1.6 in accordance with the Scottish Private Bill(s) and all ancillary regulations once enacted;
 - 13.1.2 implement, in accordance with paragraph 6 of Schedule 4 (*Operating Output Specification*) to the Operating Appendix, all component plans which constitute the Operating Method Statement as there have been developed under paragraph 26 of the Project Development Output Specification;
 - 13.1.3 enforce a comprehensive no smoking, no alcohol and no abuse of drugs or other substances policy for the System;
 - 13.1.4 implement a process of continuous improvement to facilitate the continuous operation of the System during and following the end of the Term;
 - 13.1.5 procure that records of tickets sales (including tickets granted under concessionary arrangements) are collated and retained and made available to the **tie** Project Manager on request;
 - 13.1.6 procure that regular liaison meetings are held during the Service Period to enable all aspects of Project Operations to be discussed in accordance with Clause 6 (*Management of the Project*) of the Agreement; and
 - 13.1.7 ensure that its senior managers and those of the Operator Parties receive disability equality training.
- 13.2 The Operator shall throughout the conduct of the Project Operations have full regard for the safety of all persons on the System Land (whether lawfully or not) in accordance with Good Industry Practice, to avoid risk to such persons.

14. QUALITY ASSURANCE

- 14.1 The Operator shall procure that all aspects of the Project Operations are carried out in accordance with the quality management systems set out in the Quality Management Plan.
- 14.2 The Operator shall appoint (or shall procure the appointment of) a Quality Manager with effect from the Operating Effective Date (if not already appointed prior to such date), who shall not be directly involved in the day-to-day performance of the Project Operations. The identity of the Quality Manager (and any replacement) shall be

subject to the approval of the **tie** Project Manager (such approval not to be unreasonably withheld or delayed). Without limitation, the Operator shall ensure that the terms and conditions of employment of the Quality Manager shall require him to comply with the requirements of Clause 7.5 (*Quality Assurance*) of the Agreement.

14.3 The **tie** Project Manager may, at his discretion, carry out audits of the Operator's quality system (including the Quality Management Plan and any quality manuals and procedures) at approximate intervals of 12 months during the Service Period and may carry out other periodic monitoring, spot checks and auditing of the Operator's quality management systems and the other quality systems referred to in this Clause 14 (*Quality Assurance*). The Operator shall procure that the **tie** Project Manager shall have a like right in respect of each Operator Party. The Operator shall co-operate and shall procure that any Operator Party co-operates with the **tie** Project Manager including providing him with all access, assistance, information and documentation which he reasonably requires in connection with his rights under this Clause 14 (*Quality Assurance*).

14.4 If, following any monitoring, spot check or audit undertaken pursuant to Clause 14.3 above, it is discovered that the Operator has failed, and/or that the Operator (on the balance of probabilities) will fail, to comply with the Agreement, **tie** may (without prejudice to any other right or remedy available to it) by notice to the Operator:

14.4.1 increase the level of its monitoring of the Operator until such time as the Operator shall have demonstrated to the satisfaction of **tie** that it is capable of performing and will perform all its obligations under the Agreement, in which case the Operator shall compensate **tie** for any reasonable additional costs incurred by **tie** as a result of such increased monitoring; and/or

14.4.2 require the Operator to undertake such steps as **tie**, acting reasonably, considers necessary to ensure compliance with the Agreement provided that:

- i) such a requirement shall not result in any amendment to the Target Operating Costs or the Fixed Costs; and
- ii) if the Operator does not agree that such steps are necessary for such purposes, it may refer the matter for determination under the Dispute Resolution Procedure and shall not be obliged to take such steps until the matter has been so determined.

15. ADVERTISING

There shall be no advertising permitted on or in any of the Trams and/or the Tramstops or at any other location on the System.

16. BEST VALUE AND PROJECT PHASE D BENCHMARKING

16.1 The Operator shall, throughout the Term and to the extent consistent with its obligations under the Agreement, make arrangements to secure continuous improvement in the way in which Project Operations are conducted having regard to the Project Vision and, a combination of economy, efficiency and effectiveness.

16.2 The Operator agrees to undertake (or refrain from undertaking) such actions as **tie** shall reasonably request:

16.2.1 supporting and assisting **tie** (in compliance with Clause 48 (*Information and Audit Access*) of the Agreement) in preparing best value performance plans and conducting best value reviews in relation to Project Operations;

16.2.2 complying with requests for information, data or other assistance made by **tie** in pursuance of its best value assessment; and

16.2.3 complying with all requests by **tie** to procure the attendance of specific officers or employees of the Operator or Operator Parties at any **tie** meetings at which Project Operations are to be discussed (but not, otherwise in exceptional circumstances, more than three times in any one year).

16.3 The Parties acknowledge that **tie** may prepare best value performance plans and conduct a best value review in conjunction with the reset of the Target Operating Costs, Fixed Costs (excluding the Category Five Fixed Costs) and Target Revenues pursuant to Clause 21 (*Reset of the Fixed Costs Target Operating Costs and the Target Revenues*) of this Appendix.

16.4 In addition to the KPI Customer Satisfaction Surveys, **tie** may undertake an annual customer satisfaction survey ("**tie Customer Satisfaction Survey**") in order to:

16.4.1 assess satisfaction among the public and passengers with Project Operations and, in particular, with the quality, efficiency and effectiveness of the Transport Services;

16.4.2 complement preparation of the Annual Service Report; and

16.4.3 monitor compliance by the Operator with its obligations including its management of systems availability and maintenance;

and the Operator shall provide reasonable assistance to enable the Operator to undertake the **tie** Customer Satisfaction Survey.

16.5 NOT USED

16.6 Without prejudice to any other provision in the Agreement (and no later than two Reporting Periods prior to the end of any year in which reset will take place in accordance with Clause 21 (*Reset of the Fixed Costs, Target Operating Costs and the Target Revenue*) of this Appendix and in other years within one Reporting Period of the year end) the Operator shall, at its own cost, provide a written report (the "**Annual Service Report**") which shall review the quality and performance of the Transport Services and the performance of all Project Operations measured during the relevant period and show the key issues to be addressed going forward, including customer feedback, operational issues and Transport Services improvement proposals. The customer feedback shall include the results of the KPI Customer Satisfaction Surveys and the results of any **tie** Customer Satisfaction Survey carried out pursuant to Clause 16.4 above. The Operator shall upon written request promptly provide supporting information to verify and audit the information and other material contained in the Annual Service Report.

16.7 **tie** may make comments on and/or objections and specify omissions in the supporting information or the Annual Service Report and in such case shall provide the Operator with written comments and/or objections within 30 Business Days of receipt. In the absence of such **tie** comments or objections, the supporting information (or the Annual Service Report) shall be deemed to have been accepted by **tie**.

16.8 The Operator shall, within 30 Business Days of receipt of **tie** comments and/or objections, make revisions having regard to such comments and/or objections and resubmit the information and report to **tie**. If the information and reports cannot be agreed by the Parties then the matter will be determined in accordance with the Dispute Resolution Procedure.

- 16.9 If, in **tie**'s reasonable opinion, the provision and performance of Project Operations or delivery of the Transport Services (or any part of them) could be more effective, efficient and economic having regard to the Annual Service Report and the **tie** Customer Satisfaction Survey, then **tie** may serve a **tie** Notice of Change pursuant to Clause 24 (*tie Changes*) of this Appendix stating the desired nature and timing of the changes to the provision or performance of Project Operations or delivery of the Transport Services (or the relevant part thereof).
- 16.10 The Operator shall, in conjunction with **tie**, develop Best Value Improvement Plans setting out mutually agreed tasks between the Operator and **tie** to improve the delivery of the Transport Services and demonstrate continuous improvement in the Transport Services and the achievement of the Project Vision and wider Project objectives within the Integrated Transport Initiative for Edinburgh and South East Scotland.
- 16.11 The preparation of Best Value Improvement Plans will take into account the conclusions from the Annual Service Report and the **tie** Customer Satisfaction Surveys.

PART VI: FINANCIAL MATTERS

17. COLLECTION OF FARE REVENUE

- 17.1 Without prejudice to the general applicability of Clause 54 (*No Partnership or Agency*) of the Agreement, the Operator is authorised by **tie** to enter into contracts of carriage with passengers using the Transport Services as agent for **tie**. The terms and conditions of such contracts of carriage shall be as determined by the Operator and **tie** during Project Phase A and Project Phase B, and as amended from time to time in accordance with the terms of the Agreement. The Operator shall issue tickets and collect fares as agent for **tie** in accordance with the terms of the Agreement, and shall pass all Patronage Revenue collected or received (including any Penalty Fares) to **tie** in accordance with Clause 18 (*Payment of Operating Revenue to tie*) of this Appendix. For the avoidance of doubt, the Operator shall have no rights in the Patronage Revenue collected.

- 17.2 In operating the Transport Services, the Operator shall, and shall ensure that all Operator Parties shall, comply with the Operating Method Statements in relation to the issue of tickets and the collection of Fares, including:
- 17.2.1 charging all passengers the correct Fares for their journey and issuing such passengers with the corresponding ticket; and
 - 17.2.2 checking that all tickets and other passes held by passengers are valid for the journey being taken.
- 17.3 The Operator shall allow the **tie** Inspectors to board any Trams providing the Transport Services at any time for the purpose of:
- 17.3.1 checking that the Operator and all Operator Parties are complying with the terms of the Agreement;
 - 17.3.2 monitoring the Operator's performance for the purpose of the KPI Regime and the Performance Monitoring Regime;
 - 17.3.3 carrying out any KPI Customer Satisfaction Survey;
 - 17.3.4 carrying out any **tie** Customer Satisfaction Survey or other customer satisfaction survey; and
 - 17.3.5 checking the Operator's records in relation to passenger numbers and fares collected or received by the Operator.
- 17.4 The Operator shall ensure that all Operator Parties comply with any reasonable instructions given to them by the **tie** Inspectors in accordance with the terms of the Agreement, provided that any such instruction by the **tie** Inspectors shall in no circumstances result in liability for **tie** or excuse the Operator from performance of its obligations pursuant to the Agreement.

18. PAYMENT OF OPERATING REVENUE TO TIE

- 18.1 The Operator shall pay to **tie** all Operating Revenues collected or received by the Operator and shall report daily to **tie** on the Operating Revenues for the previous Business Day or days in the case of an Edinburgh Holiday or a Sunday.

18.2 All Operating Revenues collected by the Operator shall be paid into such bank account as may be nominated by **tie** from time to time, such payments to be made each Business Day. In the event the Operator is unable to pay Operating Revenues into the nominated bank account, the Operator shall ensure that the collected funds are safeguarded properly pending their delivery to the nominated bank (including adequate insurance against loss or theft) and are remitted to the bank account the next following Business Day.

18.3 Within 2 Business Days of the end of each Reporting Period, the Operator shall prepare and deliver to the **tie** Project Manager a statement setting out full details of the amounts paid by the Operator to **tie** pursuant to Clause 18.1 above during such Reporting Period.

19. PAYMENTS TO THE OPERATOR

19.1 Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of this Appendix shall apply in respect of any Line with effect from the Service Commencement Date for such Line.

19.2 The Operator's only entitlement to payment from **tie** in respect of the performance of the Project Operations shall be as expressly provided in this Appendix.

20. ADJUSTMENT OF FIXED COSTS, TARGET OPERATING COSTS AND TARGET REVENUES

20.1 The circumstances under which the Target Operating Costs, Fixed Costs (excluding the Category Five Fixed Costs) and Target Revenues may be adjusted during Project Phases C and D shall be limited to:

20.1.1 Qualifying Change in Law and Permanent Roads Change; or

20.1.2 Long Term Roads Change (in respect of Target Operating Costs and/or Fixed Costs); or

20.1.3 **tie** Change or Operator Change; or

20.1.4 the reset of the Target Operating Costs, Fixed Costs and the Target Revenues pursuant to Clause 21 (*Reset of the Fixed Costs Target Operating Costs and the Target Revenue*) of this Appendix.

in each case where there is or will be a material effect on the Operator's ability to achieve the Target Operating Costs or Target Revenues and/or a material effect on the Operator's ability to continue to perform its obligations in terms of this Agreement in respect of the Fixed Costs and to the extent any adverse effect cannot be addressed by reasonable mitigation measures.

20.2 **tie** shall establish a Joint Revenue Committee to:

20.2.1 set Target Revenues during Project Phase B and adjust the Target Revenues in the circumstances set out in Clause 20.1 of this Operating Appendix where agreed or determined in accordance with the appropriate provisions of this Agreement;

20.2.2 assess, revise (where appropriate) and agree forward estimates for the revenue which could be generated from the operation of each Line and the operation of the Core Network; and

20.2.3 review proposals for the maximisation of revenue from the operation of the System.

20.3 **tie** shall procure that the Joint Revenue Committee shall meet:

20.3.1 during Project Phase B in advance of the setting of Target Revenues;

20.3.2 in advance of each reset to be carried out in accordance with Clause 21 (*Reset of the Fixed Costs, Target Operating Costs and the Target Revenue*);

20.3.3 in advance of each review of CEC Fares Policy; and

20.3.4 from time to time at **tie's** request.

20.4 **tie** and the Operator agree that an additional revenue consultant should be appointed to join the Joint Revenue Committee. **tie** shall appoint such revenue consultant and the Operator shall assist in the procurement, evaluation and appointment of such revenue consultant. The terms of the engagement of the revenue consultant will be determined by **tie**.

20.5 Both **tie** and the Operator agree that the briefing to the members of the Joint Revenue Committee shall be in such terms so as to require the Joint Revenue Committee to arrive at an agreed estimate of revenue.

- 20.6 Both **tie** and the Operator agree that they shall not raise any Dispute with regard to agreed estimates of revenue prepared by the Joint Revenue Committee in accordance with this Clause 20 (*Adjustment of Fixed Costs, Target Operating Costs and Target Revenues*), to the Dispute Resolution Procedure.
- 20.7 The Joint Revenue Committee shall be required in terms of the briefing given under Clause 20.5 above, to prepare a profile of Target Revenues for each Year during Project Phase D. Such profile shall refer to how revenues may vary seasonally and in accordance with fluctuations in service levels including bank holidays.

21. RESET OF THE FIXED COSTS, TARGET OPERATING COSTS AND THE TARGET REVENUE

- 21.1 Either Party may notify the other no later than six Reporting Periods prior to a Reset Decision Date of their intention to request operation of this Clause 21 (*Reset of the Fixed Costs, Target Operating Costs and the Target Revenue*) and shall provide to the other Party a detailed submission in support of that request within 30 days of such notification.
- 21.2 No later than three Reporting Periods prior to the third anniversary of the Service Commencement Date of the first Line (and each following third anniversary, in each case a "**Reset Decision Date**") in respect of which the Operator provided the Transport Services, **tie** and the Operator shall review:
- 21.2.1 the Operating Costs incurred by the Operator in the previous 3 years, and compare such costs to the Target Operating Costs and the Fixed Costs;
 - 21.2.2 the Operating Revenues generated by the System in the previous 3 years, and compare such revenue to the Target Revenue;
 - 21.2.3 the performance of the Operator under all aspects of the Performance Monitoring Regime and the Operator's Project Return;
 - 21.2.4 the contents of the most recent Annual Service Report;
 - 21.2.5 the results of the **tie** Customer Satisfaction Surveys and KPI Customer Satisfaction Surveys; and

21.2.6 any Best Value Improvement Plans produced pursuant to Clause 16.10 of this Appendix

21.3 Following such review which shall expressly take into account the Project Return, the Base Case Assumptions, Part A of Schedule 17 (*Setting of Fixed Costs*) in respect of drivers' salaries and benefits and other related salaries and benefits, and the positions stated in the Financial Proposals, the Operator Financial Model and the Project Development and Operating Costs, the Parties may agree to revise the Payment Mechanism, the Fixed Costs (except for the Category Five Fixed Costs), the Target Operating Costs and /or the Target Revenues (including, if relevant, the applicable pain/gain sharing structure and/or the KPI Regime). Where the Parties agree to revise this Appendix by resetting any of the matters listed in this Clause 21.3 (or otherwise) all other rights and obligations under the Agreement shall remain unchanged.

21.4 If the Parties are unable to agree revisions to the Payment Mechanism, Fixed Costs (excluding the Category Five Fixed Costs) , Target Operating Costs and /or Target Revenues and/or KPI Regime prior to the anniversary referred to in Clause 21.2 above (or 21.5 below as the case may be), either Party may refer the Dispute to the Dispute Resolution Procedure provided always that **tie** shall be entitled to serve notice to terminate pursuant to Clause 37 (*Voluntary Termination by tie*) of the Agreement.

21.5 The Operator and **tie** shall carry out further reviews in accordance with Clauses 21.1 to 21.4 above no later than three Reporting Periods prior to the following Reset Decision Dates:

21.5.1 the sixth anniversary;

21.5.2 the ninth anniversary;

21.5.3 the twelfth anniversary

of the Service Commencement Date of the first Line in respect of which the Operator provided the Transport Services.

22. RELIEF EVENTS

22.1 If and to the extent that a Relief Event:

22.1.1 is the direct cause of a delay in achievement of Service Commencement or Full Service Commencement in respect of any Line; and/or

22.1.2 materially and adversely affects the ability of the Operator to perform any of its obligations under the Agreement;

then the Operator shall be entitled to apply for an extension of time and/or relief from any rights of **tie** arising under Clause 34 of the Agreement (*Termination on Operator Default*).

22.2 To obtain such extension or relief, the Operator must:

22.2.1 as soon as practicable, and in any event within 14 days after it became aware that the Relief Event has caused or is likely to cause delay or adversely affect the ability of the Operator to perform its other obligations, give to **tie** a notice of its claim for relief, including full details of the nature of the Relief Event, the date of occurrence and its likely duration;

22.2.2 within 7 days of receipt by **tie** of the notice referred to in Clause 22.2.1 above, give full details of the relief and/or extension claimed; and

22.2.3 demonstrate to the reasonable satisfaction of **tie** that:

22.2.3.1 the Operator and the Operator Parties could not have avoided the occurrence or consequences of the relevant Relief Event by steps which they might reasonably be expected to have taken, without incurring substantial expenditure;

22.2.3.2 the Relief Event directly caused the delay and/or the need for relief;

22.2.3.3 the time lost and/or relief needed could not reasonably be expected to be mitigated or recovered by the Operator acting in accordance with Good Industry Practice, without incurring substantial expenditure; and

22.2.3.4 the Operator is using best endeavours to perform its obligations under the Agreement.

- 22.3 In the event that the Operator has complied with its obligations under Clause 22.2 above and **tie** is reasonably satisfied as to the matters specified in Clause 22.2.3 above, then:
- 22.3.1 the Planned Service Commencement Date shall be postponed by such time as shall be reasonable for such a Relief Event, taking into account the likely effect of delay; and
- 22.3.2 **tie** shall not be entitled to exercise rights to terminate the Agreement under Clause 34 (*Termination on Operator Default*) of the Agreement or Clause 33 (*Persistent Breach*) of the Agreement as a result of failure by the Operator to comply with its obligations to the extent that compliance is prevented by the Relief Event.
- 22.4 Nothing in Clause 22.3 above shall affect any entitlement to award Underperformance Points against the Operator for the purposes of operation of the KPI Regime (excluding the issue of a Major KPI Breach Notice) during the period in which the Relief Event is subsisting.
- 22.5 In the event that information required by Clause 22.2 above is provided after the dates referred to in that Clause, then the Operator shall not be entitled to any relief.
- 22.6 The Operator shall notify **tie** if at any time it receives or becomes aware of any further information relating to the Relief Event, giving details of that information to the extent that such information is new or renders information previously submitted materially inaccurate or misleading.
- 22.7 If the Parties cannot agree the extent of the relief required, or **tie** disagree that a Relief Event has occurred or that the Operator is entitled to any extension of time and/or relief, either Party may refer the matter for determination in accordance with the Dispute Resolution Procedure.

PART VII: VARIATIONS AND CHANGES IN LAW

23. PERFORMANCE AND FINANCIAL ADJUSTMENTS

23.1 Where the Operator may be entitled to an adjustment as a result of a Relevant Event to (i) the Operating Output Specification, (ii) the Target Costs for Project Phase C2, (iii) the Target Operating Costs, (iv) the Fixed Costs (excluding the Category Five Fixed Costs) , and/or (v) the Target Revenues, the provisions of this Clause 23.1 shall apply:

23.1.1 The Operator shall demonstrate the actual and/or projected impact of the Relevant Event and propose any amendments to the Operating Output Specification designed to mitigate and/or eliminate that impact. Any necessary amendments as a result of or consequence of the Relevant Event to the Operating Output Specification, the Base Case Assumptions, the Target Costs for Project Phase C2, the Target Operating Costs, the Fixed Costs (excluding the Category Five Fixed Costs) and/or the Target Revenues (as appropriate) shall be agreed, or in the absence of agreement determined, on the reference of either Party, pursuant to the Dispute Resolution Procedure so that:

- (i) the projected performance of the Operator against the Operating Output Specification (as measured by the KPI Regime) is No Better and No Worse than the average performance of the Operator against the Operating Output Specification (as measured or to be measured by the KPI Regime) in the 12 months immediately preceding the first Reporting Period in which the Relevant Event has effect ignoring for these purposes any failure to meet the requirements of the Operating Output Specification arising by virtue of that Relevant Event;
- (ii) in determining any amendments to the Operating Output Specification, due regard shall be had to the positions set out in the Financial Proposals, the Operator Financial Model, the Project Development and Operating Costs, and in particular the Base Case Assumptions.

- 23.2 Where a Permanent Roads Change occurs which is beneficial to the Operator, **tie** shall be entitled to require an adjustment to the Operating Output Specification, the Target Costs for Project Phase C2, the Target Operating Costs, the Fixed Costs (excluding the Category Five Fixed Costs) and/or the Target Revenues, as the case may be, in accordance with this Clause 23 (*Performance and Financial Adjustments*) to reflect the beneficial effects of such Permanent Roads Change .
- 23.3 The Profit Element shall be set at the Effective Date and shall be Indexed throughout the Term of this Agreement, and shall not be otherwise adjusted except in the following circumstances:
- 23.3.1 in the case of a **tie** Change which involves Network Expansion or a material alteration in the scope of Project Operations such that it is reasonable to project (using the provisions of Clauses 24.3 to 24.5) a change in excess of 25% in either annual Operating Costs or annual Operating Revenues;
- 23.3.2 in the case of a **tie** Change, during the relevant Project Phase A or Project Phase B, which relates to a truncation of Line 1 and/or Line 2 and/or Line 3 from what was anticipated to form part of the Core Network but which does not amount to a change in excess of 25% in either annual Operating Costs or annual Operating Revenues, the Profit Element shall be reduced on a pro-rated basis to reflect the proportionate reduction in Target Operating Costs, Target Costs for Project Phase C2 and/or Fixed Costs (excluding the Category Five Fixed Costs) ;
- 23.3.3 in the case of a **tie** Change to any of the Required Insurances, the Profit Element shall be adjusted by applying the Project Return for the relevant Project Phase to the relevant Target Operating Costs, the relevant Target Costs for Project Phase C2 and/or the relevant Fixed Costs to calculate the profit element applicable to the relevant Required Insurance and then using such calculation to make the appropriate increase or decrease to the Profit Element;
- 23.3.4 in the case of a **tie** Change where **tie** takes out and maintains any of the Required Insurances itself or agrees to pay the actual costs of any of the Required Insurances to the Operator rather than make payment to the Operator on a fixed or target basis, then no Profit Element shall be payable

by **tie** to the Operator in respect of any such Required Insurances and if any Profit Element is paid to the Operator by **tie** in relation to any such Required Insurances, then the relevant part of the Profit Element shall be adjusted accordingly by applying the Project Return for the relevant Project Phase to the relevant Target Operating Costs, the relevant Target Costs for Project Phase C2 and/or the relevant Fixed Costs to calculate the profit element applicable to the relevant Required Insurance and then using such calculation to make the appropriate increase or decrease to the Profit Element; and

23.3.5 in the case of a **tie** Change in accordance with paragraph 16.6 of Schedule 2 (*Project Development Output Specification*), a sum of 10.5% of the actual costs of such **tie** Change shall be added to the Profit Element.,

24. **tie** CHANGES

24.1 Unless expressly stated in this Agreement or as may otherwise be agreed by the Parties, **tie** Changes shall be dealt with in accordance with this Clause 24 (*tie Changes*). If **tie** requires a **tie** Change, it must serve a **tie** Notice of Change on the Operator.

24.2 A **tie** Notice of Change shall:

24.2.1 set out the proposed **tie** Change required in sufficient detail to enable the Operator to calculate and provide the Estimate in accordance with Clause 24.3 below;

24.2.2 require the Operator to provide **tie** within 21 days of receipt of the **tie** Notice of Change with an Estimate; and

24.2.3 set out whether **tie** wishes to pay for any proposed **tie** Change on the basis of target costs, fixed costs or actual costs.

24.3 As soon as is reasonably practicable, and in any event within 21 days after having received a **tie** Notice of Change, the Operator shall deliver to **tie** the Estimate. The Estimate shall include the opinion of the Operator (acting reasonably) on:

24.3.1 whether relief from compliance with any of its obligations is required (including the obligations of the Operator to achieve Service Commencement by the Planned Service Commencement Date and to meet the requirements

of the Operating Output Specification or the Project Development Output Specification), during or as a result of the implementation of the proposed **tie** Change;

24.3.2 any impact on the performance of the Project Operations and/or the Project Development Services;

24.3.3 any amendment (including an amendment to the Target Costs for Project Phase C2, the Target Operating Costs, the Fixed Costs (excluding the Category Five Fixed Costs) and/or the Target Revenue) required to the Agreement as a result of the implementation of the proposed **tie** Change, calculated in accordance with Clause 23 (*Performance and Financial Adjustments*) of this Appendix;

24.3.4 any Necessary Consents which are required as a result of the implementation of the proposed **tie** Change;

24.3.5 the proposed method of certification of any aspects of the Project Operations or the Project Development Services required by the proposed **tie** Change; and

24.3.6 the estimated actual costs of the proposed **tie** Change.

24.4 The Operator shall include in the Estimate evidence demonstrating that:

24.4.1 the Operator has used all reasonable endeavours to minimise, and procure that the Operator Parties minimise (including by the use of competitive quotes) any increase in costs and to maximise, and procure that the Operator Parties maximise, any reduction of costs;

24.4.2 the Operator has, to the extent reasonably practicable, sought competitive quotes from persons other than the Operator Parties in pursuance of its obligation under Clause 24.4.1 above;

24.4.3 the proposed **tie** Change will be implemented in the most cost-effective manner, including showing that when such expenditure is incurred, Changes in Law that are foreseeable at that time have been taken into account by the Operator; and

- 24.4.4 any expenditure that has been avoided, which was anticipated to be incurred and any likely increase in Patronage Revenue as a result of the proposed **tie** Change, has been taken into account in the proposed amendments to the Target Operating Costs, Target Costs for Project Phase C2, the Fixed Costs and/or Target Revenue included in the Estimate.
- 24.5 If the Operator does not intend to use its own resources to implement any proposed **tie** Change, it shall:
- 24.5.1 demonstrate that it is appropriate to subcontract the implementation of such **tie** Change; and
- 24.5.2 comply with Good Industry Practice with the objective of ensuring that it obtains best value for money (taking into account all relevant circumstances including, in particular, the requirement that the Operator should be left in No Better and No Worse position as a result of the implementation of the proposed **tie** Change) when procuring any work, services, supplies, materials or equipment required in relation to the proposed **tie** Change.
- 24.6 As soon as reasonably practicable after **tie** receives the Estimate, the Parties shall discuss and agree the issues set out in the Estimate. From such discussions **tie** may modify the **tie** Notice of Change, and (if the estimated increase in the Target Costs for Project Phase C2, the Target Operating Costs and/or Fixed Costs (excluding the Category Five Fixed Costs) in respect of the proposed **tie** Change is expected to exceed £10,000 (Indexed) and it is practicable for the Operator to do so) **tie** may require the Operator to seek and evaluate competitive tenders. In each case the Operator shall, as soon as practicable, and in any event not more than 14 days after receipt of such modification, notify **tie** of any consequential changes to the Estimate.
- 24.7 If the Parties cannot agree on the contents of the Estimate, then either Party may refer the Estimate for determination in accordance with the Dispute Resolution Procedure provided that the Operator shall not be obliged to implement any proposed **tie** Change where:
- 24.7.1 **tie** does not have the legal power or capacity to require the implementation of such proposed **tie** Change; or
- 24.7.2 implementation of such proposed **tie** Change would:

- 24.7.2.1 be contrary to Law;
- 24.7.2.2 not be technically feasible;
- 24.7.2.3 result in the risk of liability for Property Loss and/or Personal Loss in respect of any part of the System being Uninsurable;
- 24.7.2.4 cause any existing Necessary Consent (which is not reasonably likely, on the balance of probabilities, to be capable of modification) to be revoked;
- 24.7.2.5 require a new Necessary Consent or an amendment to a Necessary Consent which having used best endeavours to obtain in accordance with Clause 24.10 below, the Operator is unable to obtain within a time frame appropriate (in the reasonable opinion of **tie**) to the implementation of the proposed **tie** Change; or
- 24.7.2.6 substantially and materially affect the Operator's ability to perform the Project Operations or the Project Development Services such that it substantially and materially increases the probability of (a) a substantial non-compliance by the Operator with the Operating Output Specification or the Project Development Output Specification; or (b) termination of the Agreement as a result of Operator Default.

24.8 As soon as reasonably practicable after the contents of the Estimate have been agreed or determined pursuant to the Dispute Resolution Procedure **tie** shall:

24.8.1 confirm in writing the Estimate (as modified); or

24.8.2 withdraw the **tie** Notice of Change.

24.9 If **tie** do not confirm in writing the Estimate (with or without modification) within 30 days of the contents of the Estimate having been agreed or determined pursuant to 24.7, then the **tie** Notice of Change shall be deemed to have been withdrawn.

24.10 If it shall be necessary to obtain or amend any Necessary Consent in respect of a proposed **tie** Change, then the Operator shall use best endeavours to obtain such Necessary Consent or amendment.

25. OPERATOR CHANGES

25.1 The Operator shall have the right to propose changes and, in this regard, shall keep the Project Operations under review with a view to identifying ways in which the performance of the Project Operations can be improved, having regard to the Project Vision, a combination of economy, efficiency and effectiveness and the needs of passengers using the System. If the Operator wishes to introduce a change in the Project Operations or is required to do so by a third party (other than by an Infrastructure Provider as a consequence of a change to the Infrastructure and Equipment Output Specification to which Clause 24.1 above shall apply) it must serve an Operator Notice of Change on **tie**.

25.2 The Operator Notice of Change must:

25.2.1 set out the proposed change in the Project Operations in sufficient detail to enable **tie** to evaluate it in full;

25.2.2 specify the Operator's reasons for proposing the change;

25.2.3 request **tie** to consult with the Operator with a view to deciding whether to agree to the change and, if so, what consequential changes **tie** require as a result;

25.2.4 indicate the time period proposed for implementation of the change;

25.2.5 indicate any implications of the change;

25.2.6 indicate, in particular, whether a variation to the Target Costs for Project Phase C2, the Target Operating Costs, the Fixed Costs (excluding the Category Five Fixed Costs) and/or the Target Revenues is proposed (and, if so, give a detailed cost estimate of such proposed variation); and

25.2.7 indicate if there are any dates by which a decision by **tie** is critical.

25.3 **tie** shall evaluate the Operator's proposed change in good faith, taking into account all relevant issues, including whether:

- 25.3.1 a change in the Target Costs for Project Phase C2, Target Operating Costs, and/or the Target Revenue, or to the Operator's ability to achieve them and/or a change in the Fixed Costs (excluding the Category Five Fixed Costs) or the Operator's ability to continue to perform its obligations in terms of this Agreement in respect of these Fixed Costs (excluding the Category Five Fixed Costs) and to the extent any adverse effect cannot be addressed by reasonable mitigation measures will occur;
- 25.3.2 the proposed change would affect the quality of the Project Operations or the likelihood of successful delivery of the Project Operations;
- 25.3.3 the change will interfere with the relationship of **tie** with third parties;
- 25.3.4 the proposed change materially affects the risks or costs to which **tie** are exposed; or
- 25.3.5 the proposed change affects the Base Case Assumptions and the positions set out in the Financial Proposals, the Operator Financial Model and the Project Development and Operating Costs..
- 25.4 As soon as reasonably practicable after receiving the Operator Notice of Change, the Parties shall meet and discuss the matter referred to in it. During their discussions, **tie** may propose modifications or accept or object to the Operator Notice of Change.
- 25.5 If **tie** give written notice of no objection to the Operator Notice of Change, (with or without modification), the relevant Operator Change shall be implemented by the Operator within the period specified in the Operator Notice of Change.
- 25.6 If **tie** object to the Operator Notice of Change, they shall not be obliged to give their reasons for such a rejection.
- 25.7 Unless **tie's** acceptance specifically agrees to a change in the Target Costs for Project Phase C2, Target Operating Costs, the Fixed Costs and/or the Target Revenue, there shall be no change to such targets or fixed costs as a result of a change in the Project Operations proposed by the Operator.
- 25.8 **tie** shall be free to object pursuant to Schedule 9 (*Review Procedure*) of the Agreement to any Operator Change to the Project Operations proposed by the Operator, except if required in order to conform to a Change in Law. The costs of

introducing a change in Project Operations resulting from a Qualifying Change in Law shall be dealt with in accordance with Clause 27 (*Qualifying Change in Law*) of this Appendix.

26. ROADS CHANGES

26.1 A Permanent Roads Change shall be treated as a **tie** Change for the purposes of the Agreement and the Parties shall use all reasonable endeavours to agree:

26.1.1 adjustments to the Target Costs for Project Phase C2, the Target Operating Costs, the Fixed Costs (excluding the Category Five Fixed Costs) and/or the Target Revenues (where appropriate);

26.1.2 amendments to the Operating Output Specification (including the Timetable);
and

26.1.3 a permanent and commensurate recalibration of the KPI Regime.

in accordance with Clause 23 (*Performance and Financial Adjustments*) of this Appendix

26.2 As soon as reasonably practicable after the issues referred to in Clause 26.1 above have been agreed between the Parties or determined pursuant to the Dispute Resolution Procedure, **tie** shall give a **tie** Notice of Change and the provisions of Clause 24 (*tie Changes*) of this Appendix shall apply except that the Operator shall be obliged to implement the change in all circumstances except to the extent that such change falls within any of Clause 24.7.2.1, 24.7.2.2, 24.7.2.3 and 24.7.2.4 of the Operating Appendix.

26.3 A Long-Term Roads Change shall not be treated as a **tie** Change. However, in respect of the period of a Long-Term Roads Change, the Parties shall use all reasonable endeavours to agree:

26.3.1 adjustments to the Target Costs for Project Phase C2, the Target Operating Costs and/or the Fixed Costs (where appropriate excluding the Category Five Fixed Costs) but not the Target Revenues;

26.3.2 amendments to the Operating Output Specification (including the Timetable) and/or Agreement; and

- 26.3.3 a commensurate recalibration of the KPI Regime.
- 26.4 A Temporary Roads Change shall not be treated as a **tie** Change. However, in respect of the period of the Temporary Roads Change:
- 26.4.1 the Parties shall use all reasonable endeavours to agree a revised Timetable taking account of the impact of the Temporary Roads Change; and
- 26.4.2 the Operator's performance for the purposes of the KPI Regime relating to Headway and first and last trams shall be measured by reference to such revised Timetable for the duration of the Temporary Roads Change.
- 26.5 The Operator shall maintain and make available to **tie** for inspection at all reasonable times, detailed daily records of Patronage Revenue for the System and such other records and documents as may reasonably be required to evidence the Operator's entitlements under this Clause 26 (*Roads Changes*).
- 26.6 When adjustment to the Operating Output Specification is required in accordance with the provisions of this Clause 26 (*Roads Changes*), it shall be carried out in accordance with Clause 23 (*Performance and Financial Adjustments*) of this Appendix.

27. QUALIFYING CHANGE IN LAW

- 27.1 If a Qualifying Change in Law occurs or is to occur, then either Party may write to the other to express an opinion on its likely effects, giving details of its opinion of:
- 27.1.1 any necessary change in the Project Operations;
- 27.1.2 whether any changes are required to the terms of the Agreement to deal with the Qualifying Change in Law, including any required amendment to the KPI Regime, the Target Costs for Project Phase C2, the Target Operating Costs, the Fixed Costs (excluding the Category Five Fixed Costs) and/or the Target Revenues calculated in accordance with Clause 23 (*Performance and Financial Adjustments*) of this Appendix; and
- 27.1.3 whether relief from compliance with obligations is required, as a result of the Qualifying Change in Law;

in each case giving in full detail the procedure for implementing the Qualifying Change in Law.

27.2 As soon as reasonably practicable after receipt of any notice from either Party under Clause 27.1 above, the Parties shall discuss and agree the issues referred to in Clause 27.1 above and any ways in which the Operator can mitigate the effect of the Qualifying Change of Law and the Operator shall:

27.2.1 provide evidence to **tie** that the Operator has used and will continue to use all reasonable endeavours (including where appropriate and practicable the use of competitive quotes) to oblige Operator Parties to minimise any increase in costs and maximise any reduction in costs;

27.2.2 demonstrate that the relevant changes will be implemented in the most cost-effective manner, including showing that when expenditure will be incurred or has been incurred, foreseeable Changes in Law at that time will be taken into account by the Operator;

27.2.3 give evidence as to how the Qualifying Change in Law has affected operating revenues and costs for any similar businesses to the Project; and

27.2.4 demonstrate that any expenditure that has been avoided, which was anticipated in terms of the Target Operating Costs, the Target Costs for Project Phase C2 and/or the Fixed Costs (excluding the Category Five Fixed Costs) to be incurred (whether to replace or maintain assets affected by the Qualifying Change in Law or otherwise), has been taken into account in the amount of the change to the Target Operating Costs, the Target Costs for Project Phase C2 and/or the Fixed Costs (excluding the Category Five Fixed Costs) which in its opinion is required under Clause 27.1.2 above.

27.3 As soon as reasonably practicable after the issues referred to in Clause 27.1 above have been agreed between the Parties or determined pursuant to the Dispute Resolution Procedure, **tie** shall give a **tie** Notice of Change and the provisions of Clause 24 (**tie Changes**) of this Appendix shall apply except that:

27.3.1 the Operator shall be obliged to implement the change in all circumstances except to the extent that such change both:

27.3.1.1 falls within any of Clauses 24.7.2.1, 24.7.2.2, 24.7.2.3 and 24.7.2.4 of this Appendix; and

27.3.1.2 is not necessary to implement the Qualifying Change in Law; and

27.3.2 **tie** shall confirm the Estimate pursuant to Clause 24.8.1 above once it has been agreed or determined pursuant to the Dispute Resolution Procedure.

PART VIII: TERMINATION AND EXPIRY

28. TRANSITION ON TERMINATION OR EXPIRY

28.1 On the Expiry Date or upon termination, the Operator shall provide to **tie** the following information and assistance ("**Handback Package**"), which shall be current in all respects:

28.1.1 a list of managers involved in managing the Tram Business or any material element of the Project Operations showing name, work telephone number, role and responsibilities;

28.1.2 a list of all contracts, agreements, permits, licences, Necessary Consents or other documents which are material to the operation of the Tram Business or which have a value in excess of £5,000 showing (as appropriate) the contract account number, name, address and telephone number of counter parties, contract price, value, term, and notice period for termination or expiry date;

28.1.3 a list of all computer systems and software used for the maintenance of the business together with a description of the systems and master passwords where applicable, as well as a commitment to give any reasonable practical instruction or basic training for competent use of the computer systems and software;

28.1.4 the names and addresses of all insurers providing the Required Insurances along with the applicable policy numbers and other references;

28.1.5 a letter, in a form reasonably satisfactory to **tie**, authorising **tie** and its agents to request and to receive from the relevant insurers details of all claims paid or outstanding under the Required Insurances;

28.1.6 full particulars of all employees engaged in the provision of the Project Operations including:

28.1.6.1 employee, name and the date on which continuity of employment began;

28.1.6.2 the terms and conditions of employment of each such person;

- 28.1.6.3 all payments, benefits or changes to terms and conditions of employment promised to any such person;
 - 28.1.6.4 any agreements or arrangements with any trade union or association of trade unions or organisation or body of employees including elected representatives which represent any such employees;
 - 28.1.6.5 particulars of any strikes or industrial action taken by such employees; and
 - 28.1.6.6 details of any pension or death in service scheme in which such employees participate, the benefits provided by such schemes, the rate of employer and employee contributions and other terms applicable to such schemes.
- 28.2 **tie** shall not disclose the terms of the Handback Package to any third party, other than:
- 28.2.1 to the extent in the public domain, or as required by the law or in the course of conducting, prosecuting or defending any adjudication, arbitration, court or tribunal proceedings, or following a Termination Notice; or
 - 28.2.2 for the purpose of seeking offers from third parties for the provision of any of the Project Development Services, Project Operations or like services following the termination or expiry of this Agreement; or
 - 28.2.3 to a Successor Operator or its appointed subcontractors for the purpose of ensuring or assisting with continuity of the Project Operations following termination or expiry of this Agreement.
- 28.3 The Operator shall maintain and manage the business of providing the Project Operations with the intent that **tie** or any Successor Operator would be able to take over that business and secure continuity of the Project Operations on a going concern basis at any time following a Termination Notice.
- 28.4 Accordingly, following the service of a Termination Notice or in the six month period preceding any anticipated termination or expiry of this Agreement, the Operator shall (and shall procure that the Operator Parties shall):

- 28.4.1 take all reasonable steps and co-operate fully with **tie** and any Successor Operator so that continuation of the Project Operations after such termination or expiry is achieved with the minimum of disruption and so as to prevent or mitigate any inconvenience or risk to health or safety of the employees of **tie** and members of the public;
 - 28.4.2 liaise with **tie** and any Successor Operator and provide reasonable assistance and advice concerning the Project Operations and their transfer to **tie** or to such Successor Operator;
 - 28.4.3 allow **tie** and any Successor Operator access (at reasonable times and on reasonable notice) to each part of the System;
 - 28.4.4 provide to **tie** and to any Successor Operator such information concerning the System and the Project Operations which is reasonably required for the efficient transfer of responsibility for performance of the Project Operations;
 - 28.4.5 allow, or procure that the Operator Party shall allow, **tie** and any Successor Operator such access to any employees engaged by the Operator or such Operator Party in the provision of the Project Operations or the Project Development Services as **tie** or such Successor Operator shall reasonably require for the purpose of informing and consulting with such employees over the terms and conditions on which their employment will be transferred (to the extent this is the case) to **tie** or any Successor Operator or sub-contractor engaged by the Successor Operator; and
 - 28.4.6 on request, make the Handback Package available to **tie** or any Successor Operator without charge or restriction.
- 28.5 The Operator shall use best endeavours to facilitate the transfer of responsibility for the Project Operations to a Successor Operator or to **tie**, as the case may be, and the Operator shall take no action at any time which is calculated or intended to prejudice or frustrate or make more difficult such transfer. In particular, but without limitation to the generality of the foregoing, the Operator shall, during the final 12 months of the Term (where this expires by effluxion of time) or during the period following service of a Termination Notice, and whilst the same remains outstanding, not without the prior written consent of **tie** (which shall not be unreasonably withheld or delayed), make any material changes in the range of tickets and passes available for

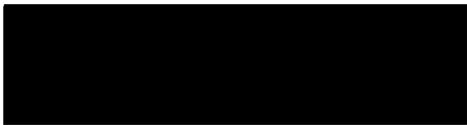
Transport Services on the System, reduce the purchase price of any such tickets or passes, rezone stops so as to alter fare structure or alter One Ticket involvement where such changes or price reductions would not otherwise reasonably be made by the Operator in the ordinary course of its business of operating the System and acting in accordance with Good Industry Practice

28.6 The Operator acknowledges that all the Assets have been funded by **tie**. Accordingly the Operator:

28.6.1 shall handover the Assets to **tie** or, if so directed, a Successor Operator, such handover to be in a timely and orderly fashion so as to preserve the technical and commercial integrity and goodwill and value of the System and to enable an efficient handover of Project Operations; and

28.6.2 shall not be entitled to any payment or benefit in respect of the handover and any relinquishment of licence to use the Assets or perform Project Operations.

28.7 **tie** may request to purchase any assets owned by the Operator which have been used in the performance of the Project Operations or used in relation to the System. If the Parties agree a fair market value for any such assets, **tie** shall pay the agreed sum to the Operator and the Operator shall deliver such assets to **tie** as soon as reasonably practicable.



Director/Authorised Signatory
Transport Initiatives Edinburgh Limited



Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

SCHEDULE 1

Conditions Precedent

1. Completion by the Operator of all requirements included within Project Phase A, Project Phase B and Project Phase C in respect of the Line which is intended to be the first Line on which the Transport Services are to be provided, other than in respect of Project Development Services included within Project Phase C2 which the Operator shall be required to provide in order to fulfil the requirements of Clause 2.5 and Clause 3 or Clause 4 of the Operating Appendix, shall be a condition precedent to the Operating Effective Date.

2. In addition, delivery by the Operator to ~~tie~~ in form and substance satisfactory to ~~tie~~ (acting reasonably) of the documents listed in paragraph 2.1 and the other matters listed in this paragraph 2 shall be condition precedent to the Operating Effective Date. Where listed as a duly certified copy, the document shall be certified by the company secretary of the Operator as being a true copy, in full force and effect at a date no later than the Operating Effective Date:
 - 2.1 a copy, duly certified, of minutes of a meeting of the board of directors of the Operator evidencing a resolution of the board of directors approving any amendments to this Operating Appendix and the Operating Output Specification since the Effective Date of the Agreement;

 - 2.2 evidence :
 - 2.2.1 that the Required Insurances are in full force and effect and that the relevant policies comply with the requirements of the Agreement; and

 - 2.2.2 of the current credit ratings of the Insurers and that these ratings are not below a credit rating to A- by Standard & Poors; and.

 - 2.2.3 that revenue collection and safekeeping procedures which comply with the requirements of the Agreement are in place.

 - 2.3 confirmation (in the form of a letter of acceptance from the proposed surety) that the Operator is taking out a Performance Bond pursuant to Clause 8 (*Operator's Performance Security*) of the Agreement.



~~Director~~/Authorised Signatory
Transport Initiatives Edinburgh Limited



Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

SCHEDULE 2

tie Completion Requirements

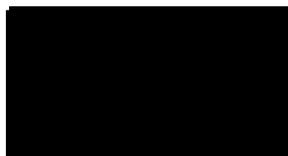
[These requirements are to be developed between the Parties during Project Phase A and Project Phase B. Different tie Completion Requirements will be required depending on whether:

- there is to be a gap between Service Commencement and Full Service Commencement; or*
- Full Service Commencement is to occur on the day on which the Line is first opened to fare paying passengers]*

Any changes to tie's Completion Requirements during Project Phases C1 or C2 shall be proposed as a tie Change or an Operator Change as appropriate.

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Director/Authorised Signatory
Transport Initiatives Edinburgh Limited

A solid black rectangular box redacting the signature of the representative from TRANSDEV Edinburgh Tram Limited.

Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

SCHEDULE 3

Project Phase D Payment Mechanism and KPI Regime

Payment during Project Phase D

1. The Operator shall be entitled to submit applications for payment to **tie** during Project Phase D within five days of the end of each Reporting Period and following submission to **tie** of the Service Quality Report pursuant to Clause 12 (*Service Performance and Quality Monitoring*) of this Appendix. Applications for payment shall be for the Profiled Target Operating Costs for the Reporting Period just ended, the Profiled Fixed Costs for the Reporting Period just ended, the actual costs of any agreed Special Event, any other actual costs provided for under this Agreement or agreed in accordance with this Agreement and the Profiled Profit Element for the Reporting Period just ended. The Operator shall also submit a detailed breakdown with each application for payment showing the Operating Costs for the relevant Reporting Period.
2. Each application for payment submitted by the Operator pursuant to paragraph 1 of this Schedule shall take into account performance deductions calculated by the Operator in accordance with the KPI Regime set out at paragraphs 7 to 17 below.
3. **tie** shall procure that the **tie** Project Manager shall, subject to any clarifications as are in **tie's** opinion (acting properly and reasonably) necessary, and subject to paragraph 2 above and Clause 10.11, certify by notice in writing to the Operator that part of the Target Operating Costs, Fixed Costs, the actual costs of any agreed Special Event, any other actual costs provided for under this Agreement or agreed in accordance with this Agreement and Profit Element claimed in the relevant application for payment which is approved by **tie** and give reasons why any part of the Target Operating Costs, the Fixed Costs, the actual costs of any agreed Special Event, any other actual costs provided for under this Agreement or agreed in accordance with this Agreement and Profit Element, and deductions calculated by the Operator in accordance with the KPI Regime have not been so approved and certified no later than 10 days after the date on which such application for payment is received by **tie**.
4. Within 5 Business Days of receiving a notice from **tie** pursuant to paragraph 3 of this Schedule certifying part or all of the Target Operating Costs, the Fixed Costs, the actual costs of any agreed Special Event, any other actual costs provided for under this Agreement or agreed in accordance with this Agreement and Profit Element claimed in the relevant

application for payment, and the deductions in accordance with the KPI Regime, the Operator shall issue an invoice to **tie** for the certified Target Operating Costs, Fixed Costs, the actual costs of any agreed Special Event, any other actual costs provided for under this Agreement or agreed in accordance with this Agreement and Profit Element. Invoices shall be substantially in the form of Schedule 6 (*Form of Invoice for Project Phase D*) to this Appendix.

5. **tie** shall pay any invoice submitted in accordance with paragraph 4 of this Schedule within 30 days of receipt of the relevant invoice.
6. The Operator may refer any Dispute about the Target Operating Costs, Fixed Costs, the actual costs of any agreed Special Event, any other actual costs provided for under this Agreement or agreed in accordance with this Agreement or Profit Element, and/or deductions in accordance with the KPI Regime which have not been certified and/or deductions certified, to the Dispute Resolution Procedure. If it is determined pursuant to the Dispute Resolution Procedure that the whole or any part of any disputed amount should be paid by **tie** to the Operator, then payment shall be made by **tie** to the Operator within 30 days of the receipt by **tie** of an invoice in respect of the determined amount from the Operator.

Operation of the KPI Regime

7. The Operator shall continually monitor performance and service quality against the Key Performance Indicators shown in Table 1 to this Schedule.
8. The performance and service quality monitoring undertaken by the Operator shall be in accordance with requirements set out at and developed in accordance with paragraphs 24 and 25 of Schedule 2 (Project Development Output Specification) of the Agreement and shall be produced in the form of a composite KPI Monitoring Report included in the Service Quality Report submitted to **tie** for each Reporting Period no later than three Business Days following the end of the Reporting Period and in advance of submission of the Operator's application for payment for that Reporting Period. In the event that such Service Quality Report is not provided in a timely fashion in a previously agreed format or is unsatisfactory in a material respect in **tie's** opinion (acting properly and reasonably), **tie** shall not be obliged to review any application for payment relying upon such report until the defects in it are corrected to **tie's** satisfaction and **tie** has had a reasonable opportunity to review the resubmitted report.
9. **tie** shall conduct the periodic inspections and surveys stipulated under paragraphs 24 and 25 of Schedule 2 (Project Development Output Specification) of the Agreement in relation to

system cleanliness, revenue protection and customer satisfaction, as well as spot checks on other selected Performance Indicators and report on these matters on a regular basis to the Operator.

10. The Operator shall be responsible for assessing the KPI Monitoring Report and the results of the inspections and surveys under paragraph 9 above and shall allocate Underperformance Points against failure to meet the performance standards set by the Agreement, in accordance with Schedule 12 (*Performance Scoring*) to the Agreement. The Operator shall then calculate the applicable percentage deduction for the Reporting Period for application to the KPI Regime Profit Element and show this in the relevant application for payment.
11. The KPI Regime Profit Element shall be apportioned into seven financial components set individually against each KPI in accordance with the relevant weighting. The amount attributable to each KPI is shown in Column 5 of Table 1 to this Schedule.
12. Any deductions imposed in respect of underperformance shall be cumulative. For Example: performance below 85% will attract a cumulative 100% deduction on any KPI. Underperformance will attract the full percentage deduction, irrespective of where such Underperformance sits within the applicable range shown in Table 1 to this Schedule.
13. In the event that the Operator incurs aggregated deductions in respect of underperformance ("Underperformance Threshold") which equal or exceed thirty percent (30%) of the KPI Regime Profit Element during any Reporting Period, **tie** shall be entitled to issue a notice ("**Major KPI Breach Notice**") requesting the Operator to deliver a plan ("KPI Rectification Plan") setting out detailed measures to remedy the matters specified by **tie** in such notice. If, in **tie's** opinion, the KPI Rectification Plan is:
 - 13.1 inadequate; or
 - 13.2 no material improvement in performance is achieved by the Operator during the next Reporting Period (whether or not the KPI Rectification Plan was satisfactory to **tie**) and aggregated deductions remain equal to or above the Underperformance Threshold;

the Operator shall be obliged to apply a multiplier of 1.25 to the aggregated value of deductions for that Reporting Period (which calculation shall be shown in the relevant invoice) and **tie** shall issue a KPI Warning Notice.

14. If, for the next Reporting Period following issue by **tie** of a KPI Warning Notice, underperformance deductions remain at or above the Underperformance Threshold or no acceptable KPI Rectification Plan has been submitted, the Operator shall be obliged to apply a multiplier of 1.5 to the aggregated value of deductions for that Reporting Period (which calculation shall be shown in the relevant invoice). **tie** shall be entitled to issue a second KPI Warning Notice, requiring material improvement and production and delivery of a KPI Rectification Plan.
15. In the event that for a fourth and consecutive Reporting Period, underperformance deductions remain at or above the Underperformance Threshold or no acceptable KPI Rectification Plan has been submitted, the Operator shall be obliged to apply a multiplier of 2 to the aggregated value of deductions for that Reporting Period (which calculation shall be shown in the relevant invoice), until such time as performance improves. Underperformance deductions above the Underperformance Threshold without improvement for six consecutive Reporting Periods shall constitute an Operator Default.
16. In the event that underperformance by the Operator results in a second Major KPI Breach Notice within 12 months of the first such notice, this shall constitute an Operator Default.
17. The Parties acknowledge that all deductions under the KPI Regime will be a genuine pre estimate of loss incurred by the System and by **tie** as a result of the operational underperformance and that no legal challenge or review may be made to their application on the basis that the deductions (either initial or pursuant to paragraphs 7 to 16 above are unenforceable or unreasonable penalties or do not represent properly calculable heads of damages.
18. **Pain-Gain Share Mechanism**
 - 18.1 The parties have agreed to apply a mechanic to share proportionately in revenue and cost generated by the Edinburgh Tram Network operations on the following basis:
 - 18.1.1 The mechanic shall be applied by **tie** to the aggregate Operating Revenues and the aggregate Operating Costs in respect of which Target Operating Costs have been allocated at the end of each Pain/Gain Share Period.
 - 18.1.2 The calculation shall be carried out by **tie** using the applications for payment and data submitted by the Operator with regard to Operating Costs and Operating Revenue collection over the immediately preceding Pain/Gain

Share Period and verified by **tie** audit on the basis of Clause 48 (*Information and audit access*) of the Agreement.

18.1.3 The calculation exercise shall be completed by **tie** no later than 60 days following the end of the each Pain/Gain Share Period.

18.1.4 The calculation shall compare the aggregate Operating Revenues over the relevant Pain/Gain Share Period to the Profiled Target Revenues and the aggregate Operating Costs in respect of which Target Operating Costs have been allocated in the relevant Pain/Gain Share Period to the Profiled Target Operating Costs.

18.2 In the event that **tie** determines through calculation that the aggregate Operating Revenues over the relevant period:

18.2.1 have exceeded Profiled Target Revenues, the Parties shall be entitled to a share in that surplus as follows:

18.2.1.1 **tie** share: seventy per cent (70%)

18.2.1.2 Operator share: thirty per cent (30%)

18.2.2 did not achieve Profiled Target Revenues, the Parties shall contribute to the deficit as follows:

18.2.2.1 **tie** contribution : 70 per cent (70%)

18.2.2.2 Operator contribution: 30 per cent (30%)

18.3 In the event that **tie** determines that Operating Costs in respect of which Target Operating Costs have been allocated over the relevant period:

18.3.1 have exceeded Profiled Target Operating Costs the parties shall contribute to the deficit as follows:

18.3.1.1 **tie** contribution: twenty per cent (20%)

18.3.1.2 Operator contribution: eighty per cent (80%)

18.3.2 have achieved savings against Profiled Target Operating Costs, the parties shall be entitled to a share in the savings as follows:

18.3.2.1 **tie** share: fifty per cent (50%)

18.3.2.2 Operator share: fifty per cent (50%)

- 18.4 The Pain Gain share mechanic shall operate in relation to Operating Costs (except for Fixed Costs and any actual costs which are to be paid or agreed to be paid in accordance with this Agreement) and Operating Revenues and separately from the KPI Regime.
19. The calculations set out in paragraph 18 above shall be reconciled by **tie** to produce an aggregate net result. In the event that the result is positive number in the Operator's favour, **tie** shall notify the Operator, give details of the relevant calculations and reconciliation and state the net pain/gain share balance. The Operator shall then submit an invoice substantially in the form of Schedule 6 (*Form of Invoice for Project Phase D*) to this Appendix to **tie** and **tie** shall make payment within 30 days of receipt of the invoice. If the result is a negative number representing an amount owed to **tie**, **tie** shall submit an invoice to the Operator and be entitled to receive reimbursement from the Operator within 30 days of the Operator's receipt of the invoice or by operation of set off from the Operator's monthly invoices until such time such amount is extinguished. Any amount outstanding to the credit of **tie** shall be treated as debt due and payable to **tie** by the Operator. For the avoidance of doubt, set off by **tie** shall in all cases be in addition to any performance deductions being applied pursuant to the KPI Regime.
20. To the extent any VAI payment is to be made to the Operator pursuant to paragraph 23 to 29 below, **tie** shall be entitled to set off any amounts outstanding under paragraph 19 above in full against such VAI payment.
21. In the event of expiry of the Term or an early termination, **tie** shall be expressly entitled to carry out the calculation under paragraph 18 above on a pro rated basis and the provisions of paragraphs 18, 19 and 20 above shall continue to apply, save that any amount due and payable to **tie** shall be paid by the Operator to **tie** within 30 days of written demand by **tie**.
22. The Operator may refer any Dispute concerning any determination, calculation or reconciliation by **tie** in accordance with paragraphs 18, 19 and/or 21, to the Dispute Resolution Procedure. If it is determined pursuant to the Dispute Resolution Procedure that the whole or any part of any disputed amount should be paid to the Operator or to **tie** (as appropriate), then payment shall be made by the appropriate party to the other within 30 days of the receipt of an invoice in respect of the determined amount. Any costs incurred by the

Operator in auditing any determination, calculation or reconciliation which is the subject of a Dispute under this Paragraph 22 shall be at the Operator's own cost.

23. VISION ACHIEVEMENT INCENTIVE ("VAI")

For the purposes of this section:

23.1 "Additional System Surplus" means:

tie Actual System Surplus over the Vision Period less **tie** Target System Surplus over the Vision Period.

23.2 "tie Target System Surplus" means:

Target Revenues over the Vision Period less the sum of Target Operating Costs, Fixed Costs and Profit Element over the Vision Period.

23.3 "tie Actual System Surplus" means:

over the Vision Period:

- (i) Operating Revenue less the sum of Profit Element, Target Operating Costs and Fixed Costs; then
- (ii) add Operating Revenue Pain Share payments made by the Operator to **tie** pursuant to paragraphs 18 to 21 above; then
- (iii) deduct any Operating Revenue Gain Share payments by **tie** to the Operator pursuant to paragraphs 18 to 21 above; then
- (iv) add any Operating Cost Gain Share payments by the Operator to **tie** pursuant to paragraphs 18 to 21 above;
- (v) deduct any Operating Cost Pain Share payments by **tie** to the Operator pursuant to paragraphs 18 to 21 above.

23.4 "Average Individual KPI Performance" means, in respect of each Key Performance Indicator, the average performance in respect of such Key Performance Indicator during the relevant Vision Period;

- 23.5 **"Average KPI Performance"** means, in respect of a Vision Period, the level of performance calculated in accordance with paragraph 25 below;
- 23.6 **"Vision Period"** means:
- 23.6.1 the period from Service Commencement to the date closest to the third anniversary of such date being the end of a Reporting Period and a Reset Decision Date; and
- 23.6.2 each subsequent 3 year period commencing on the day after the end of the previous Vision Period, and ending on the last day of a Reporting Period closest to a Reset Decision Date, provided that the last Vision Period shall terminate on the expiry or earlier termination of the Agreement.
24. The Operator shall be entitled to the Vision Achievement Incentive in respect of a Vision Period if:
- 24.1 ~~the~~ Actual System Surplus exceeds the ~~the~~ Target System Surplus for such Vision Period;
- 24.2 the Average KPI Performance for the Vision Period is 90% or more; and
- 24.3 no Average Individual KPI Performance for the Vision Period is less than 85%
25. The Average KPI Performance for a Vision Period shall be the average of:
- 25.1 the Average Individual KPI Performance for such Vision Period for each Key Performance Indicator;
- 25.2 weighted in accordance with the weightings set out in Table 1 of this Schedule.
26. The Average Individual KPI Performance for a Vision Period for each Key Performance Indicator shall be calculated as follows:
- 26.1 the sum of the individual KPI Performances over each Reporting Period in the Vision Period divided by the number of Reporting Periods.
27. If the Operator is entitled pursuant to paragraph 24 above to a Vision Achievement Incentive in respect of a Vision Period:

- 27.1 the amount of such Vision Achievement Incentive payment shall be equal to half of the Additional System Surplus in respect of such Vision Period (but without any entitlement to interest); and
- 27.2 such payment shall be made within 60 days of the end of the Vision Period and **tie** shall provide to the Operator details of the calculation of the amount of such payment.
28. In respect of a Vision Period which terminates on the expiry or earlier termination of the Agreement:
- 28.1 A Vision Achievement Incentive may be payable on a pro rated basis in accordance with the above provisions on the expiry of the Agreement or earlier termination pursuant to (a) Clause 31.4 for failure to agree matters resulting in a termination, or (b) Clause 32 (*Termination on **tie** Default or at Operator Option*), or (c) Clause 37 (*Voluntary termination by **tie***), (except for Clause 37.1.1), or (d) Clause 35 (*Termination for Force Majeure*); and
- 28.2 No Vision Achievement Incentive shall be payable in respect of such Vision Period where the Agreement terminates for any other reason, and the Operator shall have no entitlement to any Additional System Surplus.
29. **tie** shall be responsible for all VAI calculations.. For the avoidance of doubt, the calculation and effect of KPI Regime deductions shall have no bearing on the calculation of VAI entitlement.
30. The operation of paragraphs 23 to 29 shall not come into effect if Operating Revenues are less than Target Revenues over the relevant Vision Period.

TABLE 1 - KPI REGIME

KEY PERFORMANCE INDICATOR	Weight	Performance Range	Deduction	KPI Profit Element
Headway	25%	100% to 98%	0%	£ [◆]
		<98% to 95%	10%	
		<95% to 90%	20%	
		<90% to 85%	30%	
		<85%	40%	
First and last tram	15%	100% to 98%	0%	£ [◆]
		<98% to 95%	10%	
		<95% to 90%	20%	
		<90% to 85%	30%	
		<85%	40%	
Customer Survey	10%	100% to 98%	0%	£ [◆]
		<98% to 95%	10%	
		<95% to 90%	20%	
		<90% to 85%	30%	
		<85%	40%	
Security	10%	<100% to 98%	2%	£ [◆]
		<98% to 95%	8%	
		<95% to 90%	20%	
		<90% to 85%	30%	
		<85%	40%	
Cleanliness of tram interiors and stops	10%	100% to 98%	0%	£ [◆]
		<98% to 95%	10%	
		<95% to 90%	20%	
		<90% to 85%	30%	
		<85%	40%	
Information & signage	10%	100% to 98%	0%	£ [◆]
		<98% to 95%	10%	
		<95% to 90%	20%	
		<90% to 85%	30%	
		<85%	40%	
Revenue generation and protection	20%	100% to 98%	0%	£ [◆]
		<98% to 95%	10%	
		<95% to 90%	20%	
		<90% to 85%	30%	
		<85%	40%	

[Redacted Signature]

Director/Authorised Signatory
Transport Initiatives Edinburgh Limited

[Redacted Signature]

Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

SCHEDULE 4

Operating Output Specification

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1. OVERALL SYSTEM REQUIREMENTS

1.1 The System shall be an electrically powered light rail system using Trams to carry passengers and may include all or any of the following Lines (or any parts thereof):

1.1.1 Line 1;

1.1.2 Line 2;

1.1.3 Line 3; and

1.1.4 Network Expansions

1.2 **tie's** overall requirements of the System are that it shall achieve and sustain the Project Vision and be:

1.2.1 Safe and secure;

1.2.2 Reliable;

1.2.3 Attractive;

1.2.4 Delivered within the Affordability Limits;

1.2.5 Affordable for passengers;

1.2.6 Efficient;

1.2.7 Environmentally acceptable;

1.2.8 Sustainable;

1.2.9 Easy for passengers to use;

1.2.10 Accessible to all including mobility impaired passengers;

1.2.11 Able to provide a minimum level of service specified by **tie**;

1.2.12 Able to support the local transport strategy, policies, planning and system aspirational objectives of the City of Edinburgh Council;

1.2.13 Integrated with other transport modes;

1.2.14 Capable of Network Expansions; and

1.2.15 Able to project a system wide high quality brand image.

1.3 **tie** requires that operation of the System shall reflect a high standard of presentation and public image to match the City of Edinburgh's status as a World Heritage Site and that the System shall be operated efficiently with minimum disturbance to the public and minimum delay to passengers.

1.4 All aspects of the operation of the System shall take account of the need to react safely and quickly to emergencies.

1.5 The System shall incorporate such staffing, surveillance and alarm equipment as is appropriate to ensure the safety of the public, especially lone and mobility impaired travellers.

1.6 **tie** requires that the System shall be capable of responding to Network Expansion and resultant increased ridership without adverse impact on quality.

1.7 The System shall be constructed, maintained and operated at all times in accordance with Good Industry Practice, the Necessary Consents and the Law.

2. PROJECT OPERATIONAL OBJECTIVES

The objectives of **tie** and the Operator during the Service Period shall be to ensure that:

2.1 the System complies with the requirements set out in paragraph 0 above;

2.2 the System is operated in accordance with the terms of this Agreement, including this Operating Output Specification, the Operating Method Statement, the Environmental Statement and the Design Manual, as amended from time to time in accordance with the Agreement;

2.3 the System is operated in accordance with Law and Good Industry Practice; and

2.4 the operation of the System is integrated with existing transport operators in Edinburgh, in accordance with the Service Integration Plan developed under the terms of this Agreement.

- 2.5 The primary objectives of **tie**, the **tie** Advisers and the Operator during the Service Period in respect of any Line shall be to:
- 2.5.1 procure the performance of the Project Operations in accordance with this Operating Output Specification and the Operating Method Statements;
 - 2.5.2 manage the provision of Infrastructure Provider Maintenance of the System;
 - 2.5.3 develop and procure any Network Expansion and to encourage growth in patronage; and
 - 2.5.4 sustain the highest level of system performance at all times.
- 2.6 The detail of this Operating Output Specification shall be developed by the Operator, **tie** and the **tie** Advisers pursuant to the terms of the Project Development Output Specification and the Agreement.
- 2.7 The following paragraphs set out **tie**'s intentions as at the Effective Date in relation to the requirements of the Operating Output Specification.

3. OPERATIONAL REQUIREMENTS

Introduction

- 3.1 Part of the Project Development Objectives is to optimise route service patterns and frequencies. It is therefore not possible to define the precise requirements for the Transport Services at the Effective Date.
- 3.2 The development of the Operating Output Specification in relation to the Transport Services will take into account and develop the Development Assumptions made during Project Phases A and B to accommodate the possible phased introduction of the Transport Services on the System.
- 3.3 The following paragraphs outline the expected operational parameters.

4. TRANSPORT SERVICE REQUIREMENTS

4.1 Days of Operation

The Transport Services shall be provided by the Operator on all Lines on every day of the year. On Edinburgh Holidays, the Operator shall provide Transport Services at least as frequent as it would normally provide on a Sunday.

4.2 Journey times

4.2.1 During Project Phases A, B and C, the Operator shall develop and agree with **tie** and the **tie** Advisers the maximum journey times between locations on the Lines and/or Core Network which shall not be exceeded by Trams in either direction.

4.2.2 The Operator shall also agree the planned journey times, layover times, allowances for dwell times and allowances for recovery times in planning the Timetable. When necessary, the Timetable shall be reviewed (in accordance with Clause 6 (*Transport Services Timetable*) of the Operating Appendix and, if so agreed with **tie**, adjusted and in such circumstances, the Operator shall provide a copy thereof and each successive update thereof to **tie**.

4.3 Service Levels and Patterns

4.3.1 Pursuant to paragraph 9 of the Project Development Output Specification, with effect from the Service Commencement Date in respect of each Line or part thereof, the Operator shall provide the minimum number of tram services per hour specified in the agreed operating pattern.

4.3.2 The Operator shall ensure that the intervals in the Timetable between tram services from each Tramstop for the same destination shall be equal within any time bands established for differing tram frequencies.

4.3.3 The Operator shall ensure that tram services call at all Tramstops when operating in public service, except at the beginning and end of each Tram's duty cycle when short workings may be operated.

4.3.4 If at any time during the Service Period (under normal operating conditions excluding Special Events) the level of the Transport Services set out above is

insufficient to accommodate the actual passenger demand and appropriate operating passenger densities, the Operator and **tie** will meet to discuss whether and how to jointly procure sufficient additional capacity to ensure that passenger demand can be accommodated at such appropriate operating passenger densities.

4.3.5 Transport Services to be provided during Special Events shall be subject to periodic agreement between **tie** and the Operator, taking into account anticipated patronage and route availability and dealt with under Clause 8 (*Special Events*) of the Operating Appendix.

4.4 Operating Hours

4.4.1 Unless otherwise agreed by **tie** during Project Phases A, B or C, of this Agreement, with effect from the Service Commencement Date in respect of each Line, the Operator shall ensure that the departure of:

- The first tram service for each route specified in Table 1 below shall be no later than the times specified in that table; and that
- The last tram service for each route specified in Table 1 below shall be no earlier than the time specified in the table.

Table 1 : First and Last Scheduled Departure Times

	<i>Monday to Friday</i>		<i>Saturday</i>		<i>Sunday</i>	
	<i>First depart</i>	<i>Last depart</i>	<i>First depart</i>	<i>Last depart</i>	<i>First depart</i>	<i>Last depart</i>
<i>From Airport, to City Centre</i>	<i>05.10</i>	<i>23.40</i>	<i>05.10</i>	<i>23.40</i>	<i>05.10</i>	<i>23.50</i>
<i>From Leith to City Centre via Leith Walk</i>	<i>05.00</i>	<i>24.00</i>	<i>05.00</i>	<i>24.00</i>	<i>07.00</i>	<i>24.00</i>
<i>From Leith to City Centre via Granton</i>	<i>05.00</i>	<i>24.00</i>	<i>05.00</i>	<i>24.00</i>	<i>07.00</i>	<i>24.00</i>

<i>From City Centre to Airport</i>	<i>04.30</i>	<i>24.00</i>	<i>04.30</i>	<i>01.00</i>	<i>04.30</i>	<i>24.30</i>
<i>From City Centre to Leith via Leith Walk</i>	<i>05.00</i>	<i>24.00</i>	<i>05.00</i>	<i>24.00</i>	<i>07.00</i>	<i>24.00</i>
<i>From City Centre to Leith via Granton</i>	<i>05.00</i>	<i>24.00</i>	<i>05.00</i>	<i>24.00</i>	<i>07.00</i>	<i>24.00</i>

4.5 Availability, Reliability, Punctuality and Regularity of the Transport Services

The Operator shall monitor those Performance Indicators related to Transport Services delivery for each Line by methods to be agreed with **tie** and shall report to **tie** on those Performance Indicators in the Service Quality Report rendered pursuant to Clause 12 (*Service Performance and Quality Monitoring*) of the Operating Appendix. Any remedial action necessary to achieve requisite performance levels, or where appropriate any adjustment of the performance levels, shall be subject to agreement of **tie** as set out in the KPI Regime.

5. SERVICE INTEGRATION

- 5.1 The Operator shall be responsible for refining and implementing the Service Integration Plan in conjunction with other public transport operators and in conformity with CEC's local transport strategy. All amendments to the Service Integration Plan shall be subject to **tie**'s approval in accordance with Schedule 9 (*Review Procedure*).
- 5.2 The Operator shall be responsible for ensuring that the Service Integration Plan (including any amendments to it) shall be to the satisfaction of the OFT. Subject to any necessary exemptions and clearances from the OFT and from any other relevant regulatory authority, the Operator shall implement, with other transport operators, and in a manner consistent with the LTS and CEC transport strategies, timetable coordination measures.
- 5.3 The Operator shall on each Tram show information related to connecting public transport timetables and shall provide maps of local public transport services at all transport interchange points forming part of the system.

5.4 Publicity, particularly Timetable and fares information, shall be presented in a common format and, wherever practicable, the Operator shall advertise other transport operators' services within their Timetables where these form a complementary element of the local public transport network. Timetable information shall be provided to Traveline Scotland or any successor with adequate notice being given of any proposed service alterations

6. OPERATING METHOD STATEMENT

6.1 The Operator shall implement and maintain up-to-date all component plans which constitute the Operating Method Statements and as developed under paragraph 26 of the Project Development Output Specification. Changes proposed by the Operator to any of the these plans shall be agreed with and approved by **tie** prior to implementation.

7. STAFF

7.1 At all times during the Service Period, the Operator shall ensure that:

7.1.1 there shall be a sufficient number of staff (including the Key Personnel and all relevant grades of supervisory staff) engaged in the provision of the Project Operations with the level of skill and experience appropriate to the tasks to which such staff are allocated and the standards which are required to be achieved pursuant to this Agreement. To avoid doubt, this obligation shall include ensuring that there are sufficient staff to cover periods of holiday, sickness and other absences and anticipated and actual peaks in demand for the Service;

7.1.2 all staff receive adequate training for their roles in accordance with the Training Plan to ensure the proper performance of this Agreement and compliance with all health and safety rules, procedures and requirements. Such training must be supplemented by continuing development;

7.1.3 The Operator shall, within 60 days of Operating Effective Date, present to **tie** for approval a programme of actions necessary to obtain an appropriate 'business excellence' certification such as 'Investors In People' and shall implement that programme accordingly.

- 7.1.4 The Operator shall have in place and implement appropriate equal opportunities and equality policies and comply with Law regarding employment.
- 7.2 The Operator shall procure that the **tie** Project Manager shall upon reasonable notice have access to all material details in respect of all employees of the Operator and any Operator Party engaged in the performance of the Project Operations including numbers and categories of staff employed to perform the Project Operations and including in respect of each such employee:
- 7.2.1 details of qualifications;
- 7.2.2 details of training undertaken by the employee;
- 7.2.3 disciplinary record; and
- 7.2.4 criminal record (excluding convictions considered to be spent under the Rehabilitation of Offenders Act 1974).
- 7.3 The Operator shall (and shall procure that any Operator Party shall) inform local employment and training organisations and any other employment and/or training organisations operating in Edinburgh of any staff vacancies in connection with the Project Operations before advertising the vacancies.

8. REPORTING

- 8.1 The Operator shall supply the following information to **tie** in the form of Service Quality Reports in accordance with Clause 12 of the Operating Appendix and at other such times and in such form (including Annual Service Reports) as **tie** may reasonably require:-
- 8.1.1 Patronage information and revenue collection data in consolidated format;
- 8.1.2 Operating Revenues and Operating Costs;
- 8.1.3 Fare tables for concessionary fare and multi-modal ticket reimbursement;
- 8.1.4 Reliability and punctuality records;

- 8.1.5 Quality assurance certificates in accordance with the Quality Management Plan;
 - 8.1.6 Company accounts;
 - 8.1.7 Failure information; and
 - 8.1.8 Any information necessary for **tie** to audit the achievement or otherwise of Key Performance Indicators and other Performance Indicators.
- 8.2 **tie** shall also have the right to commission or undertake passenger surveys, including face-to-face interviews, to determine usage and other information.
- 8.3 The Operator shall, where necessary, collate and report on information received from Infrastructure Providers relevant to reporting upon the operation of the System.

9. INFORMATION FOR THE PUBLIC

- 9.1 The Operator shall display information as instructed by **tie** at each Tramstop at all times throughout the Service Period:
- 9.1.1 accurate information relating to the scheduled times and Headways of all Trams in service arriving at and departing from that Tramstop, provided that for any period when the scheduled Headway is less than 10 minutes, the Operator need only provide information in relation to the duration of such Headway;
 - 9.1.2 real time information about Transport Services at all Tramstops including the anticipated time of departure from that Tramstop of the next Tram and the destination of such Trams;
 - 9.1.3 details of the first and last Tram at each such Tramstop for each day; and
 - 9.1.4 accurate information relating to the fares which apply to all journeys from that Tramstop, including that related to modes other than tram.
- 9.2 The Operator shall make paper copies of the Timetable available (free of charge) upon request from members of the public at the locations specified in Schedule 5 (*Information Locations*) to the Operating Appendix and shall display copies of the Timetable at those locations and at any bus or railway station or other passenger

interchange as reasonably requested by **tie** from time to time and subject to the approval of such third parties as may be necessary. If the Operator makes any change to the Timetable (to the extent that such changes are permitted under this Agreement) the Operator shall make copies of the revised Timetable available at the above locations at least 30 days prior to its implementation.

9.3 The Operator shall use its best endeavours (including any steps reasonably requested by **tie** from time to time) to inform potential users of the System on at least 7 prior days' notice if:

9.3.1 it will be unable to operate any Transport Services in accordance with the Timetable; or

9.3.2 it will be providing additional or modified Transport Services in connection with Special Events,

and shall notify potential users of the System at the same time of any revised Timetable or travelling arrangements.

9.4 The Operator shall:

9.4.1 immediately inform **tie** of any material disruption of the Transport Services and any mitigating action taken or to be taken so that this information can be widely circulated; and

9.4.2 at any interchange location, Tram ticket or enquiry office provide information about other public transport operators' services;

9.4.3 when requested by **tie**, provide information about its current operations and future proposals in a form agreed with **tie** to facilitate the provision of public information;

9.5 The Operator shall comply with the Public Liaison and Media Plan and co-operate with **tie** and provide such information and assistance as **tie** may reasonably require from time to time in the provision of information to the travelling public regarding public passenger transport services in Edinburgh.

10. PASSENGER'S CHARTER

10.1 Pursuant to paragraph 29 of the Project Development Output Specification, the Operator shall produce, publish and maintain in force and comply with throughout the Service Period, and update from time to time, a passengers' charter outlining the expectations which passengers may have of the Transport Services on the System and a procedure for passenger complaints, such charter to be subject to the prior written approval of **tie** (such approval not to be unreasonably withheld or delayed).

11. CONTROL CENTRE

11.1 The Operator shall be responsible for ensuring that staffing and consumables are provided on a 24/7 basis for operation of the Control Centre and for interface management between Tram operations and System infrastructure and vehicle availability and maintenance.

11.2 The Operator shall at all times at the Control Centre man a priority telephone facility (with dedicated handsets and direct lines) for external communications to the emergency services, regional electricity control and other key parties.

11.3 The Operator shall automatically and continuously log at the Control Centre Tram movements so as to provide for day-to-day performance monitoring and incident and fault inquiry and also for periodic off-line evaluation of service quality and compliance with this Operating Output Specification.

12. OPERATOR MAINTENANCE RESPONSIBILITIES

12.1 The Operator shall be responsible for implementing the Maintenance Plan.

13. MANAGEMENT OF INFRASTRUCTURE PROVIDER MAINTENANCE

13.1 The Operator shall be responsible for managing the implementation of System Maintenance by the Infrastructure Provider(s).

14. CONSUMABLES, MATERIALS AND EQUIPMENT

14.1 The Operator shall ensure that the goods, equipment, consumables and materials used by it or any Sub-Contractor in connection with the provision of any of the Project Operations (each as a distinct and separate obligation) are:

14.1.1 of satisfactory quality;

14.1.2 maintained and stored in a safe, serviceable and clean condition in accordance with Good Industry Practice;

14.1.3 of the type specified in this Operating Output Specification or as agreed during the development of the Operating Method Statements; and

14.1.4 in compliance with Law and Necessary Consents,

and shall, as soon as reasonably practicable after receiving a request from the **tie** Project Manager, supply to the **tie** Project Manager evidence to demonstrate its compliance with this paragraph 14.1.

14.2 The Operator shall be responsible for and shall procure that sufficient stocks and continuous supply of goods, spares, consumables, equipment and materials are available at all times in order to comply with its obligations under this Agreement.

14.3 The Operator shall not install, keep or use in or on the Site any materials, equipment or apparatus, the installation, keeping or use of which is likely to cause (or in fact causes):

14.3.1 material damage to the System;

14.3.2 environmental contamination or the generation, accumulation or migration of any hazardous substance in an unlawful manner whether within or outside the Site (or the soil, air or water surrounding it); or

14.3.3 health or safety risk to the public or its own staff;

and shall use all reasonable endeavours to ensure (by directions to staff and otherwise) that all consumables, materials, equipment or apparatus in or on the System Land are stored, operated and used in accordance with the Environmental Statement and so as to minimise noise and vibration (through the relevant medium) likely to cause damage, annoyance or disturbance and prevent environmental contamination or the unlawful generation or migration of any hazardous substance.

14.4 Without prejudice to the generality of its obligations under this Agreement, the Operator shall:

14.4.1 procure that all hazardous materials and equipment used or stored on the Site shall be kept in accordance with Good Industry Practice, properly and securely labelled and stored, under appropriate supervision and used only by appropriately trained and competent staff; and

14.4.2 use all practicable and reasonable means to:

14.4.2.1 prevent and counteract the unlawful emission or theft of any hazardous substance;

14.4.2.2 avoid the unlawful discharge into any conducting media serving or passing through, under or over the Site of any hazardous substance;

14.4.2.3 prevent the unlawful generation, accumulation or migration of any hazardous substance at or from the Site; and

14.4.2.4 prevent any environmental claims arising or any circumstances arising likely to result in any environmental claims.

15. REVENUE GENERATION AND PROTECTION

The Operator shall implement a system and/or methods (including in transit inspection) as agreed with ~~tie~~ from time to time to check that passengers are in possession of a valid ticket or tickets for journeys that are taken and to ensure that ticketless or other fraudulent travel is deterred.

15.1 The Operator shall link its fare collection system to the OneTicket scheme currently in operation.

15.2 The Operator shall participate in OneTicket and enter into appropriate contracts with the scheme operator for this purpose. The Operator shall ensure that its fare collection and inspection system provides a link into any regional smartcard system for the provision of transaction and validation data, and receipt of hotlists and action lists amongst other data.

- 15.3 The Operator shall ensure that its smartcard equipment is compatible with OneTicket and acceptable to the operator of any regional smartcard scheme. The Operator shall provide and maintain the equipment necessary for participation in this scheme.
- 15.4 The Operator shall ensure that its smartcard equipment includes auto-top up and the full range of charge to account facilities as may be implemented in the regional scheme to facilitate cashless payment.
- 15.5 The Operator shall ensure that its smartcard system facilitates the validation of all smartcards used for travel either on or off Tram equipment.

16. PARK AND RIDE FACILITIES

16.1 Introduction

*As at the date of this Agreement, there is no firm commitment by **tie** to construct and/or operate any Park-and-Ride facilities as part of the Edinburgh Tram Network. There are no current plans for **tie** to provide such facilities on Lines One and Two, but outline plans for Line Three include for a possible location which is suitable for Park-and-Ride facilities. Even if **tie** should proceed with construction of park-and-ride in this location, it is uncertain how this will be procured or by whom it would be operated. In the event that operation of any Park-and-Ride facility should become a part of this Agreement, the following shall apply:*

16.2 Car Park operation

Measures (such as combined fee parking and travel) shall be introduced by the Operator at the Park and Ride Sites to positively encourage car users to use the System.

16.3 Security

16.3.1 The Operator shall operate a CCTV system covering each Tramstop, facilities provided (including ticket machines, shelters, buildings and other structures) and the whole of the car park and footpaths at all park and ride sites.

16.3.2 The Operator shall ensure that each such park & ride facility and its management regime shall satisfy any requirements for a secured car park scheme as may be set out in the Design Manual.

17. SYSTEM OPERATING ENVIRONMENT AND LANDSCAPE

In carrying out the Project Operations, the Operator shall comply with such parts of the Design Manual as are mandated in this Operating Output Specification and shall give due consideration to the contents of the Design Manual as a whole.

17.1 Environmental Plan and Policy Statement

17.1.1 The Operator shall comply with the Design Manual.

17.1.2 The Operator shall implement the Environmental and Sustainability Management Plan in relation to the Operator Maintenance.

17.1.3 The Environmental and Sustainability Management Plan shall be in accordance with best environmental practice, validated by independent audit and in compliance with ISO 14001 (or equivalent). Following commissioning of the System, the Operator shall carry out an annual audit of such plan.

17.2 Operational Noise and Vibration

The Operator shall take all reasonable steps to minimise operational noise (including from public address systems and audible passenger boarding signals), vibration, emissions or other disturbance during the Term which might result in interference with and/or nuisance to the public and to nearby properties, in particular at night or with respect to buildings and structures with sensitive equipment and ensure that operation of the System complies with the requirements of the Design Manual and the Environmental Statement.

18. SYSTEM QUALITY PROTECTION

The Operator shall be responsible during the Term for continual assessment of System quality protection through the provision of advice to ~~tie~~, in particular on the introduction of technology upgrades and replacement and on the general whole life performance of the System, including Assets used by the Operator.



~~Director~~/Authorised Signatory
Transport Initiatives Edinburgh Limited



~~Director~~/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

This is Schedule 5 referred to in the Operating Appendix annexed to the foregoing Development Partnering and Operating Franchise Agreement between Transport Initiatives Edinburgh Limited and TRANSDEV Edinburgh Tram Limited dated 14 May 2004

SCHEDULE 5

Information Locations

[To be developed by the Operator and tie]



**~~Director~~/Authorised Signatory
Transport Initiatives Edinburgh Limited**



**~~Director~~/Authorised Signatory
TRANSDEV Edinburgh Tram Limited**

SCHEDULE 6

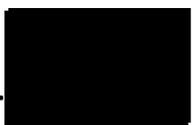
Form of Invoice for Project Phase D

[to be developed during Project Phase A]



.....

~~Director~~/Authorised Signatory
Transport Initiatives Edinburgh Limited



.....

~~Director~~/Authorised Signatory
TRANSDEV Edinburgh Tram Limited



David Humphrey
Project Director
Transdev Edinburgh Tram Limited
Level 2
Saltire Court
20 Castle Terrace
Edinburgh
EH1 2ET

Our Ref: 06.05.06A/MH/JRM

Date: 14th May 2004

Dear Mr Humphrey

**Appointment of Operator for the Development Partnering and Operating Franchise ("DPOF")
Agreement relating to the Edinburgh Tram Network**

**Drafting on Interface Issues between the Infrastructure Provider, any Vehicle and Equipment
Suppliers and the Operator, and Insurances during Project Phases C and D**

Transport Initiatives Edinburgh Limited ("tie")

1. Interface Issues

It is acknowledged by tie that the works to be carried out by any infrastructure provider or providers and the supplier of any vehicles and equipment in relation to the Edinburgh Tram Network will potentially impact on the provision of the Project Development Services and/or the Project Operations by the Operator appointed by tie under the terms of the DPOF Agreement. Given that the procurement strategy and the contractual structure for the procurement of infrastructure, vehicles and equipment is still to be fully determined by tie and approved by CEC, it is agreed by tie and Transdev that it is not currently possible to draft appropriate provisions to address any such potential impacts with any degree of certainty prior to the execution of the DPOF Agreement by tie and the successful CARP candidate.

It is, therefore, agreed by tie and Transdev that during Project Phases A and B, if Transdev is appointed as Operator, appropriate amendments to the DPOF Agreement to address such potential impacts will be agreed by tie and Transdev (both parties acting reasonably and in good faith). In addition to or as an alternative to such amendments, tie and Transdev (both parties acting reasonably and in good faith) may agree to and draft the terms of an appropriate standalone direct agreement or interface agreement with the infrastructure provider or providers and/or the vehicle and equipment suppliers.

The terms of any agreed amendments to the DPOF Agreement and/or any direct agreement/interface agreement will seek to give the Operator appropriate relief to the extent the Operator experiences demonstrable increased costs caused by the works to be carried out by any infrastructure provider or providers and the supplier of any vehicles and equipment and such is covered by liquidated damages within the relevant contract. Relief will not be available to the Operator to the extent the Operator is in breach of the DPOF Agreement or where the Operator has itself contributed to or been responsible for any adverse impact on the Project Development Services and/or Project Operations. Relief in the form of an extension to the Term of the DPOF Agreement will not be available to the Operator.

Transport Initiatives Edinburgh Limited

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web: www.tiedinburgh.co.uk

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Examples of potential impacts on the Operator where relief may be appropriate:

- delays in completion of the construction works, delivery of the trams or supply of any material equipment could lead to payment of additional costs to the Operator and relief from the provisions in Clause 17 of the DPOF Agreement which deal with the reconciliation of costs overruns and savings, no payment for sums in excess of the agreed monthly budget, and no payment above 10% of the Target Costs for Project Phase C2 and relief from the provisions in Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of the Operating Appendix which deal with the reconciliation of cost overruns and savings;
- latent defects in the infrastructure or system installation works could result in payment of additional costs to the Operator;
- defects in the trams or equipment (which is material to the operation of the System) could result in payment of additional costs to the Operator;
- a failure in the interface between any elements of the System could result in payment of additional costs to the Operator; and
- contractor snagging could result in payment of additional costs to the Operator.

In addition to the payment of associated costs to the Operator, and relief from the provisions in Clause 17 of the DPOF Agreement and the provisions in Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) as stated above, other reliefs available to the Operator could include:

- relief from default where breach of the DPOF Agreement by the Operator is caused by failure by any infrastructure provider or providers, or the suppliers of any vehicles and equipment;
- relief from the operation of the KPI Regime where failure in the Operator's performance is caused by failure by any infrastructure provider or providers, or the suppliers of any vehicles and equipment; and
- relief from provision of the Timetable and agreement of an amended Timetable where there is an adverse impact on the Operator carrying out the Project Operations caused by failure by any infrastructure provider or providers, or the suppliers of any vehicles and equipment.

The terms of any agreed amendments to the DPOF Agreement and/or any direct agreement/interface agreement will also seek to facilitate co-operation and consultation between the Operator and any infrastructure provider or providers, and the suppliers of any vehicles and equipment, with regard to the at least the following issues:

- design input;
- input on technical requirements;
- input on safety issues;
- lifecycle issues;
- input on operational issues;
- commissioning issues (including the possible provision of a sub-contract or alternative contractual mechanism to any of the infrastructure providers with regard to the provision of commissioning services by the Operator);
- promotion of partnering;

- development of the Infrastructure and Equipment Output Specification;
- programme;
- intellectual property issues; and
- resolution of related disputes.

For the avoidance of any doubt, although the Operator will have an active involvement with **tie** in the development of the procurement strategy for the appointment of any infrastructure provider or providers, and the suppliers of any vehicles and equipment, the style of procurement, its programme, contractual structure and the identity of tenderers and the selection of the contractor and suppliers will be at the absolute discretion of **tie**.

2. Insurance Issues

In terms of Clause 26.18 of the DPOF Agreement, it has been stated that the Operator will provide advice to **tie** on the selection of appropriate insurances for Project Phases C and D. It is further stated in Clause 26.19 that **tie** will take out or procure that such insurances as **tie** considers to be appropriate in relation to the construction, maintenance and operation of the System are taken out. The Operator will take out any such insurances if required to do so by **tie**.

tie acknowledges that if certain insurances in relation to the construction, maintenance and operation of the system are not taken out and maintained, there may be a potential impact on the provision of the Project Development Services and/or the Project Operations by the Operator. In the event that certain insurances with such a potential impact are not or cannot be taken out, **tie** and the Operator (both acting reasonably and in good faith) will discuss how best to deal with any potential impact and whether amendments to the terms of the DPOF Agreement are required.

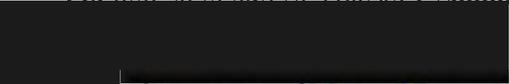
For the avoidance of doubt, the final decision on which insurances will be taken out and maintained during Project Phases C and D will be at **tie**'s absolute discretion.

Yours sincerely


Michael Howell
Chief Executive

We hereby acknowledge and accept the terms of the above letter.

For and on behalf of Transdev Edinburgh Tram Limited


.....
David Humphrey
.....
14 May 2007 Date



(1) tie LIMITED

- and -

(2) TRANSDEV EDINBURGH TRAM LIMITED

MINUTE OF VARIATION

relating to the

EDINBURGH TRAM NETWORK

20 December 2007

MINUTE OF VARIATION

BETWEEN

- (1) **tie LIMITED** a company incorporated in Scotland under number SC230949 and having its registered office at City Chambers, High Street, Edinburgh, EH1 1YJ ("**tie**"); and
- (2) **TRANSDEV EDINBURGH TRAM LIMITED** a company incorporated in Scotland under number SC267598 and having its registered office at Level 2, Saltire Court, 20 Castle Terrace, Edinburgh EH1 2ET (the "**Operator**").

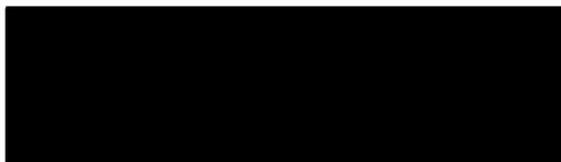
IT IS AGREED AS FOLLOWS:

1. Transport Initiatives Edinburgh Limited (now **tie Limited**) and the Operator executed a Development Partnering and Operating Franchise Agreement on 14 May 2004 (the "**DPOFA**").
2. **tie** and the Operator have agreed to amend the DPOFA and substitute therefor a revised Development Partnering and Operating Franchise Agreement of even date herewith (the "**Revised DPOFA**").
3. **tie** and the Operator have still to agree the matters listed in this Clause 3. **tie** and the Operator have agreed to act reasonably and in good faith in respect of resolving these matters and amending the Revised DPOFA in respect of these matters:
 - 3.1 **Financial Proposals (Schedule 4 to the Revised DPOFA)** – the Financial Proposals shall be adjusted (as appropriate) in accordance with the Revised DPOFA;
 - 3.2 **KPI Regime (Schedule 3 to the Operating Appendix of the Revised DPOFA)** – The KPI Regime described in Schedule 3 to the Operating Appendix is to be agreed by **tie** and the Operator (both acting reasonably and in good faith), based on the principles set out in Attachment A to this Minute of Variation. **tie** and the Operator (both acting reasonably and in good faith) shall agree to a timescale for completing this; and
 - 3.3 **Schedule 5 - Operator Financial Model** – The Operator Financial Model shall be amended to reflect the adjustments agreed between **tie** and the Operator in the Revised DPOFA and to reflect the validation of these numbers for consistency and accuracy.
4. The Revised DPOFA shall be effective from 20 December 2007.
5. This Minute of Variation, any document completed or to be completed in accordance with its provisions and any matter arising from it or any such document shall be governed by and construed in accordance with Scots law.

This is Attachment A referred to in the foregoing Minute of Variation between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

KPI Regime – to be based upon the draft DPOFA KPI Regime Payment Mechanism exchanged between the tie and the Operator on the 19th December 2007 and to be agreed in accordance with the following principles:

- The net effect of the application of the KPI Regime is such that a good operator should be capable of achieving no or de minimus deductions;
- The regime/calibration shall be reviewed after 12 months to adjust if not reflecting these principles (assuming good operator);
- The operator fee at risk of deductions should be a maximum of 10 % as aggregate deductions;
- The regime should not create any perverse incentives to provide good Transport Services;
- The regime shall take into account that Relief Events shall be reflected in the definition of Excusing Causes and Operator Late Trams;
- The KPI Regime shall in defining Excusing Causes and Operator Late Trams address such items as insured or insured events/damage.
- and where relevant Industry Standard Guidance shall be reflected in the Regime



Director/Authorised Signatory
tie Limited



Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited



(1) tie LIMITED

- and -

(2) TRANSDEV EDINBURGH TRAM LIMITED

**DEVELOPMENT PARTNERING AND
OPERATING FRANCHISE
AGREEMENT**

relating to the

EDINBURGH TRAM NETWORK

Revised Version - 20 December 2007

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DEVELOPMENT PARTNERING AND OPERATING FRANCHISE AGREEMENT

BETWEEN

- (1) **tie LIMITED** a company incorporated in Scotland under number SC230949 and having its registered office at City Chambers, High Street, Edinburgh, EH1 1YJ ("**tie**"); and
- (2) **TRANSDEV EDINBURGH TRAM LIMITED** a company incorporated in Scotland under number SC267598 and having its registered office at Level 2, Saltire Court, 20 Castle Terrace, Edinburgh EH1 2ET (the "**Operator**").

WHEREAS

- A **tie** requires project development assistance and services for the subsequent commissioning and operation of a light rapid transit system in Edinburgh, known as the Edinburgh Tram Network .
- B Pursuant to a notice published in the Official Journal of the European Communities on 11 June 2003 with reference 2003/S 110-099040, **tie** invited expressions of interest from appropriately qualified parties for the development and subsequent operation of the System.
- C By a competitive procurement process, conducted in accordance with law, **tie** has selected the Operator to support promotion of the Scottish Private Bills through the Scottish Parliament and to develop (under partnering arrangements with **tie**) and operate the System subject to the terms and conditions of this Agreement applicable to each phase of the Project.
- D It is acknowledged that this Agreement aims to achieve a project vision (the "Project Vision") for the Edinburgh Tram Network. This Project Vision involves the development of a System which will stand favourable comparison with the best in Europe. The quality of the System and the Transport Services provided will be appropriate to Edinburgh's status and role as a European capital city and its city centre's designation as a World Heritage Site. The System will integrate as far as possible with other transport modes to serve the existing fabric of the City of Edinburgh, and promote appropriate development and social inclusion.

It is intended that this goal be achieved in a spirit of partnership, utilising modern design methods and standards.

PART I - PRELIMINARY MATTERS

NOW THEREFORE IT IS AGREED AS FOLLOWS:

1. DEFINITIONS AND INTERPRETATION

- 1.1 Schedule 1 (*Definitions and Interpretation*) to this Agreement shall govern all matters concerning definitions and interpretation.

2. TERM OF AGREEMENT

- 2.1 This Agreement shall come into effect on the Effective Date and shall continue in effect until the earlier of:

2.1.1 the Expiry Date; and

2.1.2 the Termination Date.

- 2.2 tie may serve a notice on the Operator not less than 180 days before the fifteenth anniversary of the Effective Date requiring an extension of the Term of this Agreement for a period of up to five years commencing from the original Expiry Date. If tie serves such a notice under this Clause 2.2, the original Expiry Date shall be extended to such date as may be specified in such notice, and with effect from the day after the fifteenth anniversary of the Effective Date, in consideration of the continued grant to the Operator of the right to operate the Transport Services, the Operator shall continue to perform its obligations under the terms of this Agreement.

- 2.3 tie may serve a notice on the Operator not less than 90 days before the fifteenth anniversary of the Effective Date proposing an extension of the Term of this Agreement, on such terms, and until such date, as tie may specify in such notice. If tie serves such a notice under this Clause 2.3:

2.3.1 tie and the Operator will negotiate in good faith in relation to:

- (a) the terms of this Agreement to apply with effect from the day after the fifteenth anniversary of the Effective Date; and
- (b) the period of the extension to the Term of this Agreement; and

2.3.2 if tie and the Operator agree the matters referred to in Clause 2.3.1 prior to the date when this Agreement would otherwise have expired, the original Expiry

Date shall be extended to such date as may be agreed between tie and the Operator, and with effect from the day after the fifteenth anniversary of the Effective Date, in consideration of the continued grant to the Operator of the right to operate the Transport Services, the Operator shall perform its obligations under the terms of this Agreement as amended pursuant to this Clause 2.3.

- 2.4 The date specified by tie in a notice under Clause 2.2 or the date agreed between the Operator and tie pursuant to Clause 2.3 shall not be less than 30 days after the date which was the original Expiry Date before service of such notice nor more than 20 years after the Effective Date.

PART II - DEVELOPMENT PHASE

3. PROJECT PARTNERING APPROACH

- 3.1 The Parties agree to work in mutual cooperation to fulfil their agreed roles and responsibilities and apply their expertise in relation to the Project to achieve the Project Development Objectives in accordance with the terms of this Agreement.
- 3.2 **tie** and the Operator shall procure that each **tie** Party and each Operator Party (as appropriate) shall work in accordance with the principles set out in Clause 3.1 above.
- 3.3 Subject to Clause 3.4 each Party ("**First Party**") undertakes to co-operate with the other ("**Second Party**") in order to facilitate the performance of this Agreement and in particular will:
- 3.3.1 approach all pricing, estimating and budgeting functions on a collaborative and Open Book Basis;
 - 3.3.2 use reasonable endeavours to avoid unnecessary complaints, disputes and claims against or with the Second Party;
 - 3.3.3 comply with the provisions of the Dispute Resolution Procedure in relation to any such complaints, disputes and claims with or against the Second Party;
 - 3.3.4 not interfere with the rights of the Second Party in performing its obligations under this Agreement, nor in any other way hinder or prevent the Second Party from performing those obligations or from enjoying the benefits of its rights; and
 - 3.3.5 take reasonable steps to mitigate any foreseeable losses and liabilities of the Second Party which are likely to arise out of any failure by the First Party to take any of the steps referred to in Clauses 3.3.2 to 3.3.4 (inclusive).
- 3.4 Nothing in Clause 3.3 shall:
- 3.4.1 interfere with the right of each of the Parties to arrange its affairs in whatever manner it considers fit (in compliance with Law) in order to exercise its rights and perform its obligations under this Agreement (in compliance with Law) and, in the case of **tie**, its duties and functions as a wholly owned subsidiary of CEC; or

3.4.2 relieve either Party from any obligation contained in this Agreement or from any obligation to pay any debt due and payable under this Agreement.

3.5 Senior representatives from the Parties shall meet on a quarterly basis (or as may be otherwise agreed by the Parties) to review:

3.5.1 any matters outwith the Operator's control and not caused by an Operator Default or other breach of the Agreement by the Operator which have adversely affected or may adversely affect:

- (a) the achievement of the Project Development Objectives;
- (b) the performance of the System;
- (c) the Operator's ability to perform its obligations in terms of the Agreement;
- (d) the generation of revenue; and/or
- (e) the maintenance of the Operator's costs within the Capped Fees, the Fixed Costs, the Target Costs for Project Phase C2 or the Target Operating Costs (as appropriate); and

3.5.2 any proposals from either Party to:

- (a) maximise revenue;
- (b) minimise costs; and/or
- (c) optimise the performance of the System.

3.6 Either Party may propose measures to address the matters set out in Clause 3.5.1 and a determination of what measures (if any) should be undertaken by the Operator and/or the Party to address such matters shall be considered in accordance with and subject to each Party's existing rights, obligations and the existing contractual mechanisms under this Agreement including but not restricted to the rights, obligations and contractual mechanisms set out in Clause 22 (*Relief Events*), Clause 23 (*Performance and Financial Adjustments*), Clause 24 (*Fee Changes*), Clause 25 (*Operator Changes*), Clause 26 (*Roads Changes*) and Clause 27 (*Qualifying Change in Law*) of the Operating Appendix.

- 3.7 Any proposal from either Party in terms of Clause 3.5.2 shall be reviewed in accordance with Clause 24 (*tie Changes*) or Clause 25 (*Operator Changes*) of the Operating Appendix (as appropriate).

4. THE PROJECT DEVELOPMENT SERVICES

- 4.1 The Operator shall assist *tie* with the promotion of the Project and the achievement of the Project Development Objectives by providing the Project Development Services during Project Phase A, Project Phase B and Project Phase C in relation to each Line and/or Phase (as appropriate) in accordance with:

4.1.1 Schedule 2 (*Project Development Output Specification*); and

4.1.2 the requirements and directions of *tie* from time to time in accordance with the terms of this Agreement.

- 4.2 The Operator shall (each as a distinct and separate obligation) perform the Project Development Services and its other obligations under this Agreement:

4.2.1 in accordance with the terms of this Agreement;

4.2.2 in accordance with Good Industry Practice from time to time for the activity concerned;

4.2.3 in such manner so as not wilfully to detract from the image and reputation of *tie*, CEC or the Project;

4.2.4 in accordance with all applicable Law governing the provision of the Project Development Services and the element of the Project Development Objectives which those Project Development Services are directed towards achieving;

4.2.5 to the extent applicable to the Project Development Services, in accordance with the Code of Construction Practice and the Code of Maintenance Practice;

4.2.6 in a manner that is not likely to be injurious to persons or property;

4.2.7 in a manner consistent with the Project Development Objectives;

4.2.8 in a timely and efficient manner and in accordance with the Partnering Methodology and Programme, and Project Programme and otherwise as directed by *tie* in accordance with the terms of this Agreement; and

- 4.2.9 using the Key Personnel and such other Project Development Staff as may be approved by **tie** for that type of work; and
- 4.2.10 save as **tie** may have directed to the contrary.
- 4.3 The Operator shall, and shall procure that the Operator Parties shall, participate in such publicity, forums and meetings as are considered by **tie** to be reasonably required to garner support of all sections of the Edinburgh populace for the Project.
- 4.4 The Operator must comply at all times with Law, in particular the provisions of the Health & Safety At Work etc Act 1974 ("HS Act") and the CDM Regulations insofar as they affect the Operator's obligations under this Agreement and without prejudice to the generality of the foregoing:
- 4.4.1 where for the purposes of the Project, the Operator is a "designer" as defined in the CDM Regulations, the Operator shall comply with the obligations of a designer under the CDM Regulations;
- 4.4.2 the Operator shall co-operate fully with the planning supervisor and the principal contractor appointed under the CDM Regulations;
- 4.4.3 the Operator shall allocate adequate resources to enable it to comply with its obligations in this Agreement and the CDM Regulations;
- 4.4.4 the Operator shall co-operate with all other persons involved in the Project as designers to consider the prevention of risk and protection of persons who may be exposed to risks; and
- 4.4.5 the Operator must not by any act or omission do anything that would cause **tie** to be prosecuted under the HS Act.
- 4.5 Notwithstanding the provisions of Clause 4.4 the Parties have agreed that **tie** shall appoint the Competent Person (as such term used in this Clause is defined in ROGS) pursuant to ROGS for the Project. If the Operator is obliged at Law to appoint a Competent Person from commencement of Project Phase D or if the Project Safety Committee or **tie** direct the Operator to appoint a Competent Person then such shall be deemed to be a **tie** Change. If the Operator is obliged at Law or directed as a **tie** Change to appoint a Competent Person then the Operator and **tie** shall seek to agree in good faith (a) whether the Competent Person appointed by **tie** pursuant to Clause 12.12.2 could be appointed or the appointment transferred; (b) the basis for payment

of the Competent Person and whether the obligation to pay the Competent Person could be undertaken by tie in substitution for the Operator. tie shall, acting reasonably, have the right to approve such Competent Person and tie shall act reasonably in declining the approval of such Competent Person in circumstances including the remuneration of such Competent Person or a lack of ability to assign the proposed contract with such Competent Person to tie or other appropriate party (in the case of an appointment of a Competent Person by the Operator).

5. PROJECT TEAM AND KEY PERSONNEL

- 5.1 The Operator and tie shall agree from time to time the structure of the joint team (comprising representatives of tie, the tie Advisers and the Project Development Staff) which shall be the forum for partnering, liaison, co-operation and coordination of the Project.
- 5.2 The Operator shall ensure that:
- 5.2.1 the Key Personnel shall be available for meetings in Edinburgh at such times as tie may, in its sole discretion, direct; and
- 5.2.2 in addition to the Key Personnel, there shall at all times be a sufficient number of staff (including all relevant grades of supervisory staff) available for the provision of the Project Development Services in accordance with the Project Development Output Specification. This obligation shall include ensuring that there are sufficient Project Development Staff to cover periods of holiday, sickness and other absences and anticipated and actual peaks in servicing tie's requirements for the Project Development Services.
- 5.3 The Operator shall locate Project Development Staff at such locations as the Operator considers convenient for the Project, provided that:
- 5.3.1 the Operator acknowledges that pursuant to Clause 16 (*Project Development Costs*), it will not be entitled to any reimbursement from tie during Project Phases A, B, C and D in excess of any sum included in the Core Staff Fixed Rates and/or the Non-Core Staff Fixed Rates of the Project in relation to the travel of any person to or from Edinburgh and/or within the United Kingdom, or for the accommodation or subsistence of any person within the United Kingdom and/or elsewhere but the Operator shall be entitled to

reimbursement from tie in relation to travel costs outwith the United Kingdom;

5.3.2 pursuant to Clause 5.2.1, tie will require the Operator to make the Key Personnel available for meetings in Edinburgh at such times as tie may, in its sole discretion, direct; and

5.3.3 pursuant to Clause 6.8, the Operator Project Manager shall be required to be located in Edinburgh during Project Phase C2 and Project Phase D.

5.4 The Operator shall ensure that the Project Development Staff referred to in Clause 5.2.2 shall:

5.4.1 have the level of skill and experience appropriate (i) to undertake the tasks and Project Development Objectives to which such staff are allocated and (ii) the standards to be achieved pursuant to this Agreement; and

5.4.2 receive such training and supervision as is necessary to ensure the proper performance of this Agreement and compliance with all health and safety rules, procedures and requirements. All training shall be in accordance with the Recruitment and Training Plan once that plan has been agreed between tie and the Operator pursuant to the Project Development Output Specification.

5.5 The Operator shall ensure that the Key Personnel have day to day responsibility for the implementation of the Project Development Services and that each of them performs the role in relation to the Project specified against his or her name in the Project Development and Operating Costs.

5.6 The Operator shall ensure that:

5.6.1 there are no changes to the Key Personnel without tie's prior written consent (such consent not to be unreasonably withheld or delayed in the case of a change necessitated by sickness or reasonable annual, maternity, paternity or compassionate leave or where one of the Key Personnel's employment ceases) and that any replacement persons shall be of at least equivalent status and ability to the person whom they replace; and

5.6.2 all other Project Development Staff shall be available in accordance with the requirements set out in the Partnering Methodology and Programme.

- 5.7 The Operator shall use all reasonable endeavours to ensure the continuity of the personnel assigned to perform the Project Development Services and shall select Key Personnel having careful regard to those persons' existing work load and other planned commitments.
- 5.8 If tie gives the Operator notice that any member of the Project Development Staff should be removed from involvement in the Project Development Services, the Operator shall immediately comply with such notice.
- 5.9 The Operator shall (and shall procure that the Operator Parties shall) comply with all relevant statutory health and safety requirements in respect of Project Development Staff, and any rules, regulations and any safety and security instructions from the tie Project Manager.
- 5.10 During Project Phases A, B and C1, tie shall provide office accommodation for the Project Development Staff within tie's own offices. If such accommodation is not available within tie's own offices, tie shall require the Operator to find alternative accommodation as soon as reasonably practicable and such requirement shall be considered in accordance with Clause 24 (*tie Changes*) and Clause 23 (*Performance and Financial Adjustments*) of the Operating Appendix.

6. MANAGEMENT OF THE PROJECT

- 6.1 tie shall appoint a project manager ("**tie Project Manager**") by notice in writing to the Operator who (subject to Clause 6.12) will:
- 6.1.1 be responsible for managing the day to day conduct of the Project during Project Phases A, B, C and D;
- 6.1.2 be responsible for the day to day direction of the tasks to be performed by the Operator during Project Phases A, B, C and D;
- 6.1.3 exercise the functions and powers of tie in relation to the Project which are identified in this Agreement as functions or powers to be carried out by him/her (including during Project Phase D);
- 6.1.4 exercise such other functions and powers of tie under this Agreement as tie may notify to the Operator from time to time (including during Project Phase D); and

6.1.5 be the primary point of contact for the Operator with **tie** (including during Project Phase D);

and the Operator shall observe, and shall procure that the Project Development Staff observe, all reasonable directions of the **tie** Project Manager in relation to the Project.

6.2 The **tie** Project Manager shall be entitled at any time, by notice in writing to the Operator, to authorise any other persons to exercise the functions and powers of **tie** delegated to him pursuant to Clause 6.1, either generally or specifically. Until further notice from **tie**, any act of any such person shall, for the purposes of this Agreement, constitute an act of the **tie** Project Manager and all references to the "**tie** Project Manager" in this Agreement (apart from this Clause 6) shall be taken as references to such person so far as they concern matters within the scope of such person's authority.

6.3 **tie** may by notice in writing to the Operator change the identity of the **tie** Project Manager. **tie** shall (as far as reasonably practicable) consult with the Operator prior to the appointment of any replacement for the **tie** Project Manager, taking account of the need for liaison and continuity in respect of the Project. Such change shall have effect on the date specified in the written notice.

6.4 During any period when a **tie** Project Manager has not been appointed (or when the **tie** Project Manager is unable through illness, incapacity or any other reason whatsoever to carry out or exercise his functions under this Agreement), **tie** shall carry out the functions which would otherwise be performed by the **tie** Project Manager.

6.5 No decision, act or omission of **tie**, the **tie** Project Manager or any **tie** Party shall, except as otherwise expressly provided in this Agreement:

6.5.1 in any way relieve or absolve the Operator from, modify, or act as a waiver or personal bar of, any liability, responsibility, obligation or duty under this Agreement;

6.5.2 in the absence of an express written instruction or authorisation issued by **tie** under Clause 24 (*tie* Changes) of the Operating Appendix, constitute or authorise a **tie** Change; or

6.5.3 be construed as restricting or binding **tie** in any way save with regard to the specific project matters to which it relates.

- 6.6 Except as previously notified in writing before such act or omission by **tie** to the Operator, the Operator and the Operator Project Manager shall be entitled to treat any act or omission of the **tie** Project Manager which is authorised by this Agreement as being expressly authorised by **tie** and the Operator and the Operator Project Manager shall not be required to determine whether an express authority has in fact been given.
- 6.7 The Operator shall appoint a project manager ("**Operator Project Manager**") who shall:
- 6.7.1 act as the principal point of contact for **tie**, the **tie** Project Manager and the **tie** Advisers in relation to all matters related to the Project;
 - 6.7.2 have full authority to act on behalf of the Operator for all purposes of this Agreement;
 - 6.7.3 manage and co-ordinate the provision of the Project Development Services by the Project Development Staff and the integration of provision of the Project Development Services with the tasks being performed by **tie's** internal team and the **tie** Advisers; and
 - 6.7.4 liaise with the **tie** Project Manager in relation to the matters referred to in Clause 6.12 including, without limitation, the scope of the Project Development Services to be carried out from time to time.
- 6.8 During Project Phase C2 and Project Phase D, the Operator Project Manager shall be:
- 6.8.1 located in Edinburgh; and
 - 6.8.2 engaged on the Project full time.
- 6.9 Except as previously notified in writing before such act or omission by the Operator to **tie**, **tie** and the **tie** Project Manager shall be entitled to treat any act or omission of the Operator Project Manager in connection with this Agreement as being expressly authorised by the Operator, and **tie** and the **tie** Project Manager shall not be required to determine whether any express authority has in fact been given.
- 6.10 The Operator may by written notice to **tie** change the identity of the Operator Project Manager. Where the Operator wishes to do so it shall by written notice to **tie** propose a substitute for approval, taking account of the need for liaison and continuity in respect of the Project and the Project Phase when the change is proposed. Such

appointment shall be subject to the prior written approval of **tie** (not to be unreasonably withheld or delayed).

6.11 The Operator shall also nominate a deputy to the Operator Project Manager. During any period when the Operator Project Manager is unable through illness, incapacity or any other reason whatsoever to carry out or exercise his functions under this Agreement, such deputy shall carry out the functions which would otherwise be performed by the Operator Project Manager.

6.12 Major decisions in relation to the Project Development Objectives during all Project Phases, will be taken by **tie**, such decisions to include:

6.12.1 the terms on which all Necessary Consents are applied for and the manner in which any proceedings necessary to obtain such Necessary Consents are conducted (including the terms of all applications and notices and evidence to be presented in support of such applications and of any commitments and undertakings to be given in the course of such proceedings), always provided that this Clause 6.12.1 shall not apply to any Operator Necessary Consent. In relation to the Operator Necessary Consents, the Operator shall be solely responsible for determining the terms on which such Operator Necessary Consents are applied for and the manner in which any proceedings necessary to obtain such Operator Necessary Consents are conducted;

6.12.2 the terms on which public sector funding and local contributions for the Project (or any part of it) are applied for or agreed and the manner in which any proceedings necessary to obtain such funding are conducted;

6.12.3 the terms offered, or to be agreed with regard to all third party agreements, commitments and undertakings proposed to be entered into in respect of any Phase before the Service Commencement Date in respect of the Phase to which such agreement or undertaking relates;

6.12.4 the land or rights over land to be acquired for the purposes of the Project (other than offices or temporary work sites required by the Operator) and the manner and terms of such acquisition;

6.12.5 any application or representation or agreement or arrangement with any public authority, roads authority or highway authority, including CEC,

and to the Operator's immediate parent company and TRANSDEV plc the reference in Clause 26.1.8 to audited accounts shall refer to the latest set of the audited accounts issued by the Operator, the Operator's immediate parent company and TRANSDEV plc) at the commencement of Project Phase C2 for each Phase or Network Expansion.

26.5 **tie** does not give any warranty or undertaking as to the completeness, currency, accuracy or fitness for any purpose of any of the Background Information and, subject to the express provisions of this Agreement, neither **tie**, the **tie** Advisers nor any of its or their employees shall be liable to the Operator in contract, delict (including breach of statutory duty), or otherwise as a result of:

26.5.1 any inaccuracy, omission, unfitness for any purpose or inadequacy of any kind whatsoever in the Background Information; nor

26.5.2 any failure to make available to the Operator any materials, documents, drawings, plans or other information relating to the Project;

provided that nothing in this Clause 26.5 shall exclude any liability in respect of any statements made or information provided fraudulently.

27. INSURANCES

Required Insurances and Joint Names Insurance

27.1 The Operator shall, at its own cost, procure that each of the Required Insurances is taken out and comes into effect on the earlier of:

27.1.1 the relevant date specified in each "Period of Insurance" set out in Schedule 10 (*Insurances*); and

27.1.2 the date on which the Operator is first required by Law to have in place such insurance in connection with the Project Development Services and the Project Operations,

and shall maintain the Required Insurances in full force and effect until the later of:

27.1.3 the relevant date specified in each "Period of Insurance" set out in Schedule 10 (*Insurances*); and

- 27.1.4 the last date on which the Operator is required by Law to have in place such insurance in connection with the Project Development Services and the Project Operations.
- 27.2 The Operator shall procure that all Required Insurances shall:
- 27.2.1 be maintained in accordance with Schedule 10 (*Insurances*); and
 - 27.2.2 be placed at all times with insurers authorised to carry out insurance business within the European Union (unless there is a legal requirement for any of the Required Insurances to be placed with insurers authorised to carry out insurance business in the United Kingdom) and confirmed in writing as acceptable by tie (such written acceptance not to be unreasonably withheld or delayed).
- 27.3 tie may ask the Operator to take out and maintain any insurance from time to time in the joint names of tie, the Operator and, if required, any other party agreed between the Parties to become a joint named insured (the "Joint Names Insurance") as a tie Change. If Joint Names Insurance is required, the terms of this Clause 27 including the provisions which are stated to apply to the "Required Insurances" shall apply with any appropriate adjustment to be agreed between the Parties as a tie Change. The Operator shall procure that any Joint Names Insurance shall:
- 27.3.1 contain a provision that tie, and/or any other party reasonably requested by tie, is named as a co-insured party;
 - 27.3.2 provide that any Joint Names Insurance shall continue in effect and unaltered for the benefit of the insured parties for at least 90 days after written notice by registered mail of any cancellation (including non-renewal), change, modification or lapse for any reason;
 - 27.3.3 contain a provision that requires the insurer to send copies of all notices of cancellation or alteration or suspension or any other notices given under or in relation to the policy to tie promptly upon receiving any notices of cancellation or alteration or suspension or any other notices;
 - 27.3.4 contain a provision that a notice of a claim given to the insurer by tie or the Operator under the policy shall, in the absence of manifest error, be accepted by the insurer as valid notification of a claim in respect of the interests of all insured parties;

- 27.3.5 contain a provision to the effect (on the basis of non-vitiation/severability) that all the provisions of any Joint Names Insurance shall operate as if there were a separate policy in effect (save in respect of the sums insured, limits of liability and excesses/deductibles which shall be at the levels stated) for each named insured and that non-compliance with any policy term, condition or warranty and/or misrepresentation of material information by the Operator or any other co-insured will not affect the rights and/or interests of tie under any policies effected as Joint Names Insurance; and
- 27.3.6 ensure that, in so far as within the control of the Operator, the Joint Names Insurances are primary and shall not be brought into contribution with any other policy or policies effected by or on behalf of any of the insured parties.
- 27.4 The Operator shall ensure that each of its insurance brokers (who shall be approved by tie, such approval not to be unreasonably withheld or delayed) gives tie as soon as reasonably practicable after any policy of Required Insurance is taken out, replaced or renewed, a letter of undertaking in the form set out in Part 2 of Schedule 10 (*Insurances*).
- 27.5 The Operator shall:
- 27.5.1 procure that the employer's liability insurance¹ and the third party liability insurance which is to be maintained by the Operator in accordance with Schedule 10 (*Insurances*) contains a waiver of subrogation against tie as required in Schedule 10 (*Insurances*) save in respect of fraud or deliberate non-disclosure; and
- 27.5.2 where the Operator is obliged to effect any Required Insurances, not bring any claim or action against tie (or any tie Party) in respect of any loss or damage in circumstances where and to the extent that the Operator could recover such loss or damage under such insurance (whether or not such insurance has in fact been effected or, if effected, has been vitiated as a result of any act or omission of the Operator (or any Operator Party), including but not limited to non-disclosure or under-insurance in accordance with the level stated in Schedule 10 (*Insurances*), provided that, to avoid doubt, this Clause 27.5.2 shall not by itself prevent the Operator from claiming against tie (or any tie

¹ To be confirmed by TETL's brokers.

Party) in respect of a breach of this Agreement by tie or any tie Party for any loss or damage not covered because of the level of deductibles under such insurance permitted by this Agreement or to the extent such loss or damage exceeds the greater of the insurance placed or the maximum of such insurance required under Schedule 10 (*Insurances*).

- 27.6 The Operator shall not take any action or fail to take any reasonable action or (insofar as it is reasonably within its power) permit or allow others to take or fail to take any action (including failure to disclose any fact) as a result of which any of the Required Insurances may be rendered void, voidable, unenforceable or suspended or impaired in whole or in part or which may otherwise render any sum paid out under any relevant policy repayable in whole or in part.
- 27.7 Not less than 30 days prior to the expiry or amendment of any of the Required Insurances, the Operator shall submit to tie a request for approval from tie of the insurer and the principal terms and conditions of such insurance policy in respect of any material change or revision to such terms and conditions or change in identity of such insurer, such approval not to be unreasonably withheld or delayed.
- 27.8 The Operator shall supply tie with copies of every policy document, insurance certificate and renewal certificate relating to any Joint Names Insurance (or such other evidence of insurances as may be reasonably required by tie) and documentary evidence such as insurance certificates to the effect that the Required Insurances (other than any Joint Names Insurance) have been taken out and are being maintained as soon as it is available but in any event no later than 7 days (in respect of certificates) and 60 days (in respect of policies) after the inception of the relevant policies, together with evidence of payment of the premiums and any periodic renewal certificates. If the Operator defaults in insuring or continuing to maintain the Required Insurances subject to Clause 28 (*Uninsurable Risks*), tie may insure against any risk in respect of which such default has occurred and recover any premiums from the Operator as a debt immediately due and payable.
- 27.9 The supply to tie of any insurance policy or insurance certificate or renewal certificate or other evidence of compliance with this Clause 27 (*Insurances*) shall not imply, or be taken as, acceptance by tie that:

27.9.1 the extent of insurance cover is sufficient and its terms are satisfactory; or

- 27.9.2 in respect of any risks not insured against, insurable interests or parties not insured, an acceptance by tie that the same were Uninsurable.
- 27.10 Neither failure to comply nor full compliance with the provisions of this Clause 27 (*Insurances*) and Clause 28 (*Uninsurable Risks*) shall relieve the Operator of its liabilities and obligations under this Agreement.
- 27.11 The Operator shall apply any proceeds of any of the Required Insurances maintained in accordance with Schedule 10 (*Insurances*) in satisfaction of the claim, demand, proceeding or liability in respect of which such proceeds are payable (unless already paid direct to the third party or employee by the insurer).
- 27.12 The Operator shall inform tie in writing as soon as reasonably practicable after it receives a claim or becomes aware of the occurrence of any event that may give rise to a claim under any Joint Names Insurance and will ensure that tie is kept fully informed of subsequent action and developments concerning the claim; such written information shall not be required in relation to any claim of less than £50,000 (Indexed). The Operator shall take such steps as are necessary or appropriate to ensure that each Operator Party, in respect of any event or claim of a like nature arising out of or relating to the operation or responsibility of the Operator Party, takes in relation to the Operator like action to that which the Operator is required to take under this Clause 27.12 in relation to tie, and shall inform tie promptly of information thus received from any Operator Party.
- 27.13 Notwithstanding, and without prejudice to, any other provision hereof, the Operator undertakes to the extent it has the right to do so under the relevant policy that it will not (and that each of the Operator Parties to the extent each respectively has the right to do so under the relevant policy will not) settle any Joint Names Insurance claim above £50,000 (Indexed) without the prior written agreement of tie (such agreement not to be unreasonably withheld or delayed).
- 27.14 The Operator undertakes with tie in relation to the Required Insurances:
- 27.14.1 to comply with all requirements of the insurers; and
- 27.14.2 to give notice to tie immediately upon the happening of any event which will adversely affect any policy of insurance effected in accordance with this Clause 27 (*Insurances*), including the downgrading of the credit rating to

BBB by Standard & Poors of any party providing any of the Required Insurances.

- 27.15 In the event that the Operator considers that the requirements of Clause 27.14.1 may conflict with any other Clause herein, the Operator shall immediately notify **tie** in writing.
- 27.16 The Required Insurances shall be reviewed before the commencement of a new Project Phase, and/or on an annual basis and/or as otherwise agreed between **tie** and the Operator by **tie**, with the support and assistance of the Operator, to ensure that the Required Insurances continue to offer value for money to **tie**. **tie** retains the right to require the Operator to amend the Required Insurances throughout the Term as it may reasonably require to reflect changes in the circumstances surrounding this Agreement or to effect changes which will offer better value for money to **tie**. Any such amendment shall be considered in accordance with Clause 24 (*tie Changes*) and Clause 23 (*Performance and Financial Adjustments*) of the Operating Appendix.
- 27.17 Following expiry or termination of this Agreement, **tie** shall continue to pay the Operator the agreed amount for any Required Insurances which the Operator is required in terms of this Agreement to maintain beyond the date of expiry or termination of this Agreement. **tie** shall notify the Operator if **tie** does not want the Operator to continue maintaining any such Required Insurances following expiry or termination of this Agreement.
- 27.18 The Operator shall be liable for claims made under the third party liability insurance to be taken out as a Joint Names Insurance in respect of the Project Operations during Project Phase D, which are less than the agreed level of deductibles as stated in section 2 of Part 3 of Schedule 10 (*Insurances*) relative to such insurance and subject to the Base Case Assumptions.

OCIP Insurances

- 27.19 **tie** shall (at **tie's** cost) take out and maintain or procure that the OCIP Insurances in relation to the construction, maintenance and operation of the System are taken out and maintained during Project Phase C and Project Phase D all in accordance with the terms and provisions of Part 3 of Schedule 10 (*Insurances*). The Operator acknowledges as at the DPOFA Variation Date that **tie** has placed the OCIP

Insurances for the construction phase of the Edinburgh Tram Network on 23 July 2007. Notwithstanding the dates/periods referred to in Part 3 of Schedule 10 (*Insurances*), the obligation to maintain/extend/renew the OCIP Insurances during the "Construction Phase" as described in Part 3 of Schedule 10 (*Insurances*) shall subsist until the Service Commencement Date and thereafter the obligation to maintain/extend/renew the OCIP Insurances during the "Operational Phase" as described in Part 3 of Schedule 10 (*Insurances*) shall subsist from the Service Commencement Date. **tie** shall provide confirmation sufficiently far in advance to the Operator that the OCIP Insurances during the "Operational Phase" as described in Part 3 of Schedule 10 (*Insurances*) shall be in place in accordance with this Clause 27.19.

27.20 **tie** shall procure that the Operator is included as an insured in the relevant sections of the OCIP Insurances as described in part 3 of Schedule 10 (*Insurances*) as Operator or Transdev Edinburgh Tram Limited.

27.21 The Operator shall, having regard to the knowledge skill and care of a competent operator, if required by **tie**, disclose all material facts, assist **tie** with the completion of proposal forms and provide any further relevant information which is required by insurers in relation to OCIP Insurances, any Joint Names Insurance and any insurances to be taken out by **tie**. From time to time, the Required Insurances and any Joint Names Insurances shall be reviewed by the Operator with the skill and care of an Operator and by **tie** in order to ensure these policies are fully compatible with the OCIP Insurances, any Joint Names Insurances and any insurances to be taken out by **tie** in relation to Edinburgh Tram Network. Where the Operator or **tie** identifies either a scope of cover or premium level issue regarding interaction or overlap of coverage, the Operator or **tie** shall report this to the other in order that **tie** can assess how best to place insurance.

27.22 **tie** shall procure that the OCIP Insurances shall:

27.22.1 provide that each of the OCIP Insurances shall continue in effect and unaltered for the benefit of the insured parties for at least 30 days after written notice by registered mail of any cancellation (including non-renewal), change, modification or lapse for any reason;

27.22.2 contain a provision to the effect (on the basis of non-vitiation/severability) that all the provisions of the OCIP Insurances shall operate as if there were a separate policy in effect (save in respect of the sums insured, limits of liability and excesses/deductibles which shall be at the levels stated) for each named

insured and that non-compliance with any policy term, condition or warranty and/or misrepresentation of material information by **tie** or any other co-insured will not affect the rights and/or interests of the Operator under any policies effected as OCIP Insurances;

27.22.3 ensure that, in so far as within the control of **tie**, the OCIP Insurances are primary and shall not be brought into contribution with any other policy or policies effected by or on behalf of any of the insured parties; and

27.22.4 contain a provision that a notice of a claim given to the insurer by **tie** or the Operator under the policy shall, in the absence of manifest error, be accepted by the insurer as valid notification of a claim in respect of the interests of the Operator.

27.23 **tie** shall supply the Operator with copies of every policy document, insurance certificate and renewal certificate relating to each of the OCIP Insurances (or such other evidence of insurances as may be reasonably required by the Operator) as soon as any such copies are available but in any event no later than 14 days (in respect of certificates) and 60 days (in respect of policies) after the inception of the relevant policies, together with evidence of payment of the premiums and any periodic renewal certificates and any notices of cancellation or alteration or suspension or any other notices given under or in relation to the OCIP Insurances which are relevant to the Project Development Services or the Project Operations or to the Operator, shall be supplied by **tie** to the Operator as soon as reasonably practicable. In any event such evidence in respect of each of the OCIP Insurances as may be required to enable the Operator to commence Transport Operations or to commence other activities for which evidence of such insurance being in place is a prerequisite under Law shall be supplied by **tie** to the Operator in advance of such commencement.

27.24 **tie** undertakes with the Operator in relation to the OCIP Insurances:

27.24.1 to comply with all requirements of the insurers; and

27.24.2 to give notice to the Operator as soon as **tie** becomes aware of the occurrence of any event which will adversely affect the OCIP Insurances as it relates to the Project Development Services or the Project Operations or to the Operator, including the downgrading of the credit rating to BBB or lower by Standard & Poors of any party providing any of the OCIP Insurances.

- 27.25 Any change, renewal or extension to the OCIP Insurances (which shall include the requirements of the insurers with whom the OCIP Insurances are placed) or failure or inability to maintain, renew or extend in accordance with this Clause 27 (*Insurances*) which has an effect on the interests of the Operator shall be deemed to be a *tie* Change and considered in accordance with Clause 24 (*tie Changes*) and Clause 23 (*Performance and Financial Adjustments*) of the Operating Appendix.
- 27.26 Throughout the Term, the Operator agrees to comply with the requirements of the insurers with whom the OCIP Insurances are placed in so far as such requirements have been notified by *tie* to the Operator in sufficient time to enable compliance.
- 27.27 The Operator agrees that it will intimate to *tie* any act, occurrence or failure which (a) relates to the interests of the Operator or (b) any claim notified by a third party to the Operator, and which:
- 27.27.1 leads to any claim made or notice of potential claim being made under the OCIP Insurances; or
- 27.27.2 renders any of the OCIP Insurances void, voidable, unenforceable, suspended or impaired in whole or in part or which may otherwise render any sum paid out under any relevant policy repayable in whole or in part.
- 27.28 *tie* agrees that it will intimate to the Operator any act, occurrence or failure which relates to the interests of the Operator, and which:
- 27.28.1 leads to any claim made or notice of potential claim being made under the OCIP Insurances; or
- 27.28.2 renders any of the OCIP Insurances void, voidable, unenforceable, suspended or impaired in whole or in part or which may otherwise render any sum paid out under any relevant policy repayable in whole or in part.
- 27.29 The Operator shall not take any action or fail to take any reasonable action or (insofar as it is reasonably within its power) permit or allow others to take or fail to take any action (in either case including failure to disclose any material fact) as a result of which any of the OCIP Insurances may be rendered void, voidable, unenforceable, suspended or impaired in whole or in part or which may otherwise render any sum paid out under any relevant policy repayable in whole or in part.

- 27.30 **tie** shall not take any action or fail to take any reasonable action or (insofar as it is reasonably within its power) permit or allow others to take or fail to take any action (in either case including failure to disclose any material fact) as a result of which any of the OCIP Insurances may be rendered void, voidable, unenforceable, suspended or impaired in whole or in part or which may otherwise render any sum paid out under any relevant policy repayable in whole or in part.
- 27.31 The Operator shall bear all excesses and deductibles payable in respect of claims made under the OCIP Insurances subject to the level and basis of the excesses and deductibles stated in Part 3 of Schedule 10 (*Insurances*), to the extent that such claim is due to the act or omission of the Operator or where the Operator or any Operator Party is otherwise liable for such claim in terms of this Agreement.
- 27.32 Without prejudice to any other provision of this Agreement, the Operator undertakes, to the extent it has the right to do so under the relevant policy, that it will not (and that each of the Operator Parties to the extent each respectively has the right to do so under the relevant policy will not) settle any OCIP Insurance claim above £50,000 (as Indexed) without the prior written agreement of **tie** (such agreement not to be unreasonably withheld or delayed).
- 27.33 **tie** shall, where **tie** is obliged to effect any OCIP Insurances, not bring any claim or action against the Operator (or any Operator Party) in respect of any Indemnified Liabilities in circumstances where and to the extent that **tie** could recover such Indemnified Liabilities under such OCIP Insurances (whether or not such OCIP Insurances have in fact been effected or, if effected, have been vitiated as a result of any act or omission of **tie** (or any **tie** Party), including but not limited to non-disclosure or under-insurance in accordance with the level stated in Schedule 10 (*Insurances*), provided that, to avoid doubt, this Clause 27.33 shall not by itself prevent **tie** from claiming any Indemnified Liabilities from the Operator (or any Operator Party) in respect of:
- 27.33.1 a breach of this Agreement by the Operator or any Operator Party for any Indemnified Liabilities not covered because of the level of deductibles set out in Part 3 of Schedule 10 (*Insurances*) under such OCIP Insurances or to the extent such Indemnified Liabilities exceed the greater of the OCIP Insurances placed or the maximum of such OCIP Insurances in each case required under Schedule 10 (*Insurances*); or

27.33.2 where the Indemnified Liabilities are not recoverable under the OCIP Insurances due to a breach by the Operator of this Clause 27 (*Insurances*).

27.34 **tie** shall apply any proceeds of any OCIP Insurances maintained in accordance with Part 3 of Schedule 10 (*Insurances*) in satisfaction of the claim, demand, proceeding or liability in respect of which such proceeds are payable (unless already paid direct to the third party or employee by the insurer).

27.35 Notwithstanding, and without prejudice to, any other provision hereof, **tie** undertakes to the extent it has the right to do so under the relevant policy that it will not (and that each of the **tie** Parties to the extent each respectively has the right to do so under the relevant policy will not) settle any OCIP Insurance claim above £50,000 (Indexed) in so far as any such settlement relates to:

27.35.1 the legitimate interests of the Operator; or

27.35.2 matters for which the Operator has any liability;

without the prior written agreement of the Operator acting reasonably and in good faith.

28. UNINSURABLE RISKS

28.1 Nothing in this Agreement shall oblige the Operator to take out insurance in respect of a risk or matter which is Uninsurable.

28.2 Immediately after the Operator becomes aware that a Compliance Critical Risk is Uninsurable, then:

28.2.1 the Operator shall notify **tie**; and

28.2.2 if both Parties agree or it is determined in accordance with the Dispute Resolution Procedure (on the referral of either Party) that the risk or matter is Uninsurable and that its being Uninsurable is not caused by the actions or omissions of the Operator or an Operator Party;

then the Parties shall meet to discuss the means by which the risk or matter should be managed, mitigated or controlled (including considering the use of self-insurance by either Party and/or insurance through a captive insurer in any jurisdiction).

28.3 At the meeting referred in Clause 28.2, either Party may propose:

- 28.3.1 any necessary change in the Project Development Services or Project Operations;
- 28.3.2 whether any amendments are required to the terms of the Agreement including any required adjustment to the Capped Fees, Fixed Costs (excluding the Category Five Fixed Costs), Target Costs for Project Phase C2, Target Operating Costs or Target Patronage; and
- 28.3.3 whether relief from compliance with obligations is required, as a result of the risk or matter becoming Uninsurable.
- 28.4 If the requirements of Clause 28.2 are satisfied but the Parties cannot agree as to how to manage, mitigate or control the risk or matter then, for the period during which the relevant Compliance Critical Risk is Uninsurable:
- 28.4.1 to the extent that the Operator is prevented or otherwise hindered from performing the Project Development Services or the Project Operations in the manner required by this Agreement:
- 28.4.1.1 the Operator shall be relieved from such performance and shall not be liable to tie for failure so to perform provided it continues to perform the remainder of the Project Development Services or the Project Operations as best as it is reasonably able to; and
- 28.4.1.2 during Project Phase C2 and Project Phase D, the Target Costs for Project Phase C2 or Target Operating Costs or the Fixed Costs (excluding the Category Five Fixed Costs) as the case may be shall be reduced by an amount which reflects the net cost savings made as a result of restricted Project Development Services or restricted Project Operations and Target Patronage shall be adjusted to reflect the impact of restricted Project Operations on Patronage Revenue. If the Operator determines not to reduce its operating establishment or cost base to reflect restricted Project Operations but to maintain this at the level necessary for normal Project Operations, tie shall not be obliged to pay the marginal Fixed Costs or Operating Costs relating to such establishment or cost base.

28.4.2 **tie** shall have the option to be exercised by notice in writing at any time in the period during which such Compliance Critical Risk is Uninsurable (provided that **tie** shall, if such period continues for more than 180 days, be deemed to have exercised such option on the 181st day) to terminate this Agreement forthwith.

29. INDEMNITY

29.1 The Operator shall, subject to Clause 29.2, indemnify **tie** and keep **tie** indemnified on demand at all times from and against all Indemnified Liabilities (including any claims made against **tie** under the IDA by the Infrastructure Provider) which arise out of, or in consequence of, or in connection with any breach of this Agreement by the Operator, any non-performance or delay in performance of the Operator's obligations under this Agreement or any breach of statutory duty by the Operator (or any Operator Party) save to the extent the Operator is to be excused or given relief in respect of such breach and non-performance or delay under the express provisions of this Agreement. The Operator was aware when the Operator entered into this Agreement that **tie** would enter into the IDA in respect of the Infrastructure and Equipment.

29.2 The Operator's liability to indemnify **tie** under Clause 29.1 does not extend to any Indemnified Liabilities to the extent that:

29.2.1 they are caused by the negligent acts or negligent omissions of **tie** or any **tie** Party; or

29.2.2 they are caused by the breach by **tie** of its obligations under this Agreement (save where and to the extent such breach occurs by reason of the Operator's or any Operator Party's breach or negligence); or

29.2.3 they arise as a direct result of the Operator acting on specific written instructions issued by **tie** or the **tie** Project Manager (excluding any instruction to comply with the terms of this Agreement (or any part of it)) provided that, prior to acting on such instruction, the Operator:

29.2.3.1 notifies the **tie** Project Manager of the risk of the relevant Indemnified Liability occurring as a result of acting on the instruction; and

29.2.3.2 does not then act on the instruction until it receives written confirmation from the **tie** Project Manager that it should do so.

For the avoidance of doubt neither instructions issued pursuant to Clause 24 (*tie Changes*) of the Operating Appendix and Clause 25 (*Operator Changes*) of the Operating Appendix shall constitute specific written instructions for the purposes of this provision.

29.3 Any amount paid by the Operator to *tie* pursuant to this Clause 29 (*Indemnity*) shall be excluded from the calculation of the Operating Costs.

29.4 Any claim or action against the Operator in respect of any Indemnified Liabilities pursuant to this Clause 29 (*Indemnity*) is subject to Clause 27.33.

30. CONDUCT OF CLAIMS

Subject always to the requirements of the Required Insurances, and in the instance of claims against the Operator, the Joint Names Insurances and the OCIP Insurances:

30.1 If *tie* receives any notice, demand, letter or other document concerning any claim from which it appears that *tie* is or may become entitled to indemnification under this Agreement ("Claim"), *tie* shall notify the Operator as soon as reasonably practicable and shall supply a copy of the relevant Claim to the Operator.

30.2 Where it appears that *tie* is, or may become, entitled to indemnification from the Operator in respect of the liability arising out of the act or omission which is the subject of the Claim, and where required in writing by *tie*, the Operator shall take conduct of any defence, dispute, compromise or appeal of the Claim and of any incidental negotiations and shall be entitled to resist the Claim in the name of *tie* and *tie* will give the Operator all reasonable co-operation, access and assistance for the purposes of considering and resisting such Claim.

30.3 In relation to any Claim subject to Clause 30.2:

30.3.1 the Operator shall keep *tie* fully informed and consult with it about material elements of the conduct of the Claim;

30.3.2 the Operator shall not bring the name of *tie* into disrepute; and

30.3.3 the Operator shall not pay or settle such Claims without the prior written consent of *tie*, such consent not to be unreasonably withheld or delayed.

30.4 *tie* shall be free to take steps in the proceedings, pay or settle any Claim on such terms as it thinks fit (and without prejudice to its rights and remedies under this Agreement)

if the Operator fails to notify **tie** of its intention to conduct the relevant Claim within 20 Business Days of the notice from **tie** under Clause 30.1 above or the Operator notifies **tie** that it does not intend to take conduct of the Claim.

30.5 **tie** shall be free at any time to give notice to the Operator that it is retaining or taking over (as the case may be) the conduct of any defence, dispute, compromise or appeal of any Claim (or of any incidental negotiations) to which Clause 30.2 applies. On receipt of such notice the Operator shall promptly take all steps necessary to transfer the conduct of such claim to **tie** and shall provide to **tie** all reasonable co-operation, access and assistance for the purposes of considering and resisting such Claim. If **tie** gives any notice pursuant to this Clause 30.5, then the Operator shall be released from any liability under the relevant indemnity in respect of such Claim. **tie** shall keep the Operator reasonably informed as to the progress and status of any such Claim until such Claim is settled, withdrawn, discontinued or otherwise disposed of.

30.6 If, in controlling and contesting any Claim, **tie** takes or fails to take any action in relation to such Claim which it might reasonably be expected to take or not take (as the case may be) which terminates or reduces any entitlement of the Operator to recover any part of the Claim from any insurer under any of the Required Insurances, Joint Names Insurances or OCIP Insurances, the liability of the Operator to indemnify **tie** in respect of such Claim shall be reduced by an amount equal to such part or as the case may be the amount of the reduction thereof (except in the case where **tie** could not reasonably have been expected to have known that the Operator's entitlement could be so terminated or reduced).

30.7 If the Operator pays to **tie** an amount in respect of an indemnity and **tie** subsequently recovers (whether by payment, discount, credit, saving, relief, other benefit or otherwise) a sum which is directly referable to the fact, matter, event or circumstances giving rise to the Claim, **tie** shall forthwith repay to the Operator whichever is the lesser of:

30.7.1 an amount equal to the sum recovered (or the value of the saving or benefit obtained) less any out-of-pocket costs and expenses properly incurred by **tie** in recovering the same; and

30.7.2 the amount paid to **tie** by the Operator in respect of the Claim under the relevant indemnity;

provided that there shall be no obligation on tie to pursue such recovery and that the Operator is repaid only to the extent that the amount of such recovery aggregated with any sum recovered from the Operator exceeds any loss sustained by tie in respect of the Claim.

31. LIABILITY AND SOLE REMEDY

31.1 Subject to Clause 31.3, the Parties acknowledge and agree that the only rights available to them to terminate this Agreement are those expressly set out in this Agreement and that neither Party shall be entitled to exercise a right to terminate or rescind or accept the repudiation of this Agreement under any other right whether arising in common law or statute or otherwise howsoever (other than for fraud or a fraudulent misrepresentation).

31.2 The Parties further acknowledge and agree that the express rights provided in this Agreement in relation to termination and the calculation and payment of amounts due following such termination are exclusive and are in place of (and not cumulative with) any other rights or remedies which might arise as a consequence of such termination. The Parties hereby waive all other rights and remedies arising from such termination, whether express or implied, arising by common law (including in delict), by statute or otherwise howsoever provided that nothing in this Clause 31.2 shall exclude the right of the Parties to claim remedies expressly conferred on them by this Agreement.

31.3 Nothing in this Agreement shall exclude or limit the liability:

31.3.1 of either Party for:

31.3.1.1 death or personal injury caused by that Party's negligence or the negligence of anyone for whom that Party is vicariously liable;

31.3.1.2 fraud or fraudulent misrepresentation; or

31.3.1.3 any breach of warranty given as to valid and marketable title, freedom from unduly onerous burdens and conditions or entitlement to possession by action of prescription; or

31.3.2 of the Operator subject to Clause 31.4 and the limitations in Clause 27 (*Insurances*) and 29 (*Indemnity*) (, for any breach of this Agreement or any delict (including negligence) or other liability arising prior to termination of this Agreement;

provided that nothing in this Clause 31.3 shall confer on either Party rights or remedies that they would not otherwise have.

- 31.4 Subject to Clause 31.3.1, neither party shall be entitled to claim damages for breach of this Agreement, in delict (including negligence), breach of statutory duty or on any other basis whatsoever to the extent that such damages claimed by that Party are for Indirect Losses suffered by that Party provided that for the avoidance of doubt, nothing in this Clause 31.4 shall affect either Party's liability to the other Party, whether under any indemnity, under Clause 30.6 or otherwise, in respect of any claim, action, proceedings or demand against such other Party by a third party in connection with Indirect Loss suffered.
- 31.5 The Operator shall not be relieved or excused of any responsibility, liability or obligation under this Agreement by the appointment of any Operator Party. The Operator shall, as between itself and tie, be responsible for the selection, pricing, performance, acts, defaults, omissions, breaches, delict and offences of all the Operator Parties. All references in this Agreement to any act, default, omission, breach, delict or offence of the Operator shall be construed to include any such act, default, omission, breach or delict of any Operator Party.

PART VI - TERMINATION

32. TERMINATION DURING DEVELOPMENT PHASE

32.1 During Project Phase A, Project Phase B and Project Phase C1 in respect of any Phase, **tie** may terminate this Agreement, either:

32.1.1 in whole, if no Phase has reached Project Phase C2 or Project Phase D at the time of such termination; or

32.1.2 in part, for such Phases where project development is still in Project Phase A, Project Phase B or Project Phase C1;

such termination to be by way of **tie** providing at least 30 days notice in writing to the Operator at any time.

32.2 During Project Phase A and Project Phase B in respect of Line 1 or Line 2 or Phase (as appropriate), **tie** may terminate this Agreement in whole or in part, if there is a material increase or alteration to the costs of the Project or the liabilities and risks to **tie** beyond those which **tie** considers (i) can be managed within Affordability Limits or (ii) are reasonable and prudent to retain, such termination to be by way of **tie** providing at least 30 days notice in writing to the Operator at any time.

32.3 If **tie** serves notice to terminate this Agreement in respect of one or more Phases ("**Terminated Phases**") pursuant to Clause 32.1.2, and **tie** chooses to continue development of any of such Terminated Phases, either by itself or in conjunction with any third party, **tie** shall discuss with the Operator in good faith, at the stage of development of such Terminated Phase equivalent to Project Phase B:

32.3.1 the Target Costs for Project Phase C2 for such Terminated Phase;

32.3.2 the Interim Target Operating Costs, Interim Fixed Costs and the Interim Target Patronage for the System including such Terminated Phase (if it is proposed that there be a time interval between the Service Commencement Date and the Full Service Commencement Date for such Terminated Phase);

32.3.3 the Target Operating Costs, any adjustments to the Fixed Costs (excluding the Category Five Fixed Costs) and the Target Patronage for the System including such Terminated Phase;

32.3.4 amendments to the Operating Output Specification, the Operating Method Statements (and the Operating Appendix to the extent necessary) to take effect from the Service Commencement Date of such Terminated Phase; and

32.3.5 any other aspect of the terms of this Agreement to be amended to reflect the Operator's rights and obligations in respect of such Terminated Phase (or the System including such Terminated Phase);

on the basis that the Operator should be in a No Better and No Worse position following the implementation and Service Commencement of the Terminated Phase provided that tie shall not be liable to pay the Operator any sum which the Operator has included in its Profit Element with respect to such Terminated Phase.

32.4 If tie and the Operator are unable to agree on the matters referred to in Clause 32.3, then the termination rights in Clause 32.5 will apply.

32.5 Notwithstanding that one or more Lines may be in Project Phase C2 or Project Phase D, if tie and the Operator are unable to agree:

32.5.1 the Fixed Costs and/or the Target Costs for Project Phase C2 for any proposed new Line or Network Expansion;

32.5.2 Interim Target Operating Costs, Interim Fixed Costs and Interim Target Patronage for the System including any proposed new Line or Network Expansion;

32.5.3 the Target Patronage and Target Operating Costs and/or Fixed Costs for Project Phase D for the System including any proposed new Line or Network Expansion;

32.5.4 amendments to the Operating Output Specification, the Operating Method Statements (and the Operating Appendix to the extent necessary) to take effect from the Service Commencement Date of any proposed new Line or Network Expansion; or

32.5.5 any other aspect of the contractual terms to apply in respect of Project Phase C2 or Project Phase D in respect of such Line or Network Expansion (or the System including such proposed new Line)

then **tie** shall be entitled to serve notice on the Operator to terminate this Agreement as a whole, such notice to take effect:

- (a) at the commencement of Project Phase C2 for such proposed new Line; or
- (b) at such other time as **tie** may specify prior to the expiry of the Term, being not less than 30 days after the date of the notice.

32.6 In the event that in **tie's** opinion delay in completion of Project Phase C2 for any Phase (irrespective of the reason) indicates that there is no reasonable prospect of Project Phase D commencing within six months of the Planned Service Commencement Date, **tie** shall be entitled to terminate this Agreement in respect of such Phase by serving notice which shall take effect after 30 days.

33. TERMINATION ON TIE DEFAULT OR AT OPERATOR OPTION

33.1 If a **tie** Default has occurred and the Operator wishes to terminate this Agreement, the Operator must serve a Termination Notice on **tie** within 30 days of becoming aware of the **tie** Default. Failure to do so shall be a waiver of the right to terminate.

33.2 The Operator shall specify in the Termination Notice the type of **tie** Default which has occurred entitling the Operator to terminate.

33.3 Provided the Operator has complied with Clauses 33.1 and 33.2, this Agreement will terminate on the day falling 60 days after the date on which **tie** receives the Termination Notice, unless **tie** rectifies the **tie** Default within 45 days of receipt of the Termination Notice.

33.4 The Operator shall not be entitled to, and shall not purport to, terminate this Agreement or accept any repudiation of this Agreement, except as expressly provided in this Clause 33 (*Termination on **tie** Default or at Operator Option*).

34. PERSISTENT BREACH

34.1 If a breach by the Operator of any of its obligations under this Agreement has occurred more than once then **tie** may serve a notice ("**Persistent Breach Notice**") on the Operator:

34.1.1 specifying that it is a Persistent Breach Notice;

34.1.2 giving reasonable details of the breach; and

34.1.3 stating that such breach is a breach which, if it recurs frequently or continues, may result in a termination of this Agreement.

34.2 If, following service of such a Persistent Breach Notice, the breach specified has continued or occurred more than once after the date falling 30 days after the date of service of the Persistent Breach Notice and before the date falling 365 days after the date of service of such notice, then tie may serve another notice ("**Final Persistent Breach Notice**") on the Operator:

34.2.1 specifying that it is a Final Persistent Breach Notice;

34.2.2 stating that the breach specified has been the subject of a prior Persistent Breach Notice within the period of 365 days prior to the date of service of the Final Persistent Breach Notice; and

34.2.3 stating that if such failure is not remedied within 7 days or is remedied and occurs once or more within the 180 day period after the date of service of the Final Persistent Breach Notice, this Agreement may be terminated.

35. **TERMINATION ON OPERATOR DEFAULT**

35.1 If an Operator Default has occurred and tie wishes to terminate this Agreement, it must serve a Termination Notice on the Operator.

35.2 Such Termination Notice must specify:

35.2.1 the type and nature of Operator Default that has occurred, giving reasonable details; and

35.2.2 that this Agreement will terminate on the day falling 60 days after the date on which the Operator receives the Termination Notice, unless, if (in the opinion of tie) the Operator Default is remediable, and the Operator puts forward a rectification programme acceptable to tie within 30 days or rectifies the Operator Default no later than 15 days before the 60 days above elapses.

35.3 If the Operator either rectifies the Operator Default (if remediable) within the time period specified in such Termination Notice or implements in accordance with its terms, the rectification programme approved in writing by tie, the Termination Notice will be deemed to be revoked and this Agreement will continue.

- 35.4 If the Operator fails to rectify the Operator Default within the time period specified in such Termination Notice, this Agreement will terminate on the date falling 60 days after the date of service of the Termination Notice pursuant to Clause 35.1.
- 35.5 If the Operator fails to implement, in accordance with its terms, any rectification programme approved in writing by tie, this Agreement will terminate on the date of such failure.
- 35.6 The Operator shall reimburse tie for all reasonable costs incurred by tie in exercising any of its rights under this Clause 35 (*Termination on Operator Default*) (including any relevant increased administrative expenses), and, for the avoidance of doubt, any such costs reimbursed shall be excluded from the calculation of Operating Costs for the purposes of any calculation pursuant to Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) to the Operating Appendix.
- 35.7 tie shall not exercise, or purport to exercise, any right to terminate this Agreement except as expressly set out in this Agreement. The rights of tie (to terminate or otherwise) under this Clause 35 (*Termination on Operator Default*) are in addition (and without prejudice) to any other right which tie may have to claim the amount of loss or damage suffered by tie on account of the acts or omissions of the Operator (or to take any action, including seeking an order for specific implement, other than termination of this Agreement).
- 35.8 The Operator shall immediately notify tie of
- 35.8.1 any resolution or decision by the board of directors of the Operator or a decision by any director of the Operator to seek legal or financial advice pertaining to the solvency of the Operator; and
- 35.8.2 any presentation of any petition for the purpose of winding up the Operator or any petition for an administration order.

36. TERMINATION BY REASON OF FORCE MAJEURE

- 36.1 Neither Party shall be entitled to bring a claim for a breach of obligations under this Agreement by the other Party or incur any liability to the other Party for any losses or damages incurred by that other Party or create grounds for termination of the whole or a part of this Agreement (save in so far as expressly provided by Clause 36.5) to the extent that a Force Majeure Event occurs and such party is directly prevented from

carrying out such obligations by that Force Majeure Event or the direct consequences thereof.

- 36.2 If a Force Majeure Event occurs as described in Clause 36.1 the Operator shall be relieved from deductions under the KPI Regime to the extent that the Force Majeure Event or the direct consequences thereof adversely affect the performance by the Operator of its obligations under this Agreement and the parties shall in good faith seek to agree equitable adjustments of a permanent or temporary nature to the Payment Mechanism and provisions regarding Target Costs for Project Phase C2 or Target Operating Costs or Fixed Costs (excluding the Category Five Fixed Costs) or Target Patronage to the extent that the Force Majeure Event or the direct consequences thereof adversely affect the performance by the Operator of its obligations under this Agreement .
- 36.3 On the occurrence of a Force Majeure Event, the Affected Party shall notify the other Party as soon as reasonably practicable, specifying details of the Force Majeure Event and providing evidence of its effect on the obligations of the Affected Party and any action proposed to remove or mitigate its effect.
- 36.4 The Parties shall at all times following the occurrence of a Force Majeure Event use all reasonable endeavours to prevent and mitigate the effects of any delay to the Project or interruption of Transport Services and the Operator shall at all times during which a Force Majeure Event is subsisting take all steps in accordance with Good Industry Practice to overcome or minimise the consequences of the Force Majeure Event. tie shall continue to meet the Project Development Costs and/or the Operating Costs (adjusted to take account of any disrupted, extended or restricted Project Operations) for the System for a period of 30 days following notification of a Force Majeure Event or such longer period as tie may agree.
- 36.5 If the terms or measures to remove the effect of the Force Majeure Event cannot be agreed on or before the date falling 30 days after the date of the commencement of the Force Majeure Event or by the end of such longer period as tie may have agreed in accordance with Clause 36.4 or otherwise, or such Force Majeure Event is continuing or its consequence remains such that the Affected Party is unable to comply with all or a material part of its obligations under this Agreement for a period of more than 30 days after the date of the commencement of the Force Majeure Event or by the end of such longer period as tie may have agreed in accordance with Clause 36.4 or

otherwise , either Party shall have the option to terminate this Agreement by written notice to the other.

36.6 The Affected Party shall notify the other Party as soon as reasonably practicable after the Force Majeure Event ceases and/or no longer causes the Affected Party to be unable to comply with its obligations under this Agreement. Following such notification, unless otherwise agreed by tie, this Agreement shall continue to be performed on the terms existing immediately prior to the occurrence of the Force Majeure Event.

37. TERMINATION FOR CORRUPT GIFTS AND FRAUD

37.1 If the Operator, or any Operator Party or any of their respective representatives, or Affiliates or professional advisers or employees or anyone acting on behalf of any of them, commits any Prohibited Act, then tie shall be entitled to act in accordance with Clauses 37.2 to 37.7.

37.2 If a Prohibited Act is committed by the Operator or by an employee of the Operator or any Affiliate not acting independently of the Operator, then tie may terminate this Agreement by giving notice to the Operator.

37.3 If a Prohibited Act is committed by an employee of the Operator acting independently of the Operator, then tie may give notice to the Operator of termination and this Agreement will terminate, unless within 30 days of receipt of such notice the Operator terminates the employee's employment and (if necessary) procures the performance of the relevant part of the Project Operations or the Project Development Services by another person.

37.4 If a Prohibited Act is committed by an Operator Party not acting independently of the Operator, then tie may give notice to the Operator of termination and this Agreement will terminate, unless within 30 days of receipt of such notice the Operator terminates the relevant Operator Party and procures the performance of the relevant part of the Project Operations or the Project Development Services by another person.

37.5 If a Prohibited Act is committed by an Operator Party acting independently of the Operator, then tie may give notice to the Operator of termination and this Agreement will terminate, unless within 30 days of receipt of such notice the Operator terminates the Operator Party's employment and (if necessary) procures the performance of the

relevant part of the Project Operations or the Project Development Services by another person.

37.6 If a Prohibited Act is committed by any other person specified in Clause 37.1 but not specified in Clauses 37.2 to 37.4, then tie may give notice to the Operator of termination and this Agreement will terminate unless within 30 days of receipt of such notice, the Operator procures the termination of such person's employment and of the appointment of their employer in relation to the Project (where not employed by the Operator or an Operator Party) and (if necessary) procures the performance of the relevant part of the Project Operations or Project Development Services by another person.

37.7 Any notice of termination under this Clause 37 (*Termination for Corrupt Gifts and Fraud*) shall specify:

37.7.1 the nature of the Prohibited Act;

37.7.2 the identity of the person whom tie believe has committed the Prohibited Act; and

37.7.3 the date on which this Agreement will terminate, in accordance with the applicable provision of this Clause 37 (*Termination for Corrupt Gifts and Fraud*).

38. VOLUNTARY TERMINATION BY TIE

38.1 tie may terminate this Agreement upon 60 days written notice to the Operator and without liability for any termination payment (but without prejudice to the provisions of Clause 40 (*Compensation on Termination*)) at the following stages of the Project:

38.1.1 except in the first three years of operation following the issue of the first Certificate of Service Commencement, at any other time during the Service Period if there is an Operating Deficit in 6 Reporting Periods out of any rolling period of 12 months;

38.1.2 during Project Phase D, notwithstanding any referral to or decision in terms of the Dispute Resolution Procedure, in the event that the Parties are unable to agree adjustments to the Fixed Costs, Target Operating Costs and Target Patronage or other elements of Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of the Operating Appendix sought by tie

following reset carried out pursuant to Clause 21 (*Reset of the Fixed Costs, the Target Operating Costs and the Target Patronage*) of the Operating Appendix.

38.2 This Agreement will terminate on the date falling 60 days after the date of service of the notice referred to in Clause 38.1.

39. EXPIRY

39.1 Subject to Clause 2 (*Term of Agreement*), this Agreement shall terminate automatically on the expiry of the Term unless it shall have been terminated earlier in accordance with the provisions of this Agreement. The Operator shall not be entitled to any compensation for termination of this Agreement on expiry of the Term and shall make arrangements for the orderly transfer and release to tie or its designated agent of all assets, rights and benefits used for the Project Operations by the Operator so as to safeguard efficient and continuous provision of the Transport Services during transition.

40. COMPENSATION ON TERMINATION

40.1 No compensation shall be payable by tie to the Operator for termination of this Agreement whether under contract, delict (including negligence), breach of (or compliance with) statutory duty, restitution or otherwise but without prejudice to:

40.1.1 any antecedent liability of tie that arose prior to the Termination Date (but not from the termination itself except if pursuant to Clause 33 (*Termination on tie Default or at Operator Option*));

40.1.2 any liability arising in respect of any breach by tie of its obligations under Clause 41 (*Effect of Termination*) which arises or continues after the Termination Date; or

40.1.3 payment by tie to the Operator of any demobilisation costs which have been demonstrably and reasonably incurred by the Operator in the event of a termination in respect of:

- (a) failure to agree Network Expansion pursuant to Clause 11.5;
- (b) Uninsurable Risk occurring pursuant to Clause 28.4;
- (c) Clauses 32.1, 32.2, 32.4 or 32.5;

- (d) **tie** Default pursuant to Clause 33 (*Termination on tie Default or at Operator option*); or
- (e) voluntary termination pursuant to Clause 38 (*Voluntary Termination by tie*).

The Operator shall use all reasonable endeavours to minimise and mitigate any such demobilisation costs and **tie** shall not be liable to pay the Operator for such demobilisation costs to the extent that the Operator has failed to minimise or mitigate such demobilisation costs or to the extent that such demobilisation costs have arisen out of the Operator's breach of this Agreement or any negligent act or omission by the Operator.

- 40.2 Subject to Clause 40.1, the Operator shall not have any other right or remedy against **tie** on termination or expiry of this Agreement.

41. EFFECT OF TERMINATION

- 41.1 Notwithstanding any provision of this Agreement, on service of a Termination Notice, this Agreement shall only terminate in accordance with the provisions of this Clause 41 (*Effect of Termination*).
- 41.2 Subject to any exercise by **tie** of its rights to perform, or to procure a third party to perform, the obligations of the Operator, the Parties shall continue to perform their obligations under this Agreement, notwithstanding the giving of any notice of default or breach or Termination Notice, until the termination of this Agreement becomes effective.
- 41.3 To the extent that the termination of this Agreement occurs during Project Phase C2 or Project Phase D, the provisions of Clause 28 (*Transition on termination or expiry*) of the Operating Appendix shall apply.
- 41.4 To the extent that the termination of this Agreement occurs during Project Phase A, Project Phase B, or Project Phase C1, the provisions of Clause 28 (*Transition on termination or expiry*) of the Operating Appendix shall apply to the extent relevant.
- 41.5 Within 60 days of termination of this Agreement, **tie** shall pay to the Operator:

- 41.5.1 any undisputed sums due from tie to the Operator pursuant to Clause 16 (*Project Development Costs*), Clause 18 (*Payment During Project Phase C2*) and/or Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of the Operating Appendix subject to any appropriate pain/gain share reconciliation; and
- 41.5.2 any entitlement to demobilisation costs pursuant to Clause 40.1.3.
- 41.6 Within 60 days of termination of this Agreement, the Operator shall pay to tie any sums due from the Operator to tie pursuant to this Agreement including any sum due to tie following any appropriate pain/gain share reconciliation or any sums due pursuant to Clause 35.6.
- 41.7 Either Party may refer any Dispute about disputed sums pursuant to Clause 16 (*Project Development Costs*), Clause 18 (*Payment during Project Phase C2*) and/or Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of the Operating Appendix to the Dispute Resolution Procedure. If it is determined pursuant to the Dispute Resolution Procedure that the whole or part of any disputed amount is due to either tie or the Operator, tie or the Operator (as appropriate) shall raise an invoice in respect of such determined amount and payment shall be made by the relevant Party within 60 days of the receipt of such invoice.
- 41.8 The following Clauses shall survive termination of this Agreement:
- 41.8.1 Clauses 1 (*Definitions and Interpretation*), 8 (*Operator's Performance Security*), 20 (*Method and Currency of Payment*), 21 (*Interest*), 22 (*Set-off*), 23 (*VAT*), 24 (*Taxation*), 25 (*Mitigation and Cost Management*), 27 (*Insurances*), 29 (*Indemnity*), 30 (*Conduct of Claims*), 31 (*Liability and Sole Remedy*), 39 (*Expiry*), 40 (*Compensation on termination or expiry*) and Clauses 41 (*Effect of termination*) to 60 (*Maladministration Complaints*) inclusive and Schedule 7 (*Dispute Resolution Procedure*), and such other provisions as are expressed to survive termination of this Agreement; and
- 41.8.2 in the Operating Appendix, Clause 28 (*Transition on Termination or Expiry*), and such other provisions as are expressed to survive termination of this Agreement.
- 41.8.3 For the avoidance of doubt, upon expiry of the Term or any termination of this Agreement (for whatever cause) any accrued rights or obligations to

which **tie** may be entitled or be subject to before such date shall remain in full force and effect.

42. PERSONNEL ISSUES ON TERMINATION

- 42.1 In the event that TUPE and/or the Acquired Rights Directive or any other Legislation governing the rights and obligations of employees or their employers or any person to whom they are to transfer their employment applies or will apply on the Expiry Date or the Termination Date such that the contracts of employment of the Project Operations Staff and or/ Project Development Staff engaged at such date ("**Transferring Project Staff**"), or any of them, shall be transferred from the Operator or a relevant Operator Party to **tie** or a Successor Operator to perform some or all of the Project Development Services or Project Operations or any activities equivalent to a relevant part of the Project Operations, the provisions of Clauses 42.2 to 42.9 shall apply.
- 42.2 The Parties shall comply with their respective obligations under TUPE and the Acquired Rights Directive or as otherwise may be required by Law in respect of the transfer of the Transferring Project Staff on the Expiry Date or Termination Date (as the case may be) ("**Transfer Date**").
- 42.3 The Operator shall (and shall procure that each relevant Operator Party shall) indemnify **tie** and keep **tie** indemnified on demand at all times from and against all Employment Liabilities which **tie** may suffer or incur which relate to or arise in respect of (whether directly or indirectly):
- 42.3.1 any Transferring Project Staff in respect of or in any way relating to any period up to and including the Transfer Date; and
- 42.3.2 any person employed or engaged, or formerly employed or engaged, by the Operator or any Operator Party (other than any Transferring Project Staff) for which it may be alleged that **tie** are liable by virtue of the operation of this Agreement and/or TUPE and/or the Acquired Rights Directive.
- 42.4 The Operator shall (and shall procure that each relevant Operator Party shall) indemnify the Successor Operator and keep the Successor Operator indemnified on demand at all times from and against all Employment Liabilities which the Successor Operator may suffer or incur which relate to or arise in respect of (whether directly or indirectly):

- 42.4.1 any Transferring Project Staff in respect of or in any way relating to any period up to and including the Transfer Date; and
- 42.4.2 any person employed or engaged, or formerly employed or engaged, by the Operator or any Operator Party (other than any Transferring Project Staff) for which it may be alleged that the Successor Operator is liable by virtue of the operation of this Agreement and/or TUPE and/or the Acquired Rights Directive.
- 42.5 The Parties acknowledge that it is their intention that the benefit of Clauses 42.4, 42.7, 42.8, 42.9, and 42.10 (inclusive) shall be assigned to the Successor Operator at the absolute discretion of tie and the Operator shall do, and agrees to procure that each relevant Operator Party shall do, all acts and things that tie deems reasonably necessary to give effect to such assignment including execution of all documents required.
- 42.6 tie shall procure that the Successor Operator shall assume the outstanding obligations of the Operator and/or each relevant Operator Party in respect of the untaken holiday entitlements and unpaid holiday remuneration of the Transferring Project Staff accrued up to the Transfer Date and, in consideration, the Operator shall pay, or shall procure that each relevant Operator Party shall pay, to the Successor Operator within 30 days of the Transfer Date (as the case may be), the full amount necessary to enable the Successor Operator to meet the costs of providing such accrued holiday entitlements and remuneration as at Transfer Date.
- 42.7 The Operator shall, and the Operator shall procure that each relevant Operator Party shall, prior to the transfer of the employment of any Transferring Project Staff pursuant to TUPE and the Acquired Rights Directive, comply with all of their respective obligations to inform and consult with appropriate representatives (as such term is defined in regulation 13 of TUPE) of affected Project Operations Staff and Project Development Staff and shall carry out such provision of information to, or consultation with, such representatives as is required of them by Law.
- 42.8 The Operator shall, and the Operator shall procure that each relevant Operator Party shall, prior to the transfer of the employment of any Transferring Project Staff pursuant to TUPE and the Acquired Rights Directive, comply with their obligations to provide Employee Liability Information (as such term is defined in Regulation 11 of TUPE and in terms of the timescale referred to in that regulation) in respect of

Transferring Project Staff and carry out the provision of information until the Termination Date or Expiry Date as appropriate.

- 42.9 The Operator shall, and the Operator shall procure that each relevant Operator Party shall, indemnify and keep tie and the Successor Operator indemnified on demand at all times in respect of all Employment Liabilities arising out of any failure of the Operator and/or any Operator Party to comply fully with their respective obligations pursuant to Clause 42.7, save where, and to the extent only that, failure to do so is attributable to the default or failure on the part of tie or a Successor Operator to provide relevant information to the Operator or the relevant Operator Party (as the case may be) as is required of tie or the Successor Operator by Law.
- 42.10 Following the service of a Termination Notice or at any time in the 365 days before the Expiry Date, the Operator shall not, and shall procure that each Operator Party shall not, without the prior written consent of tie (which consent shall not be unreasonably withheld or delayed), carry out any of the following:
- 42.10.1 the termination of the employment or engagement of any Project Operations Staff or Project Development Staff;
- 42.10.2 the alteration or change (or the making of any promise to alter or change) in any way any terms and conditions of employment, or terms of engagement, of any Project Operations Staff or Project Development Staff (whether with or without the consent of any such Project Operations Staff or Project Development Staff (as appropriate)) other than in order to give effect to wage or salary awards which are in line with those offered generally for similar status individuals within the relevant employer's workforce or as is required by Law;
- 42.10.3 the recruitment of any employees, self-employed consultants or other personnel to perform any of the Project Operations or Project Development Services (except as a replacement for any Project Operations Staff or Project Development Staff whose employment is terminated and where the replacement is recruited on terms which are not materially better than the terms of the Project Operations Staff or Project Development Staff member being replaced); and

42.10.4 the re-assignment of any of the Project Operations Staff or Project Development Staff to or from duties connected with the Project Operations or the Project Development Services.

42.11 Following the service of a Termination Notice or at any time in the 730 days before the Expiry Date, within 30 days of a written request from **tie**, the Operator shall, or the Operator shall procure that each Operator Party shall, provide to **tie** such information concerning the Project Operations Staff and Project Development Staff as **tie** shall reasonably stipulate ("**Staffing Information**") including:

42.11.1 the number of Project Operations Staff and Project Development Staff;

42.11.2 their status as employees, self-employment contractors, agency workers or otherwise;

42.11.3 dates of commencement of employment or engagement and gender;

42.11.4 their relevant contractual notice periods and any other terms relating to termination of employment, including redundancy procedures and contractual redundancy payment schemes;

42.11.5 the wages, salaries, profit sharing, incentive and bonus arrangements applicable to them;

42.11.6 details of other employment related benefits, including (without limitation) medical insurance, life assurance, pension or other retirement benefit schemes, share option schemes and company car schemes applicable to them;

42.11.7 any outstanding or potential contractual, statutory or other liabilities in respect of such individuals (including in respect of personal injury claims);

42.11.8 details of any such individuals on long-term sickness absence, maternity or parental leave; and

42.11.9 copies of all relevant documents and materials relating to such information, including copies of relevant contracts of employment.

42.12 The Operator expressly consents, and shall procure that each Operator Party and all Project Operations Staff and Project Development Staff shall consent, to any Staffing Information being provided to third parties, including a Successor Operator or any prospective Successor Operator, subject to such third party agreeing to respect the

confidentiality of the Staffing Information, and only to use such Staffing Information for the purposes for which it was provided.

PART VII - MISCELLANEOUS PROVISIONS

43. DISPUTE RESOLUTION PROCEDURE

The Parties agree that Schedule 7 (*Dispute Resolution Procedure*) shall have effect for the resolution of any differences or disputes between the Parties arising under, out of or in relation to, this Agreement, save for matters expressly reserved to some other jurisdiction pursuant to any provision of the Tram Legislation.

44. ASSIGNATION, SUB-CONTRACTING AND CHANGES IN CONTROL

44.1 The Operator shall not, without the prior written consent of **tie**,

44.1.1 assign, transfer or otherwise dispose of any interest in, or right or obligation under, this Agreement; or

44.1.2 sub-contract any of its obligations under this Agreement without the prior written consent of **tie** (such consent not to be unreasonably withheld or delayed).

44.2 **tie** shall not assign, novate or otherwise dispose of any interest in, or rights or obligations under this Agreement in whole or in part to any person, save:

44.2.1 to the relevant Scottish Minister, TEL, Transport Scotland or CEC or to any local authority or other public body where such local authority or other public body has no worse financial standing than that of **tie** and who, as a result of any Change in Law, such local authority or other public body has taken over all or substantially all the functions of **tie**; or

44.2.2 to any other person whose obligations under this Agreement are unconditionally and irrevocably guaranteed (in a form reasonably acceptable to the Operator) by **tie** or a person falling within Clause 44.2.1; or

44.2.3 with the prior written consent of the Operator (such consent not to be unreasonably withheld or delayed).

44.3 Subject to Clause 44.4 prior to the expiry of thirty six (36) months following the Service Commencement Date for the first Phase to become operational, the Operator shall procure that no Change of Control of the Operator (or any company of which the Operator is a subsidiary) shall take place without the prior written approval of **tie**.

44.4 If applicable, Clause 44.3 shall not apply to a Change of Control resulting from the sale of any shares in the Operator held by any Third Party Shareholder.

44.5 The Operator shall inform the tie Project Manager as soon as reasonably practicable and, in any event, within five Business Days of any Change of Control of the Operator.

45. SECURITY INTERESTS

45.1 The Operator shall not create or agree to create any Security Interest over the System or any part of the System or over this Agreement.

45.2 The Operator shall not dispose of any right in respect of or interest in any asset used in the Project Operations or relating to the System if to do so would have a material adverse effect upon either the Project or the position of tie under this Agreement, whether or not this Agreement has terminated or expired provided always that restrictions in this Clause shall not apply in the case of:

45.2.1 disposals of redundant or obsolete assets not required for the operation of the System; or

45.2.2 disposals of property or assets where such property or assets are replaced by other property or assets comparable or superior as to type and function.

46. INFORMATION AND CONFIDENTIALITY

46.1 The Parties shall keep confidential all matters relating to this Agreement and the Project and, save as provided in Clause 46.3, shall not disclose any such matters to any third parties.

46.2 Each Party shall use all reasonable endeavours to procure that their respective employees and any other person to whom they disclose information pursuant to Clauses 46.3.1, 46.3.3, 46.3.6 and 46.3.7 shall comply with this Clause 46 (*Information and Confidentiality*) as if they were parties to this Agreement.

46.3 Clause 46.1 shall not apply to:

46.3.1 any disclosure of information that is reasonably required by the Parties in order to carry out the Project Development Objectives and perform their obligations and exercise their rights under this Agreement;

- 46.3.2 any matter which a Party can demonstrate is already generally available and in the public domain otherwise than as a result of a breach of this Clause 46 (*Information and Confidentiality*);
- 46.3.3 disclosure to enable a determination to be made under the Dispute Resolution Procedure, subject always to that disclosure being restricted to parties directly involved in the process ;
- 46.3.4 any disclosure which is required by any Law, any parliamentary obligation or the rules of any stock exchange or governmental or regulatory authority having the force of law;
- 46.3.5 any disclosure of information which is already lawfully in the possession of the receiving party, prior to its disclosure by the disclosing party;
- 46.3.6 any provision of information to the professional advisers or insurance advisers of either Party;
- 46.3.7 where it is proposed that a person should or may provide funds (whether directly or indirectly and whether by loan, equity participation or otherwise) to the Operator to enable it to carry out its obligations under the Agreement, any provision of information to that person but only to the extent reasonably necessary to enable a decision to be taken on the proposal;
- 46.3.8 any disclosure by tie of information relating to the design, construction, operation and maintenance of the System and such other information as may be reasonably required for the purpose of conducting a due diligence exercise to any proposed Successor Operator, its advisers, should tie decide to retender the Project Operations or any part of them;
- 46.3.9 any registration of information in respect of the Necessary Consents and any property registration required;
- 46.3.10 any disclosure of information by tie to CEC, Partnerships UK Limited, any department, office or agency of the Scottish Executive or the UK government;
- 46.3.11 any disclosure by tie of any document related to this Agreement and which the Operator has agreed with tie contains no Commercially Sensitive Information (such agreement not to be unreasonably withheld or delayed);

46.3.12 any disclosure for the purpose of:

46.3.12.1 the examination and certification of tie's or the Operator's accounts; or

46.3.12.2 any examination (pursuant to applicable Law) of the economy, efficiency and effectiveness with which tie has used their resources or funding made available for the Project; and

46.3.13 any disclosure by tie of any information (except for information which has been designated as Commercially Sensitive Information) as may be reasonably required for the purpose of appointing and working with any Infrastructure Provider;

46.4 Any public relations material, press releases, public presentations or conference engagements in relation to the Project planned by the Operator require tie's prior written approval during the Term.

47. INTELLECTUAL PROPERTY RIGHTS

47.1 All Operator IPR shall continue to be owned by the Operator.

47.2 The Operator hereby:

47.2.1 assigns by way of future assignment to tie with full title guarantee the Project IPR which is created by it and shall procure that Project IPR created by any Operator Party is also so assigned, for all the residue of the term of such rights and all renewals or extensions thereof and together with all accrued causes of action in respect thereof;

47.2.2 grants to tie a non-exclusive perpetual irrevocable royalty free licence to use such Operator IPR as may be necessary for tie to use solely in relation to the Project and any Network Expansion and for no other purpose;

47.2.3 grants to tie the right to grant non-exclusive non-assignable sub-licences to third party contractors for such lengths of time as tie may reasonably require and otherwise on the same terms as the licence granted to tie pursuant to Clause 47.2.2 above, to use the Operator IPR referred to in that Clause in so far as is necessary or desirable for such third party contractor to use such

Operator IPR solely in relation to work connected with the Project and any Network Expansion.

47.3 For the avoidance of doubt, the persons to whom tie may grant sub-licences pursuant to Clause 47.2.3 above shall include:

47.3.1 any Infrastructure Provider and its contractors for purposes connected with the performance of any Infrastructure Delivery Agreement;

47.3.2 any party other than the Operator providing support to tie in relation to the development of any Network Expansion;

47.3.3 any party other than the Operator engaged in the provision of Transport Services on the System; and

47.3.4 any assignee or transferee under this Agreement.

47.4 tie hereby:

47.4.1 grants to the Operator a non-exclusive revocable royalty free licence for the Term to use such Project IPR as is owned by it as may be necessary for the Operator to use solely and exclusively for the purpose of meeting its obligations under this Agreement (including the Operating Appendix and for no other purpose); and

47.4.2 grants to the Operator the right to grant non-exclusive non-assignable sub-licences to the Operator Parties on the same terms as the licence granted to the Operator pursuant to Clause 47.4.1 above to use the Project IPR referred to in that Clause in so far as is necessary or desirable for such Operator Parties to use such Project IPR, solely and exclusively for the purpose of performing their obligations in relation to the Project.

47.5 The Operator shall at any time and from time to time hereafter at the request of tie execute all such documents and do all such further acts as may be required in order to vest the rights referred to in Clause 47.2.1 in tie.

47.6 The Operator waives any and all moral rights held or to be held by the Operator in the Project Data and the Project IPR and shall procure that all of the Operator Parties who are authors of the whole or any part of the Project Data or the Project IPR waive and abandon in writing all moral rights.

- 47.7 The Operator agrees that all rights in the Project IPR shall remain the property of **tie** and the Operator shall retain no rights in the Project IPR beyond the licence granted in Clause 47.4.1 above. The Operator shall be entitled to use such Project IPR only on the terms set out herein and solely for the purpose of the Project. In particular, otherwise as permitted in this Agreement herein, the Operator shall not (and shall procure that its sub-licensees pursuant to Clause 47.4.2 shall not) disclose, assign, sub-licence, lease, rent or otherwise dispose of the Project IPR.
- 47.8 To the extent that any of the Project Data are generated by or maintained on a computer or similar system, the Operator shall use all reasonable endeavours to procure for the benefit of **tie**, at no charge or at the lowest reasonable fee, the grant of a licence or sub-licence for any relevant Third Party Software on the same terms as the Operator Software is licensed to **tie**, to enable **tie** or its nominee to access and otherwise use (subject to the payment by **tie** of the relevant fee, if any) such Project Data in connection with the Project. As an alternative, the Operator may provide such Project Data in a format which may be read by software generally available at reasonable prices in the market at the relevant time or in hard copy format.
- 47.9 The Operator shall, within thirty (30) days of any upgrade or update to the Operator Software and/or Specially Written Software and/or Third Party Software, for the Term:
- 47.9.1 deposit a copy of the Operator Software and/or Specially Written Software with the Escrow Agent under the terms and conditions of the Escrow Agreement; and
- 47.9.2 use all reasonable endeavours to procure the deposit of a copy of all the Third Party Software with the Escrow Agent and under the terms and conditions of the Escrow Agreement, or with another person under terms that are materially the same as the Escrow Agreement, and in either case for the benefit of **tie**.
- 47.10 The Operator shall comply with the terms of the Escrow Agreement, or any other like agreement in respect of the Third Party Software under Clause 47.9.2 for the duration of this Agreement.
- 47.11 Any costs relating to the Escrow Agreement, including any costs relating to the registration of any Operator Software, Specially Written Software and Third Party Software, and any renewal costs charged from time to time by the Escrow Agent, shall be the sole responsibility of the Operator.

- 47.12 The Operator shall ensure the back-up and storage in safe custody of the Project Data in accordance with Good Industry Practice. Without prejudice to this obligation, the Operator shall submit to the **tie** Project Manager for approval its proposals for the back-up and storage in safe custody of the Project Data and **tie** shall be entitled to object if the same is not in accordance with Good Industry Practice. The Operator shall comply, and shall cause all the Operator Parties to comply, with all such proposals to which the **tie** Project Manager has given his or her approval. The Operator may vary its procedures for such back-up and storage subject to submitting its proposals for change to the **tie** Project Manager, who shall be entitled to object on the basis set out above.
- 47.13 Where a claim or proceeding is made or brought against **tie** or its permitted licensees which arises out of the infringement of any Intellectual Property Rights in any Project Data or other materials provided by the Operator or any Operator Party to **tie** then, unless such infringement has arisen out of the use of any Intellectual Property Rights by **tie** in breach of this Agreement, the Operator shall indemnify and keep **tie** indemnified on demand at all times from and against all Indemnified Liabilities arising in connection with such claim or proceedings.
- 47.14 For the purposes of this Clause 47 (*Intellectual Property Rights*), "use" shall include the acts of copying, modifying, adapting and translating the material in question and/or incorporating them with other materials and the term "the right to use" shall be construed accordingly.
- 47.15 The provisions of this Clause 47 (*Intellectual Property Rights*) shall apply during the continuance of this Agreement and after its termination howsoever arising, and immediately following termination howsoever arising, the Operator shall provide **tie** with:
- 47.15.1 a copy of the object code for the Third Party Software and the Operator Software on media that is reasonably acceptable to **tie**;
 - 47.15.2 a copy of the source code for the Specially Written Software on media that is reasonably acceptable to **tie**; and
 - 47.15.3 a copy of all documentation, manuals and other technical information relating to the Third Party Software, the Specially Written Software and the Operator Software that is reasonably required by **tie** to operate, manage and support the

Third Party Software, the Specially Written Software and the Operator Software.

48. DATA PROTECTION

48.1 For the purpose of the following Clauses, the term "personal data" shall have the meaning given to it in the Data Protection Act 1998.

48.2 The Operator shall, in relation to any personal data in respect of which it is either the "data controller" or the "data processor" for the purposes of the Data Protection Act 1998, comply with the obligations of a "data controller" under the provisions of the seventh data protection principle as set out in Schedule 1 of that Act. In addition, the Operator:

48.2.1 shall have at all material times (and shall use its best endeavours to procure that all Operator Parties have or will have at all material times) the appropriate technical and organisational measures in place against unauthorised or unlawful processing of personal data and against accidental loss or destruction of, or damage to, personal data held or processed by it;

48.2.2 shall (and shall use its best endeavours to procure that the Operator Parties shall) take at all material times, all reasonable steps to ensure the integrity of any of its staff with access to personal data processed in connection with the Project;

48.2.3 shall act only on the instructions of tie in relation to the processing of any personal data in respect of which tie is the "data controller" for the purposes of that Act;

48.2.4 shall only obtain, hold, process, use, store and disclose such personal data as is necessary to perform its obligations under this Agreement; and

48.2.5 shall allow tie access to any relevant premises on reasonable notice to inspect its procedures referred to in Clause 48.2.1.

49. INFORMATION AND AUDIT ACCESS

49.1 The Operator shall in accordance with Good Industry Practice keep and maintain:

49.1.1 detailed records regarding the Project Development Services and its activities in relation to the Project;

49.1.2 all Project Data;

49.1.3 detailed records regarding the Project Operations, including details of ticket sales by the Operator, Patronage Revenue receipts by the Operator and breakdowns of Operating Costs; and

49.1.4 all invoices, timesheets and expense claims for which it has sought or is seeking reimbursement under the provisions of this Agreement;

and shall keep such records for at least twelve years following expiry or termination of this Agreement.

49.2 The records referred to in Clause 49.1 shall be kept in good order and in such form as to be capable of audit (including by electronic means) by the tie Project Manager or any other third party. The Operator shall make such records available for inspection by or on behalf of tie and the tie Project Manager at all reasonable times.

49.3 The Operator shall provide to the tie Project Manager and tie's auditors all information, documents, records and the like in the possession of, or available to, the Operator (and to this end the Operator shall use all reasonable endeavours to procure that all such items in the possession of the Operator Parties shall be available to it) as may be reasonably requested by the tie Project Manager for any purpose in connection with the Project or this Agreement.

49.4 The Operator shall provide and shall procure that the Operator Parties shall provide such information, data records, and assistance as tie may reasonably require from time to time, including to enable tie and CEC to meet its obligations to provide reports and returns pursuant to Law, directions and guidance applicable to the passenger transport sector and audit.

49.5 The Operator shall comply, as its own cost, with any request by tie in respect of the recording, storage, keeping, disclosure, organisation, use, processing, dissemination, deletion or destruction of any records, data or information obtained by the Operator as a result of carrying out the Transport Services or any other obligation under this Agreement.

49.6 tie shall provide to the Operator (subject to reasonable notice and relevant undertaking as to costs) such information within its possession or control with respect to the Project as the Operator may reasonably request to enable it to perform its obligations under this Agreement, provided that tie shall have no obligation to provide

information with respect to which it is subject to an obligation of confidentiality (whether under any Law, at contract or otherwise).

- 49.7 The provisions of this Clause 49 (*Information and Audit Access*) shall apply during the continuance of this Agreement and after its expiry or termination howsoever arising.

50. ENTIRE AGREEMENT

- 50.1 The Operator acknowledges and confirms that it has, by carrying out such due diligence and other investigations as any Operator acting in accordance with Good Industry Practice would do, satisfied itself fully as to the veracity, accuracy, reasonableness, scope, materiality, currency (where applicable) and completeness of all the Background Information.
- 50.2 Except where expressly provided otherwise in this Agreement, this Agreement constitutes the entire agreement between the Parties in connection with its subject matter and supersedes all prior representations, communications, negotiations and understandings concerning the subject matter of this Agreement.
- 50.3 Each of the Parties confirms to the other that it has neither been induced to enter into this Agreement in reliance on, nor has it made, any representation or warranty except those contained or referred to in this Agreement.
- 50.4 Any representations or warranties other than those contained or referred to in this Agreement are superseded and extinguished by this Agreement.
- 50.5 Each Party irrevocably and unconditionally waives all rights and remedies which it might otherwise have had in relation to any representations or warranties other than those contained or referred to in this Agreement.
- 50.6 Each Party irrevocably and unconditionally waives any right it may have to rescind this Agreement on the grounds that any representation or warranty (whether contained or referred to in this Agreement or not) constitutes a misrepresentation.
- 50.7 Nothing in this Clause 50 (*Entire Agreement*) shall affect the liability of either Party in respect of fraud or fraudulent misrepresentation.

51. FURTHER ASSURANCE

51.1 Each Party shall at the reasonable request and cost of the other (save where either in satisfaction of an Operator Condition Precedent or where it is expressly provided that the cost of such act or execution shall be for that Party's account) do any act or execute any document that may be necessary to give full effect to this Agreement.

52. JURISDICTION

52.1 This Agreement, any document completed or to be completed in accordance with its provisions and any matter arising from it or any such document shall be governed by and construed in accordance with Scots law.

52.2 Subject to Clause 43 (*Dispute Resolution Procedure*), the Parties hereby irrevocably submit to the exclusive jurisdiction of the Court of Session in relation to this Agreement, any such document and any such matter.

53. VARIATIONS AND WAIVERS TO BE IN WRITING

No variation, alteration or waiver of any of the provisions of this Agreement shall be effective unless it is in writing and signed by or on behalf of the Party against which the enforcement of such variation, alteration or waiver is sought.

54. WAIVER AND CUMULATIVE REMEDIES

54.1 Save where expressly stated, no failure or delay by either Party to exercise any right or remedy in connection with this Agreement will operate as a waiver of it or of any other right or remedy nor will any single or partial exercise preclude any further exercise of the same, or of some other right or remedy. A waiver of any breach of this Agreement shall not be deemed to be a waiver of any subsequent breach.

54.2 The Parties' rights and remedies under this Agreement are, except where provided otherwise in this Agreement, independent, cumulative and do not operate to exclude one another or any rights or remedies provided by law.

55. NO PARTNERSHIP OR AGENCY

55.1 Nothing in this Agreement shall be construed as creating a partnership between tie and the Operator.

55.2 The Operator shall not (and shall procure that the Operator Parties shall not) act or purport to act as agent for tie in relation to any matter. The Operator shall not be entitled to bind tie in any way or to create any liability or cause of action against tie and shall not hold itself out (and shall procure that no Operator Party shall hold itself out) as having any such authority or power, provided always that this Clause 55.2 shall be without prejudice to:

55.2.1 Clause 17 (*Collection of Fare Revenue*) of the Operating Appendix, pursuant to which the Operator is authorised to enter into contracts of carriage with passengers, and to collect Patronage Revenue, as agent for tie; and

55.2.2 Clause 14 (*Edinburgh Tram Network Integration*) of this Agreement and Clause 11 (*Operation and Maintenance Procedures*) of the Operating Appendix, pursuant to which tie may delegate to the Operator the exercise of some of tie's contractual rights under the Infrastructure Delivery Agreement(s).

56. NOTICES

56.1 Any notice or notification required or authorised to be given under this Agreement by one Party to the other shall be:

56.1.1 in writing;

56.1.2 sent by one of the following methods:

56.1.2.1 pre-paid registered or recorded delivery post or facsimile transmission addressed to the Party to which it is given at:

(a) in the case of notices given to tie: tie Limited, Citypoint, 65 Haymarket Terrace, Edinburgh EH12 5HD, fax number 0131 622 8301 attention: , tie Tram Projects Director, or such other address in the United Kingdom as tie may notify the Operator from time to time for that purpose; or

(b) in the case of notices given to the Operator, TRANSDEV Edinburgh Tram Limited, Citypoint, 65 Haymarket Terrace, Edinburgh EH12 5HD, attention Operator's Representative or such other address in the United Kingdom as the Operator may notify tie from time to time for that purpose; or

56.1.2.2 facsimile transmission addressed to the tie Project Manager or the Operator Project Manager (as appropriate) at a facsimile number notified to the giving Party by the receiving Party for the service of notices under this Agreement from time to time; or

56.1.2.3 personal delivery into the hands of:

- (a) in the case of notices given to tie, the tie Project Manager; or
- (b) in the case of notices given to the Operator, the Operator Project Manager

56.1.2.4e-mail (but not to be used in respect of Termination Notices and Persistent Breach Notices) to:

- (a) in the case of notices given to tie, tie's Representative; or
- (b) in the case of notices given to the Operator, the Operator's Representative.

56.1.3 be deemed duly served:

56.1.3.1if sent by pre-paid registered or recorded delivery post, 2 clear Business Days after posting; or

56.1.3.2if sent via facsimile transmission or personal delivery, on the day of issue of the relevant fax confirmation receipt or such personal delivery (as appropriate), unless that day is not a Business Day in which case it shall be deemed duly served on the next Business Day thereafter; or

56.1.3.3if sent by e-mail, on the day a positive read receipt or delivery confirmation is issued unless that day is not a Business Day in which case it shall be deemed duly served on the next Business Day thereafter.

57. INVALID TERMS

57.1 If any term of this Agreement shall be held to any extent to be invalid, unlawful or unenforceable:

57.1.1 that term shall to that extent be deemed not to form part of this Agreement;
and

57.1.2 the validity and enforceability of the remainder of this Agreement shall not be
affected.

58. THIRD PARTIES RIGHTS

58.1 Save as provided in Clause 58.2, a person who is not party to this Agreement shall
have no right to enforce any term of this Agreement.

58.2 The tie Advisers and CEC shall have the benefit of the terms of Clause 26.5.

59. HUMAN RIGHTS ACT

59.1 Insofar as and to the extent that the Operator is deemed to be acting as a public
authority for the purposes of the Human Rights Act 1998, any claim asserted or
proceedings commenced against tie arising from a negligent act or negligent omission
by the Operator or breach by the Operator of its obligations under this Agreement
shall, for the purposes of Clause 29 (*Indemnity*), be treated as an Indemnified
Liability.

60. MALADMINISTRATION COMPLAINTS

60.1 The Operator shall provide such reasonable assistance (including the provision of witnesses) as tie may reasonably request (having regard to the Transport Services, in particular as to the timing, duration and number of witnesses) in connection with any audit process or judicial review of tie's involvement in the Project or the Project generally.

IN WITNESS WHEREOF these presents consisting of this and the ¹⁰⁵~~87~~ preceding pages together with Schedules 1 to 19 (inclusive) and the Operating Appendix together with Schedules 1 to 4 (inclusive) which are annexed and signed as relative hereto are executed as follows:

EXECUTED for and on behalf of the LIMITED at Edinburgh on 20 December 2007 by

Director/Authorised Signatory: [REDACTED]

Full Name: WILLIAM GALLACHER

Witness: [REDACTED]

Full Name: STUART STOBIE

Address: [REDACTED] Edinburgh, EH13 [REDACTED]

EXECUTED for and on behalf of TRANSDEV EDINBURGH TRAM LIMITED at London on 19 December 2007 by

Director/Authorised Signatory: [REDACTED]

Full Name: COLIN SKELLS

Witness: [REDACTED]

Full Name: THEO NAUD

Address: [REDACTED] LONDON EC2U [REDACTED]

This is Schedule 1 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 1

Definitions and Interpretation

1. In this Agreement, unless the context otherwise requires:

"**Acquired Rights Directive**" means the European Council Directive 77/187/EEC on the approximation of laws of European Union member states relating to the safeguarding of employees' rights in the event of transfers of undertakings, businesses or parts of undertakings or businesses;

"**Actual Tram Patronage (boarders)**" means the patronage figures for the Edinburgh Tram Network derived from the automatic passenger counting equipment installed as part of the System or such other mechanism as may be agreed by both Parties acting reasonably;

"**Affected Party**" means a Party that is unable to comply with all or a material part of its obligations under this Agreement as a direct result of a Force Majeure Event;

"**Affiliate**" means in relation to any organisation:

- (a) any person having any shares in or membership of that organisation, whether directly, through nominees or through shares in or membership of any other person; and
- (b) any person in which that organisation holds shares or of which that organisation is a member whether directly, through nominees or through shares in or membership of any other person;

"**Affordability Limits**" means such financial limits as may be advised by tie to the Operator from time to time in relation to the affordability of the Project or any part of it;

"**Agreement**" means the main body of this document, together with its Schedules and Operating Appendix, (as amended from time to time pursuant to Clause 53 (*Variations and Waivers to be in Writing*));

"**Annual Service Report**" means the report to be provided by the Operator pursuant to Clause 16 (*Best Value and Project Phase D Benchmarking*) of the Operating Appendix;

"Approvals Management Plan" means the plan referred to in paragraph 26.8 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance the terms of this Agreement;

"Assets" means all assets and rights to enable tie, CEC or another operator to own, operate and maintain the System and take over the Project Operations in accordance with this Agreement, including:

- (a) any equipment, plant, furniture, hardware and software (software being subject to the provisions in Clause 47 (*Intellectual Property Rights*)) and excluding Operator IPR;
- (b) any books and records (including the Operating and Maintenance Manual, health and safety manuals and other know-how);
- (c) any spare parts, tools and other assets (together with any warranties in respect of assets being transferred);
- (d) any revenues and any other contractual rights; and
- (e) any Intellectual Property,

but excluding any assets and rights in respect of which tie or CEC is full, legal and beneficial owner;

"Background Information" means all and any materials, documents, drawings, plans or other information in paper, electronic or any other form, relating in any way to the Project and the Private Bills (and the parliamentary process) and made available to the Operator by tie, CEC and/or any of their respective members, officers, agents and/or advisers in connection with the Project and/or the negotiation and/or preparation of this Agreement or during the process of competitive bidding which preceded such negotiation and preparation;

"Base Case RPIX" means RPIX as at 1 January 2003 equal to 177.1;

"Base Case Assumptions" means the assumptions set out in Schedule 18 (*Base Case Assumptions*) as may be agreed to be amended from time to time in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) or following a tie Change in accordance with Clause 24 (*tie Changes*) of the Operating Appendix or following an Operator Change in accordance with Clause 25 (*Operator Changes*) of the Operating Appendix;

"Best Value Improvement Plans" means the plan referred to in Clause 16 (*Best Value and Project Phase D Benchmarking*) of the Operating Appendix;

"Bonded Costs" means the costs, expenses, liabilities, loss of profits and damages incurred by **tie** as a result of the matters listed in Clauses 8.5.1, 8.5.2, 8.5.3 and 8.5.4 of this Agreement;

"Business Day" means any day other than a Saturday, Sunday or Edinburgh Holiday;

"Capped Fee" means subject to Clause 16.13, the relevant cap as set out in the Financial Proposals;

"Category Five Fixed Costs" means the costs numbered "5" in the tables included in the Base Case Assumptions, which are set in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) at a level in accordance with the Project Development and Operating Costs, and such other costs as **tie** and the Operator may agree from time to time should be treated as "Category Five Fixed Costs". All Category Five Fixed Costs shall be Indexed at Premium;

"Category Four Fixed Costs" means the costs numbered "4" in the tables included in the Base Case Assumptions, which are set in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) at a level in accordance with the Project Development and Operating Costs, and such other costs as **tie** and the Operator may agree from time to time should be treated as "Category Four Fixed Costs" All Category Four Fixed Costs shall be Indexed at Premium;

"Category One Fixed Costs" means the costs numbered "1" in the tables included in the Base Case Assumptions, which are set in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) at a level in accordance with the Project Development and Operating Costs, and such other costs as **tie** and the Operator may agree from time to time should be treated as "Category One Fixed Costs". All Category One Fixed Costs shall be Indexed at Premium;

"Category Three Fixed Costs" means the costs numbered "3" in the tables included in the Base Case Assumptions, which are set in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification,*

and the Setting of Fixed Costs and Rates) at a level in accordance with the Project Development and Operating Costs, and such other costs as *tie* and the Operator may agree from time to time should be treated as "Category Three Fixed Costs". All Category Three Fixed Costs shall be Indexed at Premium;

"Category Two Fixed Costs" means the costs numbered "2" in the tables included in the Base Case Assumptions, which are set in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) at a level in accordance with the Project Development and Operating Costs, and such other costs as *tie* and the Operator may agree from time to time should be treated as "Category Two Fixed Costs" All Category Two Fixed Costs shall be Indexed at Premium;

"CDM Regulations" means the Construction (Design and Management) Regulations 1994 (SI 1994/3140);

"CEC" means the City of Edinburgh Council and its successors and assignees whomsoever;

"CEC UTC System" means the system of electronically operated signals managed by CEC to control traffic movements on the streets and roads in the City of Edinburgh in which the System will be installed, and for the avoidance of doubt, includes any such electronically operated signals which operate on a stand alone basis provided that to the extent that the System serves areas outside Edinburgh from time to time, references to "CEC UTC System" shall be deemed to apply to UTC systems operated in such areas to the extent appropriate in the context;

"Certificate of Full Service Commencement" means, in relation to a Phase, the certificate of Full Service Commencement to be issued by *tie* in accordance with Clause 4.5 of the Operating Appendix or Clause 3.6 of the Operating Appendix (as appropriate) in respect of that Phase;

"Certificate of Service Commencement" means, in relation to a Phase, the certificate of Service Commencement to be issued by *tie* in accordance with Clause 3.4 of the Operating Appendix in respect of that Phase;

"Change in Law" means the coming into effect after the DPOFA Variation Date of:

- (a) Legislation, other than any Legislation which on the DPOFA Variation Date has been published:
- (i) in a draft Bill (to have effect in Scotland) as part of a Scottish Executive or United Kingdom Government consultation paper;
 - (ii) in a Bill;
 - (iii) in draft subordinate Legislation within the meaning of section 21(1) of the Interpretation Act 1978; or
 - (iv) as a draft directive or a draft regulation in the Official Journal of the European Communities; or
- (b) any applicable judgment of a relevant court of law which changes a binding precedent;

"Change of Control" means any sale or disposal of any legal, beneficial or equitable interest in any or all of the share capital of a corporation or the control over the exercise of voting rights in a corporation or the control over the right to appoint or remove directors of a corporation;

"Claim" has the meaning given in Clause 30.1;

"Code of Construction Practice" means the code dated 19 December 2007 and provided to the Operator for review prior to the date hereof which has been developed in conjunction with all relevant local authorities with regard to environmental and safety aspects affecting the interests of local businesses, the general public and the surroundings in the vicinity of the Construction Works, as maybe amended from time to time (as a *tie* Change in accordance with Clause 24 (*tie Changes*) of the Operating Appendix) and notified to the Operator. The Code will apply to the Construction Works;

"Code of Maintenance Practice" means the code dated 19 December 2007 and provided to the Operator for review prior to the date hereof which has been developed by *tie* with regard to environmental and safety aspects affecting the interests of local businesses, the general public and the surroundings in the vicinity of the Edinburgh Tram Network, as maybe amended from time to time (as a *tie* Change in accordance with Clause 24 (*tie Changes*) of the Operating Appendix) and notified to the Operator. The Code will apply to the operation and maintenance of the Edinburgh Tram Network;

"Commercially Sensitive Information" means this Agreement (unless otherwise agreed by the Parties), any information relating to detailed costings and funding of the Project and/or any other information which is agreed to be or is identified at the time of issue as being commercially sensitive;

"Competent Person" the competent person to be appointed in accordance with ROGS and Clause 12.12 from time to time;

"Compliance Critical Risk" means a risk or matter the Operator is obliged to insure against pursuant to Part 1 of Schedule 10 (*Insurances*) and which the failure of the Operator to carry any of the Required Insurances would prevent the Operator from lawfully performing the Project Development Services or the Project Operations in whole or in substantial part in the manner required by this Agreement;

"Concessionary Travel Scheme" means:

- (i) in respect of Edinburgh, East Lothian and Midlothian, the concessionary travel scheme known as "Concessionary Travel - Arrangements from 30 September 2002 for residents of The City of Edinburgh, East Lothian and Midlothian Councils"; and
- (ii) in respect of West Lothian, the concessionary travel scheme known as "West Lothian Concessionary Travel Scheme";

or any successor to either of such schemes nominated by tie;

"Construction Panel" has the meaning given to it in paragraph 5.4 of Schedule 7 (*Dispute Resolution Procedure*);

"Construction Works" means the infrastructure construction and installation works as part of the works to be carried out by any Infrastructure Provider;

"Control Centre" means the control centre for the control of the System to be provided by the Infrastructure Provider(s) and operated by the Operator pursuant to this Agreement;

"Core Staff Fixed Rates" means the costs numbered "9" in the tables included in the Base Case Assumptions, which are set in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) at a level in accordance with Table 1 of the Project Development and Operating Costs, and such other rates as tie and the Operator may agree

Network Rail, statutory undertakers or other public or regulatory body in relation to the Project;

6.12.6 any change to the Partnering Methodology and Programme, Project Programme, Affordability Limits or Operating Appendix; and

6.12.7 the scope of the Project Development Services to be provided by the Operator from time to time, and all other matters specified in Clause 16 (*Project Development Costs*).

6.13 Save as directed in writing by the Operator or the Operator Project Manager, the Operator shall not, and shall procure that the Operator Parties shall not, have any discussions or dealings with any person:

6.13.1 from whom any Necessary Consent (other than any Operator Necessary Consents) or public sector funding is sought, in relation to such Necessary Consent or funding or otherwise relating to any aspect of the Project which is not in the public domain;

6.13.2 whose land is or may be required for the purposes of the Project, in relation to such land or otherwise relating to any aspect of the Project which is not in the public domain;

6.13.3 who has objected to the Project or a proposed Scottish Private Bill, in relation to the undertakings or commitments which might be offered to him/her, or any other matter relating to any aspect of the Project which is not in the public domain; or

6.13.4 with or to whom any commitment or undertaking may need to be given or agreement entered into to facilitate the Project, in relation to any such commitment or undertaking, or otherwise relating to any aspect of the Project which is not in the public domain. For the avoidance of doubt, this Clause 6.13.4 shall not apply to any commitment or undertaking between the Operator and any Operator Party in relation to the delivery of the Project Development Services or the Transport Services;

6.13.5 who may seek compensation in respect of nuisance, injurious affection, use of his/her land, loss of benefit from his/her land in relation to such compensation or otherwise relating to any aspects of the Project which are not in the public domain; or

6.13.6 who is a member of CEC or any employee of tie who is not part of a project team referred to in Clause 5.1, in relation to any aspect of the Project not in the public domain; or

6.13.7 who is involved in any venture or undertaking similar to the Project which may be in competition with the Project as regards resourcing capacity or funding availability.

7. QUALITY ASSURANCE

7.1 The Operator shall procure that all aspects of the Project Development Services are the subject of quality management systems at all times.

7.2 The quality management systems referred to in Clause 7.1 above shall be reflected in appropriate quality plans which shall:

7.2.1 for the period from the Effective Date until the agreement of the Quality Management Plan between tie and the Operator during Project Phase B (pursuant to Schedule 2 (*Project Development Output Specification*)), reflect the Operator's outline quality management plan set out in the Inception Report;

7.2.2 be set out in the Quality Management Plan when agreed between the Operator and tie; and

7.2.3 in any event, be consistent with BS EN ISO 9001:2000 or any equivalent standard which is generally recognised as having replaced it.

7.3 The Operator shall appoint (or shall procure the appointment of) a Quality Manager as soon as reasonably practicable following the Effective Date. The identity of the Quality Manager (and any replacement) shall be subject to the approval of the tie Project Manager (such approval not to be unreasonably withheld or delayed).

7.4 During Project Phases A to C, the Quality Manager may (without limitation) be the Operator Project Manager or one of the Key Personnel. During Project Phase D in respect of any Phase, the identity of the Quality Manager shall comply with the requirements of Clause 14 (*Quality Assurance*) of the Operating Appendix.

7.5 During all Project Phases, the Quality Manager shall:

- 7.5.1 ensure the effective operation of the quality systems described in this Clause 7 (*Quality Assurance*) or Clause 14 (*Quality Assurance*) of the Operating Appendix (as appropriate);
- 7.5.2 audit the quality systems at regular intervals and report the findings of such audit to the **tie** Project Manager;
- 7.5.3 review all quality systems at intervals agreed with the **tie** Project Manager to ensure their continued suitability and effectiveness;
- 7.5.4 liaise with the **tie** Project Manager on all matters relating to quality management; and
- 7.5.5 report to the Operator in relation to the matters mentioned in Clauses 7.5.1 to 7.5.4 (inclusive).

8. OPERATOR'S PERFORMANCE SECURITY

- 8.1 Prior to the issue of a Mobilisation Certificate by **tie** in accordance with paragraph 41.3 of Schedule 2 (Project Development Output Specification), the Operator shall provide to **tie** a Performance Bond in the form of Schedule 14 (*Performance Bond*) to this Agreement and issued by a surety acceptable to **tie**.
- 8.2 The performance bond shall be for an amount of £10,000,000 (Ten Million Pounds Sterling) and shall be callable by **tie** on demand. The parties shall review the amount secured by the Performance Bond on the third anniversary of Full Service Commencement and annually thereafter. Any amendment required by **tie** to the amount secured by the Performance Bond shall be considered in accordance with Clause 24 (*tie Changes*) and Clause 23 (*Performance and Financial Adjustments*) of the Operating Appendix.
- 8.3 **tie** shall only be entitled to issue a demand notice to the surety in order to make a claim under the Performance Bond if **tie** has:
 - 8.3.1 provided the Surety in good faith with a written statement (the "**Prior Written Notice**") which identifies the Operator Default; and
 - 8.3.2 where such Operator Default is remediable, gives the Operator fifteen Business Days¹ (following receipt by the Operator of a copy of the Prior Written Notice) to rectify the Operator Default; and

8.3.3 the Operator has failed to rectify the Operator Default.

8.4 In the event the credit rating of the surety is downgraded to A- or a lower rating by Standard & Poors, **tie** shall be entitled to request the Operator to procure a substitute performance bond on identical terms from a surety acceptable to **tie**.

8.5 In the event that **tie** has made a demand on the Performance Bond and the costs, expenses, liabilities, loss of profits and damages incurred by **tie** as a result of:

8.5.1 the circumstances in respect of which the Performance Bond was called;

8.5.2 if applicable, the procurement of a replacement operator;

8.5.3 **tie** operating the System at greater cost than the operation of the System by the Operator; and

8.5.4 the costs of maintaining the Performance Bond in the preceding 5 years which have already been reimbursed to the Operator;

are less than the amount called under the Performance Bond and paid to **tie**, **tie** shall reimburse the Operator such amount as **tie** determines by reconciliation represents any surplus. Any such reconciliation shall be carried out by **tie** no earlier than 6 months and no later than 2 years from the date of payment under the Performance Bond. For the avoidance of doubt, **tie** shall not be liable to the Operator for any interest in respect of surplus reimbursed, subject to Clause 8.6 below.

8.6 **tie** shall notify the Operator when the reconciliation has been carried out pursuant to Clause 8.5 and **tie** shall pay any surplus to the Operator within 30 days of such notification. The Parties agree that **tie**'s calculation of the Bonded Costs shall be binding and not subject to challenge or dispute by the Operator under any circumstances. Reimbursement of the surplus under this Clause 8.6 shall carry interest at the Default Interest Rate from the due date of payment until payment occurs.

9. SPECIAL EVENTS

To the extent that there are any Special Events during Project Phase C2 in respect of any Phase that may affect the performance of the Project Development Services, **tie** and the Operator shall comply with the provisions of Clause 8 (*Special Events*) of the Operating Appendix.

10. AMENDMENTS TO THE OPERATING APPENDIX, THE OPERATOR FINANCIAL MODEL AND THE OPERATING OUTPUT SPECIFICATION, AND THE SETTING OF FIXED COSTS AND RATES

10.1 tie acknowledges that the Operator has agreed:

10.1.1 the Operator Financial Model as at the DPOFA Variation Date; and

10.1.2 the terms of the Operating Appendix;

on the basis of the Base Case Assumptions and the Law as at the DPOFA Variation Date;

10.2 Subject to Clause 10.6, in accordance with the Project Development Output Specification, during Project Phase A and B in respect of a Line and/or Phase, tie and the Operator shall review and agree any appropriate amendments to the Operating Appendix and/or the Operator Financial Model and/or the Operating Output Specification as a result of any Base Case Assumptions becoming Inappropriate Base Case Assumptions, or as a result of a Change in Law.

10.3 If pursuant to Clause 10.2, amendments are requested by the Operator to the Operating Appendix, the Base Case Assumptions, the Financial Proposals, the Operator Financial Model, the Project Development and Operating Costs and/or the Operating Output Specification during Project Phases A or B, the Operator and tie shall discuss, and seek to agree the relevant changes which will leave the Operator in No Better and No Worse a position than it would have been in had (i) the relevant Base Case Assumption not become an Inappropriate Base Case Assumption or (ii) the relevant Change in Law not occurred.

10.4 Without prejudice to the provisions of Clause 12 (*Interface with the Infrastructure Provider*), to the extent that there are any further developments to the Project during Project Phase C and/or Project Phase D which either the Operator or tie consider require amendment to the Base Case Assumptions, the Financial Proposals, the Operator Financial Model, the Project Development and Operating Costs, the terms of the Operating Appendix, and/or the Operating Output Specification such amendments shall be considered by the Operator and tie in accordance with Clause 23 (*Performance and Financial Adjustments*) and Clause 24 (*tie Changes*) or Clause 25 (*Operator Changes*) in the Operating Appendix.

- 10.5 If tie and the Operator are unable to agree:
- 10.5.1 whether any of the Base Case Assumptions is or has become an Inappropriate Base Case Assumption at any point during the Term; or
 - 10.5.2 whether a Change in Law has occurred; or
 - 10.5.3 what amendments to the Operating Appendix, the Base Case Assumptions, the Financial Proposals, the Operator Financial Model, the Project Development and Operating Costs and/or the Operating Output Specification pursuant to Clause 10.3 would leave the Operator in No Better and No Worse a position,
- then either Party may refer the disagreement to the Dispute Resolution Procedure.
- 10.6 The Category One Fixed Costs, the Category Five Fixed Costs, the Core Staff Fixed Rates and the Non-Core Staff Fixed Rates are set as at the the DPOFA Variation Date and shall not be subject to adjustment pursuant to Clause 10.2 except in relation to any Changes in Law.
- 10.7 The unit cost in respect of any Category Two Fixed Costs shall be set as at the Effective Date and the total cost of any Category Two Fixed Costs shall be set by reference to the Base Case Assumptions by the end of Project Phase B in accordance with this Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) in the same way as the Target Operating Costs shall be set at the end of Project Phase B.
- 10.8 The Category Three Fixed Costs shall be set by agreement between tie and the Operator by the end of Project Phase C1 in accordance with the procedure set out in Part A of Schedule 17 (*Setting of Fixed Costs*).
- 10.9 The Category Four Fixed Costs shall be set by agreement between tie and the Operator by the end of Project Phase C2 in accordance with the procedure set out in Part B of Schedule 17 (*Setting of Fixed Costs*).
- 10.10 tie and the Operator may agree from time to time to treat other costs or rates payable in accordance with this Agreement as fixed costs or fixed rates. These additional fixed costs or fixed rates may be treated as fixed costs or fixed rates within one of the

already defined categories of costs or rates, and set accordingly, or may be treated otherwise and set in a manner agreed by tie and the Operator.

- 10.11 Fixed Costs shall not be treated as Target Operating Costs or Target Costs for Project Phase C2, and if the actual costs for an item which is a Fixed Cost exceed the amount stated in the Project Development and Operating Costs (as Indexed), then tie shall not be liable to make payment to the Operator in respect of any excess above the Fixed Costs in accordance with this Agreement save as otherwise provided in Clause 12 (*Interface with the Infrastructure Provider*). Notwithstanding the actual costs for an item which is a Fixed Cost may be less than the amount stated in the Project Development and Operating Costs, tie shall be liable to pay the relevant Fixed Cost to the Operator in accordance with this Agreement.
- 10.12 All information on the actual costs associated with any Fixed Costs or Fixed Rates shall be made available to tie on an Open Book Basis.
- 10.13 All Fixed Costs and Fixed Rates which are applicable during Project Phase D (except for the Category Five Fixed Costs and any costs which the Parties agree are to be paid by tie to the Operator on a one-off basis) shall be subject to reset in accordance with Clause 21 (*Reset of the Fixed Costs, the Target Operating Costs and the Target Patronage*) of the Operating Appendix.
- 10.14 At the start of each Year, tie and the Operator shall agree a profile for the payment of Fixed Costs, Profit Element and Target Operating Costs, and the payment of any Fixed Costs, Profit Element and any Target Operating Costs shall be made by tie to the Operator in accordance with the agreed profile. The agreed profile shall take account of the following matters (where relevant):
- 10.14.1 one-off annual payments:
 - 10.14.2 amounts spread evenly over set periods;
 - 10.14.3 amounts which will vary seasonally or otherwise;
 - 10.14.4 fluctuations in service levels including bank holidays;
 - 10.14.5 one-off payments; and
 - 10.14.6 any methodology to be agreed by the Parties.

- 10.15 Either Party may refer any Dispute about the categorisation or setting of Fixed Costs or Fixed Rates to the Dispute Resolution Procedure.
- 10.16 The Operator shall update the Operator Financial Model in the following circumstances:
- 10.16.1 after the Target Costs for Project Phase C2, the Target Operating Costs and the Category Two Fixed Costs have been set in accordance with this Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*);
- 10.16.2 after the Category Three Fixed Costs have been set in accordance with this Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*);
- 10.16.3 after the Category Four Fixed Costs have been set in accordance with this Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*);
- 10.16.4 on each Reset Decision Date or following agreement or determination of reset pursuant to Clause 21 (*Reset of the Fixed Costs, the Target Operating Costs and the Target Patronage*) of the Operating Appendix;
- 10.16.5 after the setting or adjustment of Target Patronage by the Joint Revenue Committee;
- 10.16.6 after any financial adjustment pursuant to Clause 20 (*Adjustment of Fixed Costs, Target Operating Costs and Target Patronage*) of the Operating Appendix; and
- 10.16.7 as may be otherwise agreed by tie and the Operator.
- 10.17 When the Operator Financial Model is updated in the circumstances set out in Clause 10.16, any update shall be subject to tie's approval (such approval not to be unreasonably withheld). The updating of the Operator Financial Model shall be done on an Open Book Basis, and the Operator shall also respond as soon as reasonably practicable to any reasonable request from tie to provide any information associated

with the Operator Financial Model on an Open Book Basis. If required, the Operator shall also update the Financial Proposals and the Project Development and Operating Costs at the same time as updating the Operator Financial Model.

10.18 The Operator shall supply to tie an electronic copy of any updated Base Case Assumptions, Operator Financial Model, Financial Proposals and Project Development and Operating Costs within 10 Business Days of tie's approval in accordance with Clause 10.17.

10.19 During Project Phases A to C1, when the Operator Financial Model is updated in the circumstances set out in Clause 10.16, the costs of such updating by the Operator shall be paid by tie to the Operator on the basis of the Non-Core Staff Fixed Rates and in accordance with Clause 16 (*Project Development Costs*). During Project Phases C2 to D, when the Operator Financial Model is updated in the circumstances set out in Clause 10.16, the costs of such updating by the Operator shall be paid by tie to the Operator on the basis of actual costs agreed on the basis of an estimate provided by the Operator to tie. During each Project Phase, the Operator shall minimise as far as reasonably practicable, the costs associated with the updating of the Operator Financial Model.

11. NETWORK EXPANSIONS AND PHASE 1B

11.1 tie and the Operator will keep opportunities for Network Expansion under review throughout the Term, consistent with the objectives of the Integrated Transport Initiative and any other relevant public transport initiatives of CEC, TEL or tie from time to time.

11.2 From time to time during the Term, tie may propose to the Operator a Network Expansion for development. To the extent that tie requests assistance from the Operator in relation to the development of such Network Expansion:

11.2.1 the Operator will provide Project Development Services during the development of that Network Expansion, and the provisions of this Agreement and the Project Development Output Specification shall apply to the development of that Network Expansion as if it were a Line or Phase (as appropriate); and

11.2.2 the terms of payment for the Network Expansion in respect of Project Development Services and Project Operations shall be the same as those set

out in this Agreement. Following **tie's** request pursuant to Clause 11.2 above, the Operator shall present for **tie's** approval its proposals for capped fees for the Development Phase for the Network Expansion and the relevant workstreams in the Project Development Output Specification.

11.3 If **tie** and the Operator are unable to agree the fees for the Project Development Services in respect of any Network Expansion pursuant to Clause 11.2.2, **tie** may withdraw its request for the Operator to provide the Project Development Services and **tie** may continue with the development of such Network Expansion, either by itself or in conjunction with third parties.

11.4 Whether or not **tie** requests the Operator to provide Project Development Services in relation to a proposed Network Expansion:

11.4.1 the Operator shall provide access to such information, documents and records as may be reasonably requested by **tie** or the **tie** Advisers in relation to the development of the proposed Network Expansion, and the provisions of Clause 49 (*Information and Audit Access*) shall apply (*mutatis mutandis*) to such access;

11.4.2 **tie** and the Operator will negotiate in good faith in relation to agreeing:

- (i) the Target Costs for Project Phase C2 (*Testing and Commissioning*) and any Fixed Costs relative to Project Phase C2 for the Network Expansion;
- (ii) the Interim Target Operating Costs, Interim Fixed Costs and the Interim Target Patronage for the System including such Network Expansion (if it is proposed that there be a time interval between the Service Commencement Date and the Full Service Commencement Date for such Network Expansion);
- (iii) the Target Operating Costs, the Target Patronage and any Fixed Costs for the System including such Network Expansion;
- (iv) amendments to the Operating Output Specification, the Operating Method Statements (and the Operating Appendix to the extent necessary) to take effect from the Service Commencement Date of the Network Expansion; and

- (v) any other amendments to this Agreement that are necessary in respect of the Network Expansion,

on the basis that the Operator should be in a No Better and No Worse position following the implementation and Service Commencement of the Network Expansion. **tie** and the Operator shall have regard to, but not be bound by, the costing assumptions prepared by the Operator which are set out in Schedule 19 (*Additional Costing Assumptions*).

- 11.5 To the extent that **tie** and the Operator are unable to agree the matters listed in Clause 11.4.2 by the end of Project Phase B for the Network Expansion (or the equivalent stage of development if the Operator is not providing the Project Development Services), **tie** shall be entitled to terminate this Agreement pursuant to Clause 32.5.
- 11.6 The Operator acknowledges that **tie** may, by providing the Operator with a written notice such notice to be issued sufficiently far in advance to enable the Operator to be able to do so (and in any event sufficiently far in advance of the minimum period required for recruitment), instruct that the Transport Services are to be performed by the Operator in respect of Phase 1b. If so instructed by **tie**, the Operator shall perform the Transport Services in respect of Phase 1b and, subject to Clauses 11.7 and 11.8, the provisions of this Agreement shall apply to the Transport Services to be performed in respect of Phase 1b.
- 11.7 In the event that **tie** gives the instruction to the Operator to carry out the Transport Services in respect of Phase 1b under Clause 11.6, the provisions set out in Schedules 4 (*Financial Proposals*), 5 (*Operator Financial Model*), and 6 (*Project Development and Operating Costs*) of this Agreement, and schedule 4 (*Operating Output Specification*) of the Operating Appendix, which refer to the Transport Services being combined for Phase 1a and Phase 1b shall come into force and be substituted for the equivalent provisions in respect of Phase 1a only and this Agreement shall be amended as set out in such provisions.
- 11.8 For the avoidance of doubt, in the event that **tie** gives the instruction to the Operator to carry out the Transport Services in respect of Phase 1b under Clause 11.6,;
 - 11.8.1 such Transport Services shall not include any requirement to repeat any of the tasks described in Schedule 2 (*Project Development Output Specification*) which are described as being part of Project Phase A; and

11.8.2 such instruction shall not be treated as a tie Change unless any of the Base Case Assumptions relative to such instruction are or have become Inappropriate Base Case Assumptions.

11.9 Any ambiguities or discrepancies in the Agreement that arise as a result of the notice to proceed to provide the Transport Services in respect of Phase 1b shall be resolved by tie and the Operator (both acting reasonably and in good faith).

12. INTERFACE WITH THE INFRASTRUCTURE PROVIDER

12.1 Wherever in this Clause 12 (*Interface with the Infrastructure Provider*) a Party is required to make any determination or to exercise its discretion by the giving of decisions, instructions, opinions or consents or to express satisfaction or approval or otherwise take any action, that Party shall exercise such discretion fairly and reasonably (save where it is stated that such Party is to have absolute discretion), and having regard to all the circumstances.

12.2 In the event that any of the events or circumstances defined as Infraco Events occur and to the extent that the Operator can demonstrate to tie's reasonable satisfaction that there has been a resultant demonstrable adverse effect on the Operator's ability to perform and/or the cost to perform any of the Project Development Services or the Project Operations, then the Operator shall be entitled to relief and/or compensation on the basis set out in this Clause 12 (*Interface with the Infrastructure Provider*).

12.3 Upon the occurrence of an Infraco Event, the Operator shall be entitled to:

12.3.1 reimbursement of additional costs and expenses directly attributable to the prolongation or significant disruption of Project Phase C1 and/or Project Phase C2 through:

12.3.1.1 appropriate adjustment of the Capped Fee applicable to delivery of Project Development Services during Project Phase C1; and

12.3.1.2 inclusion of any additional costs and expenses suffered or incurred during Project Phase C2 as actual Target Costs for Project Phase C2 and/or other costs and expenses for Project Phase C2 pursuant to Clause 18 (*Payment during Project Phase C2*), and in particular, subject to Clause 18.12, Category 3 Fixed Costs and the Target Costs for Project Phase C2 shall be adjusted by the appropriate amount.

12.3.2 reimbursement of demonstrable additional costs and expenses directly attributable to an Infraco Event, which costs and expenses have been suffered or incurred during Project Phase D and the Target Operating Costs shall be adjusted by the appropriate amount.

12.3.3 reimbursement of demonstrable additional costs and expenses directly attributable to (i) the carrying out by the Infrastructure Provider of any remedial or rectification works on the System to correct defects in Infrastructure and Equipment, (ii) any abortive work or services carried out by the Operator which require reworking or repetition and (iii) supplemental operating functions or maintenance required from the Operator as a result of material defects in the Infrastructure and Equipment or material failings in the Infrastructure Provider provision of services pursuant to the IDA.

provided always that any reimbursement under this Clause 12.3 shall be subject to Clause 12.4.

12.4 The reimbursement of any demonstrable additional costs and expenses sought under this Clause 12 (*Interface with the Infrastructure Provider*) by the Operator shall be:

12.4.1 reasonably reduced to the extent that the Operator has predominantly caused or materially contributed to the occurrence of the Infraco Event ;

12.4.2 reasonably reduced to the extent that the Operator has not carried out mitigation measures in accordance with Clause 12.16;

12.4.3 subject to an aggregate weekly limit of:

12.4.3.1 prior to the completion of Section A - £8,900;

12.4.3.2 following completion of Section A or commencement of training by the Operator in the following Section B and prior to completion of Section B - £15,500;

12.4.3.3 following completion of Section B or commencement of training by the Operator in the following Section C and prior to completion of Section C - £36,900;

12.4.3.4 following completion of Section C or commencement of training by the Operator in the following Section D and prior to completion of Section D - £70,000;

12.4.3.5 following completion of Section D and during Project Phase D - £129,800;

Provided always that if the works are not carried out in the sequence of (first) Section A, (second) Section B, (third) Section C and (fourth) Section D, then, as appropriate, the Parties (both acting reasonably) agree to adjust the weekly limits stated in Clauses 12.4.3.1, 12.4.3.2, 12.4.3.3, 12.4.3.4 and 12.4.3.5 and both Parties agree that in making any adjustment that they shall, as appropriate, have regard to the weekly limits which have already been agreed; and

12.4.4 subject to the provision to tie of reasonable supporting documentation and reasonable proof of expenditure of such costs and expenses by the Operator.

12.5 Where the direct effects of the Infraco Event occur during Project Phase D, the Operator:

12.5.1 shall adhere to performance as regards provision of Transport Services in accordance with the Timetable, save as may be impracticable or as may be expressly agreed otherwise with tie as regards any degraded service;

12.5.2 shall be subject to the application of any KPI Regime Profit Element deductions pursuant to Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of the Operating Appendix, save to the extent that the Operator's deficient performance has been a direct result of the relevant Infraco Event.

12.5.3 shall be responsible:

12.5.3.1 for notifying tie, and copying such notification to the Infrastructure Provider as soon as practicable (and in any case no later than 2 hours after being on notice of the Infraco Event) of the likely severity and duration of any deficient or non compliant performance of Project Operations (in particular degraded Transport Services not in accordance with the Timetable);

12.5.3.2 recording the effect of the Infraco Event and its duration and providing tie with an accurate and comprehensive report in agreed form within five (5) Business Days of the occurrence following which tie shall determine based on the report, promptly and acting reasonably, the extent and duration of relief granted to the Operator subject to the right of the Operator (acting reasonably and in good faith) to refer such determination to the Dispute Resolution Procedure;

12.5.4 shall be entitled to reimbursement of demonstrable additional costs and expenses incurred in responding to and mitigating the effect of the Infraco Event.

12.6 Upon the occurrence of an Infraco Event, the Operator shall be under a continuing obligation to report promptly to the Infrastructure Provider and to tie any incident, matter or operational irregularity which may indicate the existence of a System defect which, in the Operator's reasonable opinion, is likely to or will materially and adversely affect Project Operations, in particular so as to:

12.6.1 prevent or interfere with the provision of Transport Services;

12.6.2 increase Operating Costs or prevent savings of the same;

12.6.3 require the Operator to undertake altered or new functions;

12.6.4 require a temporary or permanent change to the Transport Services or Project Operations;

12.6.5 impact upon Operator Maintenance or, to the extent known by the Operator and reasonably practicable, the System whole life costs, or Infrastructure Provider maintenance.

12.7 **No Termination Trigger**

12.7.1 If the occurrence of an Infraco Event is the direct cause of the Operator being in breach of this Agreement, then such breach:

12.7.1.1 shall not be treated as an Operator Default, shall not count towards any calculation of an Operator Default and shall not entitle tie to

serve any notice to the Operator under the terms of Clause 35
(*Termination on Operator Default*);

12.7.1.2 shall not entitle **tie** to serve any notice to the Operator under the terms
of Clause 34 (*Persistent Breach*); and

12.7.2 shall not entitle **tie** to call upon the Performance Bond;

provided always that where the Operator is otherwise in breach of this Agreement and such breach is not the direct result of an Infraco Event, then **tie** shall, (where entitled in accordance with the other provisions of this Agreement), be entitled to terminate this Agreement and/or call upon the Performance Bond in accordance with the terms of this Agreement and the Performance Bond regardless of whether such breach is concurrent or not with the occurrence of the Infraco Event.

12.8 **Project Programme Revision**

12.8.1 Following the occurrence of an Infraco Event, the Operator shall provide **tie** with a revised Partnering Methodology and Programme within 7 days (or such longer period as may be agreed by both Parties acting reasonably) of notifying **tie** and shall support **tie** in updating the Project Programme which Project Programme shall be adjusted (as appropriate) to address the occurrence of the Infraco Event and consequences thereof.

12.8.2 The revised Project Programme will show the effect of the relevant Infraco Event and how the remedial measures taken by the Operator pursuant to Clause 12.16 will assist and/or retrieve delay so as far as practicable having regard to the Operator's resources to safeguard programme milestones, or detail the delay and mitigation measures by **tie**, the Operator or the Infrastructure Provider.

12.8.3 **tie** shall and shall procure the counterparties to the IDA each co-operate and provide such information and assistance as the Operator shall reasonably require in connection with this Clause 12.8 and the updated and revised Project Programme and Partnering Methodology and Programme.

12.9 **Infraco Snagging List**

12.9.1 **tie** shall provide a draft of the Infraco Snagging List as soon as reasonably practicable and updated drafts as appropriate to the Operator prior to the start

of Shadow Running in accordance with the Project Programme together with any Infrastructure Provider's proposals for completion and/or rectification which are available. **tie** shall then provide the Operator with a final list of the Infraco Snagging List and any updated Infrastructure Provider's proposals for completion and/or rectification within 2 Business Days of the start of Shadow Running.

- 12.9.2 Both Parties acting reasonably shall agree a remedial programme for the items on the Infraco Snagging List within 5 Business Days of the receipt of such draft Infraco Snagging List and shall agree (both Parties acting reasonably) adjustments to such remedial programme to reflect any updates to the draft Infraco Snagging List. As part of agreeing such remedial programme, the Operator shall identify any items on the Infraco Snagging List which may reasonably be expected to result in an Infraco Event if not rectified by the relevant Infrastructure Provider in accordance with the agreed remedial programme.
- 12.9.3 The Operator shall be responsible for reporting to **tie** any other snagging or incomplete items of which the Operator becomes aware, and whether such snagging or incomplete items may reasonably be expected to result in an Infraco Event which items shall be added (where appropriate) to the Infraco Snagging List. Both Parties acting reasonably shall then agree an adjustment to the remedial programme agreed in accordance with Clause 12.9.2.
- 12.9.4 In providing the report under Clause 12.9.3 and agreeing the remedial programme under Clause 12.9.2, the Operator shall take account of the effect of any Operator Snagging Matters.
- 12.9.5 **tie** and the Operator shall agree upon any temporary modification to or relaxation in the provision of Transport Services in accordance with the Timetable and any appropriate temporary adjustment to the application or calibration of the KPI Regime as set out in Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) to the Operating Appendix to reflect any System performance irregularity or any other adverse consequences caused by items on the Infraco Snagging List or as a consequence of the remediation of any items on the Infraco Snagging List provided that any adjustment to the calibration or application of the KPI Regime shall take into account the extent to which:

12.9.5.1 the Operator has not acted in accordance with the remedial programme agreed in accordance with Clause 12.9.2 save to the extent caused by **tie** or a **tie** Party; and/or

12.9.5.2 the Operator has otherwise breached the terms of this Agreement save to the extent caused by **tie** or a **tie** Party and such breach directly results in delay to such remedial programme.

12.9.6 Where any Infraco Snagging List activity by the Infrastructure Provider creates additional workload or support from the Operator, then any reasonable, direct and demonstrable costs and expenses associated with such additional workload or support shall be paid by **tie** to the Operator.

12.10 Design Input and Technical Requirements under the IDA

12.10.1 The Operator shall be entitled to comment upon the design of the System at the agreed stages of development set out in the Project Programme in order that the Infrastructure Provider is in a position to take account of such comments which **tie** shall pass to the Infrastructure Provider when refining the final design and when ensuring System integration.

12.10.2 The Operator shall be entitled to review the Infrastructure Provider responses to the technical requirements for the System and shall provide **tie** promptly with the outcome of such review.

12.10.3 **tie** shall ensure that the Operator is provided with such documentation as agreed by **tie** and the Operator in accordance with the Partnering Methodology and Programme to enable the Operator to fulfil such duties and **tie** shall take due and proper account of the Operator's comments. **tie** shall notify the Operator of those comments which are not accepted or not adhered to and/or implemented.

12.10.4 **tie** shall make available to the Operator a copy of the final version of such documentation referred to in Clause 12.10.3.

12.11 IDA Change

12.11.1 The Operator shall respond with comments ("**IDA Change Response**") within 5 Business Days of being notified of any proposed variation under the IDA which notice shall state clearly as the subject matter "**IDA Change**

Response – Urgent". If, on receipt of such notification, the Operator considers (acting reasonably) that (i) the IDA Change Response required is too complex to be completed or (ii) having regard to the number of other IDA Change Responses which have been submitted and/or are being prepared by the Operator, having regard to the Operator's resources and other obligations, a proper response cannot reasonably be completed; in each case and returned to tie within 5 Business Days, then the Operator shall, as soon as reasonably practicable and no later than 2 Business Days after receipt of such notification, deliver to tie a request for a reasonable extended period of time for return of the IDA Change Response, such extended period to be agreed by the Parties, both acting reasonably.

12.11.2 In the event that the IDA Change Response requires a modification to the proposed variation in order to avoid or mitigate the occurrence of or impact of an Infracore Event on the Operator or any adverse effects on the ability of the Operator to perform the Project Development Services and/or the Project Operations, the Operator shall provide tie and the Infrastructure Provider with a written report within 10 Business Days of the date of receipt of the IDA Change Response, setting out how the proposed variation under the IDA will cause the occurrence of or impact upon an Infracore Event or will affect the Project Development Services during Project Phase C1 and/or C2 and/or Project Operations during Project Phase D.

12.11.3 tie shall review the IDA Change Response pursuant to Schedule 9 (*Review Procedure*) and if tie is satisfied that modification to the proposed variation under the IDA is required to address any issue arising from the IDA Change Response, tie may instruct such modification under the variation provisions in the IDA.

12.11.4 If and to the extent that the Operator can demonstrate to the reasonable satisfaction of tie (who shall act reasonably) that the following matters directly and adversely affect the Project Operations or the Transport Services and are not minor matters:

12.11.4.1 where tie has not taken into account the proper and reasonable comments of the Operator acting in accordance with Good Industry Practice in respect of the Infrastructure and Equipment Output Specification, the IDA in so far as it

affects the Transport Services or the proposals of the Infrastructure Provider(s) or an IDA Change response or report under Clause 12.11.2 or the Infrastructure Provider Maintenance in so far as it affects the Transport Services; or

12.11.4.2 where the Infrastructure and Equipment Output Specification, the IDA so far as it affects the Transport Services or the Infrastructure and Equipment to be delivered pursuant to an IDA or the Infrastructure Provider Maintenance (i) is changed, (ii) or to the extent never given to the Operator to comment on under Clauses 12.10, 12.11 or 12.11.4 without the Operator being given a proper and reasonable opportunity to comment on the change or the relevant part thereof;

then the Operator and **tie** shall discuss the matter in good faith and **tie** shall determine (acting reasonably) whether **tie** wishes to change the Project Operations or the Transport Services as a result (and the same shall be a **tie** Change) or if and to the extent that **tie** does not wish to make a **tie** Change, the Operator shall be entitled to an Operator Change to address the issues and pending implementation of either a **tie** Change or an Operator Change, then the Operator shall not be in breach of this Agreement and shall not be subject to the application of any KPI Regime Profit Element deductions pursuant to Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of the Operating Appendix as a direct result of the circumstances set out in this Clause 12.11.4 (but to that extent only and no more).

12.11.5 Failure by the Operator to respond as stipulated or as otherwise agreed under Clause 12.11.1 shall be a bar to any claim for relief or compensation.

12.12 Safety

12.12.1 The Operator shall provide a suitably qualified and competent representative for the Project Safety Committee who shall be responsible for the Operator's participation in and technical contribution to the Project Safety Committee's output and discharge of its responsibilities. **tie** shall give prior notice of all meetings of the Project Safety Committee together with any agenda (where available) and any papers (where available) to the Operator in order to allow the Operator to participate. **tie** shall circulate any minutes (where available) after any such meetings.

12.12.2 The Operator acknowledges that **tie** has chosen to follow the ROGS' route for approval of the System and that, subject to Clause 12.12.3, **tie** shall appoint the "Competent Person" as may be required from time to time.

12.12.3 In advance of making any appointment of a competent person, **tie** shall liaise with the Operator and shall take due cognisance of comments from the Operator in relation to such competent person provided that such comments are reasonable.

12.12.4 To the extent relevant or appropriate to the Project Development Services or Project Operations, **tie** shall, and shall procure that each **tie** Party, complies with Law (including ROGS) and shall provide such information and/or documentation and reasonable assistance to the Operator as the Operator requests acting in accordance with Good Industry Practice in order to enable the Operator to discharge its safety obligations and duties in accordance with this Agreement.

12.13 Operational Interface and Operator Mobilisation

12.13.1 The day-to-day operation of the System to the extent handed over in accordance with the Project Programme and Shadow Running Validation Plan shall be the responsibility of the Operator from the start of Shadow Running as set out in the Project Programme. In operating the System, the Operator shall give due regard to the proper and reasonable views and technical advice of the Infrastructure Provider regarding the operational deployment and integration of the various components of the System. The Operator shall notify **tie** of any such views which would necessitate an amendment to the Project Development Services and/or the Project Operations. If **tie** agrees that any amendment to the Project Development Services and/or the Project Operations is required, such amendment shall be deemed to be a **tie** Change pursuant to Clause 24 (*tie* Changes) of the Operating Appendix. If the Operator does not agree with **tie**'s decision, the Operator may refer such decision to the Dispute Resolution Procedure for determination.

12.14 Testing and Commissioning and Trial Running

12.14.1 The Operator shall ensure that it works closely and effectively with the Infrastructure Provider in the performance of the Operator's obligations pursuant to paragraphs 34.2.3, 34.2.4 and 34.3, and paragraphs 35.1, 35.2 and

paragraph 38 (*Testing and Commissioning Plan*), paragraph 41 (*Gateway from Project Phase C1 to Project Phase C2*), paragraph 43 (*Operator's Role During Testing and Commissioning*) of Schedule 2 (*Project Development Output Specification*).

12.14.2 In the event that as a direct consequence of the Infrastructure Provider failure or delay, the Operator is unable to progress with or is hindered in the performance of the Operator's obligations set out in Clause 12.14.1 above, the Operator shall notify *tie* in writing as soon as practicable stating the reasons and the action required in order to remedy the situation.

12.14.3 Following any Infraco Event, the Operator shall be entitled to reimbursement by *tie* of all reasonable and demonstrable additional costs and expenses from an extension of or significant disruption of the commissioning and Shadow Running provided in respect of delay to the Shadow Running period such period is delayed by more than one day (such one day to be allowed is an aggregate period notwithstanding any number of delays to the Shadow Running period) and incurred directly as a result of a requirement upon the Infrastructure Provider to re-test, re-trial or re-commission any part of the System.

12.15 Partnering

12.15.1 The Operator shall use reasonable endeavours to co-operate and communicate collaboratively with the Infrastructure Provider and the Infrastructure Provider Parties at all times from the date of their respective appointment in order to:

12.15.1.1 maintain the highest standards achievable with regard to the provision of the Transport Services;

12.15.1.2 minimise the interruption to Transport Services caused by any Infraco Event, Operator Default or *tie* Default;

12.15.1.3 safeguard proper performance of the Project Development Services, the Project Operations and, by the Infrastructure Provider, of the Infrastructure Provider obligations under the IDA;

12.15.1.4 mutually support adherence to the Project Programme and all related project delivery timelines and programmes and to share on a systematic basis Project Data and key information connected with such adherence;

12.15.1.5 report promptly to one another any proposed change which is likely to or will have a material impact on the performance of any obligations owed to tie by either party during design, construction, operation or maintenance of the System and inform tie regarding measures proposed to avoid or mitigate such impact; and

12.15.1.6 agree and implement whenever appropriate measures to minimise the likelihood of disputes or claims.

12.15.2 tie shall also use reasonable endeavours to co-operate, communicate and collaborate with the Operator, the Infrastructure Provider and the Infrastructure Provider Parties at all times in respect of such matters.

12.16 Duty to Mitigate

12.16.1 The Operator shall take all reasonably practicable measures to mitigate any Infraco Event from materially adversely affecting the proper performance of the Project Development Services and the Project Operations, including reasonably practicable measures which may be advisable in order to mitigate the risk of any reoccurrence all in so far as within the Project Development Services and/or Project Operations and/or appropriate for an Operator exercising Good Industry Practice;

12.16.2 As soon as reasonably practicable (or as specifically provided for in this Agreement) after becoming aware that an Infraco Event is likely to have or has had a material adverse impact on the Operator's ability to perform any of its obligations under this Agreement, the Operator shall notify tie and the Infrastructure Provider. tie shall arrange a meeting with the Operator, the Infrastructure Provider and tie's Representative to discuss and agree a plan for corrective measures necessary to address the situation and to permit the Operator to resume unrestricted (or the best, if restricted, level of) performance of Project Operations within the shortest practicable time period. It shall be the Operator's responsibility to obtain tie's prior consent (such

consent not to be unreasonably withheld or delayed) to, and to seek the support of, the Infrastructure Provider for the use of any corrective measures taken by the Operator, whether temporary or permanent.

12.17 No Extension of Term for Infraco Event

12.17.1 In the event that an Infraco Event causes delay in the issue by tie of the Certificate of Full Service Commencement or Certificate of Service Commencement pursuant to Clause 3 of the Operating Appendix, the Operator shall not be entitled to any extension of the Expiry Date.

12.17.2 For the avoidance of doubt, the provisions of Clause 22 (*Relief Events*) of the Operating Appendix shall not apply to Infraco Events but without prejudice to the provision of Clause 12.7.

12.18 Infrastructure & Equipment

12.18.1 If the Operator can demonstrate to tie's reasonable satisfaction (tie shall act reasonably) that:

12.18.1.1 the Operator cannot provide the Transport Services or Project Operations in accordance with this Agreement and/or cannot reasonably practicably comply with an instruction/direction of tie under this Agreement which tie is entitled to give and having regard to the Operator's resources and competencies; and

12.18.1.2 this is directly caused by the Infrastructure and Equipment; and

12.18.1.3 this is not an Infraco Event; and

12.18.1.4 the Operator is acting reasonably in accordance with Good Industry Practice and any adjustments to the Infrastructure and Equipment which might remove or alleviate the issue are not adjustments that the Operator ought to make as part of the Transport Services acting reasonably in accordance with Good Industry Practice and having regard to the Operator's resources and competencies;

then the Operator shall not be in breach of this Agreement and shall not be subject to the application of any KPI Regime Profit Element deductions pursuant to Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of the Operating Appendix in respect of the circumstances set out in this Clause 12.18, provided that to the extent the Operator should, exercising Good Industry Practice and having regard to all relevant circumstances, have identified the issue during Project Phase B and/or Project Phase C and did not, then, the Operator shall not be entitled to relief from the Operator's obligations or the application of any such KPI Regime Profit Element deductions to that extent.

12.19 Collection and/or Provision of Information and Data

12.19.1 The Operator's obligations in this Agreement to collect and/or process/provide information and/or data to tie shall be limited to what is reasonably practicable using the Infrastructure and Equipment and to the extent that the information/data is collected by or held by others and not the Operator, or to the extent provided to the Operator pursuant to the Service Integration Plan.

12.20 Infrastructure Provider

12.20.1 tie shall notify the Operator of the identity and address/place for service of notices upon the Infrastructure Provider and of any change in such details form time to time.

PART III - OPERATIONS PHASE

13. TRANSITION TO PROJECT PHASE D

- 13.1 The Operating Appendix shall come into effect in accordance with its terms and this Agreement (including such Operating Appendix) will govern the performance of the Project Operations for each of the Phases and/or any Network Expansion.
- 13.2 The Service Commencement Date (and the Full Service Commencement Date, if different) for each Phase or Network Expansion shall be determined in accordance with the Project Programme, the terms of the Project Development Output Specification and the Operating Output Specification.

14. EDINBURGH TRAM NETWORK INTEGRATION

- 14.1 The Operator shall be responsible for maintaining and implementing the System Integration Plan, and shall liaise with the Infrastructure Provider(s) accordingly.
- 14.2 The Operator shall exercise such management authority (in respect of the performance of the System Integration Plan) pursuant to tie's rights under the Infrastructure Delivery Agreements as tie may direct from time to time in accordance with Clause 11 (*Operation and Maintenance Procedures*) of the Operating Appendix.
- 14.3 During the Term, the Operator shall remain responsible for supporting maintenance and implementation of the Service Integration Plan, to support the integration of the Edinburgh Tram Network with other local public transport for the benefit of passengers and the realisation of the objectives of the Integrated Transport Initiative, the Project Vision and tie's and TEL's other transportation objectives.

15. PERSONNEL ISSUES

- 15.1 The Operator shall at all times during the Term (including the Development Phase):
- 15.1.1 follow recruitment good practice to ensure that appropriately high quality staff are engaged, suitable for the posts to be filled, taking into account the level of responsibility involved;
- 15.1.2 procure that there are set up and maintained by the Operator and all contractors with whom the Operator contracts in respect of the Project, personnel policies and procedures covering all relevant matters (including discipline, grievance, benefits, equal opportunities and health and safety).

The Operator shall procure that the terms and the implementation of such policies and procedures comply with Law (which for the purposes of this Clause 15.1.2 shall exclude Guidance which only tie or a public sector body and not the Operator is bound to comply with) and Good Industry Practice, and that such policies and procedures are approved by the relevant authorised party within the Operator and are prepared in appropriate editable electronic media and paper copy and that an electronic and a reasonable number of paper copies as agreed between tie and the Operator (both acting reasonably) of such policies and procedures (and any revisions and amendments to them) are issued to tie as soon as reasonably practicable after production;

15.1.3 provide, and shall procure that all contractors with whom the Operator contracts in respect of the Project provide, to tie upon request written details of their respective management organisations;

15.1.4 not (and the Operator shall insert a clause to this effect in each contract with contractors with whom the Operator contracts in respect of the Project) unlawfully discriminate within the meaning and scope of the provisions of the Equal Pay Act 1970, the Sex Discrimination Act 1975, the Race Relations Act 1976, the Disability Discrimination Act 1995, the Employment Rights Act 1996, the Working Time Regulations 1998, the Part-Time Workers (Prevention of Less Favourable Treatment) Regulations 2000, the Fixed Term Employees (Prevention of Less Favourable Treatment) Regulations 2002, the Employment Equality (Sexual Orientation) Regulations 2003, the Employment Equality (Religion or Belief) Regulations 2003 and the Employment Equality (Age) Regulations 2006; and

15.1.5 have in place and implement appropriate equal opportunities and equality policies and comply with all applicable Law (which for the purposes of this Clause 15.1.5 shall exclude Guidance which only tie or a public sector body and not the Operator is bound to comply with) regarding employment of or recruitment of the Operator's employees.

15.2 The Operator shall during Project Phase C2 and Project Phase D:

15.2.1 comply with paragraph 7 of Schedule 4 (*Operating Output Specification*) to the Operating Appendix in relation to personnel issues; and

15.2.2 comply with the Recruitment and Training Plan.

15.3 In accordance with Clause 5.4.2, the Operator shall comply with the Recruitment and Training Plan during Project Phase B once that plan has been agreed between tie and the Operator pursuant to the Project Development Output Specification.

15.4 During Project Phase C2 or Project Phase D, the tie Project Manager (acting properly and reasonably) may notify the Operator in writing if any employee of the Operator or any Operator Party (in accordance with the terms and conditions of employment of the employee concerned) misconducts himself or is incompetent or negligent in his duties or whose conduct in relation to the Project Operations is considered by the tie Project Manager to be undesirable and/or not in accordance with the Operator's obligations under this Agreement. tie shall co-operate with any disciplinary proceedings instigated by the Operator and shall be advised in writing by the Operator of the outcome in respect of such notification.

15.5 During Project Phase C2 or Project Phase D, if tie, acting fairly and having reasonable grounds to believe that a member of the Project Operations Staff:

15.5.1 has been or is under the influence of alcohol or drugs whilst performing any duties in connection with the Project Operations; or

15.5.2 has been convicted of any offence concerning sexual offences on children, theft, corruption or fraud; or

15.5.3 has, in the case of a Tram driver, been convicted of any offence involving alcohol or drugs,

requires the Operator (by notice in writing) to do so, the Operator shall (or shall procure that the relevant Operator Party shall) at the Operator's cost, immediately remove such employee from the Project Operations. Such employee may only be returned to the Project Operations if the matter or matters referred to in Clauses 15.5.1, 15.5.2 and/or 15.5.3 which is/are the subject of tie's reasonable grounds is/are established to be incorrect.

PART IV - FINANCIAL PROVISIONS

15A. INDEXATION

15A.1 Indexation shall be applied on an annual basis on 1 April of each year to the costs set out in Clauses 15A.2 and 15A.3 below.

15A.2 The following costs shall be Indexed:

15A.2.1 Target Costs for Project Phase C2;

15A.2.2 Target Operating Costs;

15A.2.3 Interim Target Costs;

15A.2.4 Profit Element;

15A.2.5 any amount which is expressed to be "Indexed" in this Agreement; and

15A.2.6 any other amount which is agreed by the Parties to be Indexed.

15A.3 The following costs shall be Indexed at Premium:

15A.3.1 Fixed Costs;

15A.3.2 Interim Fixed Costs;

15A.3.3 Fixed Rates;

15A.3.4 any amount which is expressed to be "Indexed at Premium" in this Agreement; and

15A.3.5 any other amount which is agreed by the Parties to be Indexed at Premium.

16. PROJECT DEVELOPMENT COSTS

16.1 During the Development Phase of this Agreement, the tie Project Manager and the Operator Project Manager shall meet:

- (a) no later than 7 days before the end of each Quarter during Project Phases A, B and C1 to agree the provision of Project Development Services by the Operator's Core Team for the forthcoming Quarter; and

- (b) no later than 7 days before the end of each month during Project Phases A, B and C1 to agree the provision of Project Development Services by the Operator's Non-Core Staff , and
- (c) no later than 7 days before the end of each month during Project Phase C2 to agree the provision of Project Development Services during Project Phase C2

to:

- 16.1.1 review the partnering tasks required in the next Quarter or (as appropriate) month ;
- 16.1.2 specify the Project Development Services required from the Operator which will be provided by the Operator's Core Team to perform or assist in the performance of those partnering tasks. tie shall determine whether or not such Project Development Services fall outwith the Project Development Services to be provided by the Operator's Core Team within the relevant Capped Fee. If it is agreed that such Project Development Services would fall outwith this Capped Fee, then if tie still require these Project Development Services, tie shall require the Operator's Core Team to perform these additional Project Development Services as if these Project Development Services were being provided by the Operator's Non-Core Staff. Any additional Project Development Services required on this basis shall be specified in accordance with Clause 16.1.3 and budgeted on a monthly basis in accordance with Clause 16.1.5;
- 16.1.3 specify the Project Development Services required from the Operator which will be provided by the Operator's Non-Core Staff to perform or assist in the performance of those partnering tasks;
- 16.1.4 agree amendments to the Partnering Methodology and Programme setting out the plan and timetable for the performance of those tasks;
- 16.1.5 agree a forward budget for such month or Quarter (as appropriate) in respect of the services specified by tie pursuant to Clauses 16.1.2 and 16.1.3 for the Project Development Costs to be incurred by the Operator in performing those tasks, and such budget shall also include any agreed Profiled Fixed Costs and any agreed Profiled Profit Element (where appropriate); and

16.1.6 review progress on delivery of Project Development Services against programme and agreed budget during the immediately preceding month or Quarter (as appropriate).

provided that:

16.1.7 if any of the matters referred to in Clauses 16.1.1 to 16.1.5 cannot be so agreed, either Party may refer the matter to the Dispute Resolution Procedure;

16.1.8 tie shall not be required to reimburse the Operator at more than the Core Staff Fixed Rates and the Non-Core Staff Fixed Rates in respect of the Operator's Core Team and the Operator's Non-Core Staff for the services to be provided pursuant to Clauses 16.1.2 and 16.1.3, notwithstanding that any Operator Party who makes Operator's Non-Core Staff available to the Operator for the purpose of the Project may make a greater charge to the Operator and, for the avoidance of doubt, no such greater charge shall be included within the Project Development Costs;

16.1.9 tie shall not be required to make any reimbursement for Project Development Costs in excess of that provided for in a budget agreed pursuant to Clause 16.1.5 unless and until (and to the extent only that) any such excess is approved by the tie Project Manager;

16.1.10 during Project Phases A, B, C and D, tie shall not be required to reimburse the Operator for the travel of any person to or from Edinburgh and/or within the United Kingdom, or for the accommodation or subsistence of any person within the United Kingdom and/or elsewhere in excess of any sum included in the Core Staff Fixed Rates or the Non-Core Staff Fixed Rates but the Operator shall be entitled to reimbursement from tie in relation to travel costs outwith the United Kingdom;

16.1.11 tie shall not be required to reimburse the Operator for any costs or expenses incurred or time spent by the Operator or any Operator Party in relation to the negotiation or the procurement, preparation or negotiation of contracts or arrangements with third parties engaged by the Operator and, for the avoidance of doubt, no such charge shall be included within the Project Development Costs; and

16.1.12 any specific Project Development Services to be provided by the Operator in relation to the support for the parliamentary process relating to the Scottish Private Bills shall be agreed on the basis of the Fixed Non-Core Staff Rates, budgeted, invoiced (quarterly) and paid for in accordance with this Clause 16 (*Project Development Costs*).

16.2 In accordance with tie's requirements pursuant to Clause 16.1.3, the Operator shall supply the Operator's Non-Core Staff provided that the Operator shall be obliged to provide Operator's Non-Core Staff who are employed by an Operator Party only if the required Operator's Non-Core Staff are available and can perform the required Project Development Services in accordance with the Partnering Methodology and Programme or otherwise in accordance with any timescale required by tie and/or the tie Project Manager.

16.3 The Operator shall submit to the tie Project Manager no later than 14 days after the end of each Quarter in respect of Project Development Services provided by the Operator's Core Team or no later than 14 days after the end of each month in respect of Project Development Services provided by the Operator's Non-Core Staff an application for payment in respect of the Project Development Costs and the Fixed Costs claimed for that Quarter or month (as appropriate). Such application for payment shall set out the following details:

16.3.1 the total Project Development Costs incurred by the Operator and/or budgeted for that Quarter or month (as appropriate) in accordance with Clause 16.1.5;

16.3.2 a breakdown of those Project Development Costs by activity and by Line or Phase (where practicable and appropriate);

16.3.3 a breakdown of those Project Development Costs between Project Development Costs relative to the Operator's Core Team and Project Development Costs relative to the Operator's Non-Core Staff;

16.3.4 the timesheets of each member of the Operator's Non-Core Staff engaged in performing the Project Development Services, certified as true and accurate by that person; and

16.3.5 a breakdown of the Fixed Costs claimed by the Operator together with a breakdown of the actual costs of any Fixed Costs incurred.

- 16.4 **tie** shall procure that the **tie** Project Manager shall, subject to any clarifications as are in **tie's** opinion (acting properly and reasonably) necessary and subject to Clauses 10.11, 16.1.8, 16.1.9, 16.1.10, 16.1.11 and 16.13, certify by notice in writing to the Operator that part of the Project Development Costs and the Fixed Costs claimed in the application for payment approved by **tie** which approval shall include the sums stated in the budget for the relevant month or Quarter agreed in accordance with Clause 16.1.5 and give reasons why any part of the Project Development Costs and the Fixed Costs claimed in the application for payment has not been so approved and certified no later than 30 days after the date on which such application for payment is received by **tie** (the "**Due Date for Payment**"). **tie** shall not be liable to pay to the Operator any Project Development Costs contained in any budget agreed in accordance with Clause 16.1.5 to the extent that the Operator has not provided any of the Project Development Services. **tie** shall pay to the Operator the Project Development Costs contained in any budget agreed in accordance with Clause 16.1.5 where and to the extent **tie** instruct the Operator not to provide such Project Development Services.
- 16.5 Within 5 Business Days of receiving a notice from **tie** pursuant to Clause 16.4 certifying part or all of the Project Development Costs and the Fixed Costs claimed in the relevant application for payment, the Operator shall issue an invoice (in the form agreed between the Parties) to **tie** for ninety percent (90%) of such certified Project Development Costs and Fixed Costs. **tie** shall retain ten percent (10%) of such certified Project Development Costs (the "**Retention**").
- 16.6 **tie** shall pay any invoice submitted in accordance with Clause 16.5 within 30 days of the Due Date for Payment calculated in accordance with Clause 16.4 (the "**Final Date for Payment**").
- 16.7 Within 5 Business Days of the issue of a PPCN by **tie** (in respect of the relevant Project Phase for the relevant Line or Phase (as appropriate)), the Operator shall submit to the **tie** Project Manager the final application for payment in respect of the Project Development Costs and the Fixed Costs claimed for the relevant Project Phase for the relevant Line or Phase (as appropriate). Such application for payment shall set out details listed in Clauses 16.3.1 to 16.3.4.
- 16.8 **tie** shall procure that the **tie** Project Manager shall, subject to any clarifications as are in **tie's** opinion (acting properly and reasonably) necessary and subject to Clauses 10.11, 16.1.8, 16.1.9, 16.1.10, 16.1.11 and 16.13, certify by notice in writing to the

Operator that part of the Project Development Costs and the Fixed Costs claimed in the final application for payment approved by **tie** which certification shall include the budget for the relevant month or Quarter agreed in accordance with Clause 16.1.5 in respect of the Project Development Services required from the Operator which were to be provided by the Operator's Core Team and give reasons why any part of the Project Development Costs and the Fixed Costs claimed in the final application for payment has not been so approved and certified no later than 30 days after the date on which such application for payment is received by **tie** (the "**Due Date for Payment**").

- 16.9 Within 5 Business Days of receiving a notice from **tie** pursuant to Clause 16.8 certifying part or all of the Project Developments Costs and the Fixed Costs claimed in the final application for payment, the Operator shall issue an invoice to **tie** for one hundred percent (100%) of such certified Project Development Costs and Fixed Costs and, subject to Clause 16.11, for one hundred percent (100%) of each Retention retained in accordance with Clause 16.5.
- 16.10 **tie** shall pay the invoice submitted in accordance with Clause 16.9 within 30 days of the Due Date for Payment calculated in accordance with Clause 16.8 (the "**Final Date for Payment**").
- 16.11 In respect of Project Phase A, if **tie** issues a PPCN at a time when the Royal Assent to the Scottish Private Bill for the relevant Line has not yet been obtained, the Retention in respect of any specific Project Development Services provided pursuant to Clause 16.1.12 shall not be invoiced by the Operator until following the date of the giving of Royal Assent to the Scottish Private Bill for the relevant Line. **tie** shall pay the invoice submitted in accordance with this Clause 16.11 within 30 days of its receipt by **tie**.
- 16.12 The Operator may refer any Dispute about Project Development Costs and/or Fixed Costs which have not been certified by **tie** to the Dispute Resolution Procedure. If it is determined pursuant to the Dispute Resolution Procedure that the whole or part of any disputed amount should be paid by **tie** to the Operator, the Operator shall raise an invoice in respect of such determined amount and payment shall be made by **tie** to the Operator not less than 7 days from the date of receipt of such invoice by **tie** or the date which, apart from the Dispute would have been the Final Date for Payment calculated in accordance with Clause 16.6 or Clause 16.8 (as appropriate), whichever date is later.

16.13 Fees payable in respect of the Project Development Services provided by the Operator's Core Team during Project Phases A, B and C1 are Capped Fees subject to the following provisions of this Clause 16.13. Under no circumstances (absent tie's express agreement) shall tie be liable to pay the Operator any amount with respect to any Project Phase for the Project Development Services provided by the Operator's Core Team, in excess of the amount of the relevant Capped Fee notwithstanding that tasks may remain outstanding in order for completion of Project Development Services in any Project Phase to be achieved to tie's satisfaction provided always that if Project Phases A, B or C1 are extended beyond the dates set out in the Project Programme and/or the Partnering Methodology and Programme, and this extension is not due to the Operator's breach of this Agreement, the tie Project Manager shall meet with the Operator Project Manager to agree a budget for any further Project Development Services which are required from the Operator and which will be provided by the members of the Operator's Core Team and/or the Operator's Non-Core Staff, as if all members of the Operator's Core Team and the Operator's Non-Core Staff were Operator's Non-Core Staff.. The provisions of this Clause 16 shall apply to these Project Development Services as if the Project Development Services had been specified in accordance with Clause 16.1.3.

16.14 The Operator shall notify tie immediately if the Operator believes that the Operator's Core Team cannot carry out the Project Development Services in accordance with the timescales set out in the Partnering Methodology and Programme or otherwise in accordance with any requirements of tie or the tie Project Manager.

16.15 The Parties may agree to suspend provision of the Project Development Services at any time for any period up to a maximum of 12 months or such longer period as the Parties may agree. In the event of any such suspension, the Parties shall agree the reasonable costs of such suspension, the terms for payment of such costs and the procedure for recommencement of the provision of the Project Development Services at the end of any agreed period of any suspension.

17. PAYMENTS FOR THE PROJECT DEVELOPMENT SERVICES

17.1 In consideration of the performance by the Operator of the Project Development Services in accordance with the terms of this Agreement, tie:

17.1.1 shall make the payments to the Operator specified in Clause 16 (*Project Development Costs*) and Clause 18 (*Payment during Project Phase C2*); and

17.1.2 subject to the terms of this Agreement, grants to the Operator, with effect from the Service Commencement Date in respect of each Phase, the exclusive right to operate such Phase in accordance with the terms and for the period set out in the Operating Appendix.

17.2 The Operator's only entitlement to payment from **tie** in respect of the performance of the Project Development Services shall be as expressly provided in this Agreement.

18. PAYMENT DURING PROJECT PHASE C2

18.1 The Operator shall submit to the **tie** Project Manager an application for payment no later than 7 days after the end of each month in respect of the Fixed Costs for the month just ended, the actual costs for any Target Costs for Project Phase C2 for the month just ended, any other actual costs agreed with **tie** and the Profit Element claimed for that month in respect of the Project Development Services carried out in Project Phase C2 for the relevant Phase. Each application for payment shall set out the full detail of expenditure incurred and the monthly budget forecast agreed pursuant to Clause 16.1.5 . The application for payment shall also include a breakdown of the Fixed Costs claimed by the Operator together with a breakdown of the actual costs of any Fixed Costs incurred.

18.2 **tie** shall procure that the **tie** Project Manager shall, subject to any clarifications as are in **tie's** opinion (acting properly and reasonably) necessary and subject to Clauses 10.11, 18.10 and 18.11, certify by notice in writing to the Operator that part of the Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with **tie** and Profit Element claimed in the application for payment which is approved by **tie** by reference to the agreed budget and give reasons why any part of the Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with **tie** and Profit Element has not been so approved and certified no later than 30 days after the date on which such application for payment is received by **tie** (the "**Due Date for Payment**").

18.3 Within 5 Business Days of receiving a notice from **tie** pursuant to Clause 18.2 certifying part or all of the Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with **tie** and the Profit Element claimed in the relevant application for payment, the Operator shall issue an invoice to **tie** for ninety percent (90%) of such certified Fixed Costs, the actual costs for any Target Costs for Project Phase C2, and any other actual costs agreed with **tie** and ninety percent (90%) of the certified Profit Element. **tie** shall retain ten percent (10%)

of the certified Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with tie and ten percent (10%) of the certified Profit Element (the "**Retention**").

- 18.4 tie shall pay any invoice submitted in accordance with Clause 18.3 within 30 days of the Due Date for Payment calculated in accordance with Clause 18.2 (the "**Final Date for Payment**"); and
- 18.5 Within 5 Business Days of the issue by tie of a PPCN in respect of the Project Phase C2 for the relevant Phase, the Operator shall submit to the tie Project Manager the final application for payment in respect of the Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with tie and Profit Element claimed for Project Phase C2. Such application for payment shall set out the information required in Clause 18.1.
- 18.6 tie shall procure that the tie Project Manager shall, subject to any clarifications as are in tie's opinion (acting properly and reasonably) necessary and subject to Clauses 10.11, 18.10 and 18.11, certify by notice in writing to the Operator that part of the Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with tie and Profit Element claimed in the final application for payment which is approved by tie and give reasons why any part of the Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with tie and Profit Element claimed in the final application for payment has not been so approved and certified no later than 30 days after the date on which such application for payment is received by tie (the "Due Date for Payment"). The final amount certified by tie shall take into account a reconciliation of cost overrun or savings, as the case may be, calculated in accordance with Clause 18.11.
- 18.7 Within 5 Business Days of receiving a notice from tie pursuant to Clause 18.6 certifying part or all of the Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with tie and Profit Element claimed in the final application for payment, the Operator shall issue an invoice to tie for one hundred percent (100%) of such certified Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with tie and Profit Element and for one hundred percent (100%) of each Retention retained in accordance with Clause 18.3.

- 18.8 **tie** shall pay the invoice submitted in accordance with Clause 18.7 within 30 days of the Due Date for Payment calculated in accordance with Clause 18.6 (the "**Final Date for Payment**").
- 18.9 The Operator may refer any Dispute about the Fixed Costs, the actual costs for any Target Costs for Project Phase C2, any other actual costs agreed with **tie** and/or Profit Element which have not been certified to the Dispute Resolution Procedure. If it is determined pursuant to the Dispute Resolution Procedure that the whole or part of any disputed amount should be paid by **tie** to the Operator, the Operator shall raise an invoice in respect of the determined amount and payment shall be made by **tie** to the Operator not less than 7 days from the date of receipt of such invoice by **tie** or the date which, apart from the Dispute would have been the Final Date for Payment calculated in accordance with Clause 18.4 or Clause 18.8 (as appropriate), whichever date is later.
- 18.10 Subject to the provisions of Clause 12 (*Interface with the Infrastructure Provider*), **tie** shall not be required to reimburse the Operator for any amount not agreed in the relevant monthly budget for Project Phase C2.
- 18.11 To the extent that the Operator's actual costs, in respect of which Target Costs for Project Phase C2 have been allocated, for Project Development Services carried out during Project Phase C2 (i) exceed the Target Costs for Project Phase C2 as adjusted by all additional costs and expenses to which the Operator is entitled pursuant to Clause 12.3, **tie** shall certify (subject to a 10% retention to be released upon issue of the PPCN for Project Phase C2) a contribution of twenty percent (20%) of the undisputed amount of any such excess, up to a ceiling for such excess of ten percent (10%) of the Target Costs for Project Phase C2 as adjusted by all additional costs and expenses to which the Operator is entitled pursuant to Clause 12.3; or (ii) represents a saving against the Target Costs for Project Phase C2 as adjusted by all additional costs and expenses to which the Operator is entitled pursuant to Clause 12.3, the Operator shall be entitled to a share of fifty percent (50%) of any such saving.
- 18.12 In the event that the Operator becomes aware of circumstances that may involve the completion of Project Phase C2 either being delayed or requiring expenditure in excess of Target Costs for Project Phase C2 and the Fixed Costs (excluding the Category Five Fixed Costs) claimed for Project Phase C2, the Operator shall notify **tie** forthwith.

19. PAYMENT DURING THE SERVICE PERIOD

19.1 The payment provisions at Clause 19 (*Payments to the Operator*) in the Operating Appendix will apply to payments during the Service Period.

20. METHOD AND CURRENCY OF PAYMENT

20.1 Subject to Clauses 20.3 and 20.4, all payments under this Agreement shall be made in pounds sterling by electronic transfer of funds to the bank account of the recipient (located in the United Kingdom) specified in the relevant invoice, quoting the invoice number against which payment is made, provided that in respect of payments pursuant to Clause 18.2 of the Operating Appendix (as regards Operating Revenues collected or received by the Operator):

20.1.1 all such Operating Revenues shall be paid directly into the bank account nominated by tie; and

20.1.2 the Operator shall supply statements summarising such payments in accordance with Clause 18 (*Payment of Operating Revenue to tie*) of the Operating Appendix

20.2 If either Party (acting in good faith) disputes the amount of all or any part of a payment due under this Agreement, the undisputed amount of such payment shall be paid in accordance with Clause 20.1 and the provisions of this Clause 20.2 shall apply in respect of the disputed part only. The Parties shall resolve the Dispute in accordance with Clause 43 (*Dispute Resolution Procedure*). Following resolution of the Dispute, any amount agreed or determined to have been payable shall be paid forthwith together with interest on such amount calculated in accordance with Clause 21 (*Interest*).

20.3 If the United Kingdom becomes a Participating Member State and to the extent that EMU Legislation provides that an amount denominated in the National Currency Unit of a Participating Member State and payable within that Participating Member State may be paid either in the Euro unit or in that National Currency Unit, each Party shall be entitled to pay any such amount either in the equivalent Euro unit (at the prevailing rate of exchange given by the Bank of England on the last Business Day prior to the due date pursuant to this Agreement for such payment) or in pounds sterling during such period as the relevant EMU Legislation permits.

20.4 On expiry of such period as referred to in Clause 20.3 above, the Parties shall discharge their payment obligations to one another by payment in Euros and all liabilities, amounts (whether outstanding or payable in the future) and calculations expressed in pounds sterling in this Agreement shall be converted or amended (as the case may be) automatically to the equivalent amount in Euros at the exchange rate provided pursuant to the relevant EMU Legislation.

21. INTEREST

21.1 Each Party shall be entitled, without prejudice to any other right or remedy (excluding any right under the Late Payment of Commercial Debts (Interest) Act 1998), to receive interest on any payment not duly made pursuant to the terms of this Agreement on the due date calculated from day to day at a rate per annum equal to the Default Interest Rate from the day after the date on which payment was due up to and including the date of payment. The Parties agree that the entitlement to interest pursuant to this Clause 21 (*Interest*) constitutes a "substantial remedy" for the purposes of section 9 of the Late Payment of Commercial Debts (Interest) Act 1998.

22. SET-OFF

22.1 The Operator shall not be entitled to retain or set off any amount owed to it by **tie** against any amount due to **tie** by it.

22.2 **tie** may retain or set off any amount owed to it by the Operator which has fallen due and payable against any amount due from **tie** to the Operator by specifying the amount(s) to be set off or retained and the ground(s) for set off or retention in the notice in writing to be issued by **tie** to the Operator on or before any Due Date for Payment or by **tie** issuing to the Operator a Notice of Intention to Withhold Payment not less than five Business Days before any Final Date for Payment.

22.3 If the retention or set-off of any amount referred to in Clause 22.1 is disputed, then any undisputed part of that amount shall be retained or set off and the following provisions of this Clause 22.3 shall apply in respect of the disputed part only. The Parties shall use all reasonable endeavours to resolve the dispute in question but, if they fail so to resolve it, either Party may refer the matter to the Disputes Resolution Procedure. Following resolution of the dispute, any amount agreed or determined to have been payable shall be paid not later than 7 days from the date of resolution of the Dispute or the date which, apart from the Dispute would have been the final date for

payment (whichever is earlier), together with interest on such amount calculated in accordance with Clause 21 (*Interest*).

23. VAT

- 23.1 All amounts specified in this Agreement are exclusive of VAT.
- 23.2 If any supply made under this Agreement is or becomes chargeable to VAT then the person receiving the supply ("**Recipient**") shall in addition pay the person making the supply ("**Supplier**") the amount of that VAT against receipt by the Recipient from the Supplier of a valid and correct VAT invoice in respect of that supply.
- 23.3 Where, under this Agreement, any amount is calculated by reference to any sum which has been or will be incurred by any person, the amount shall include any VAT in respect of that sum only to the extent that such VAT is not and will not be recoverable as input tax by that person, save where such VAT is irrecoverable by reason of that person's negligence, error or omission.
- 23.4 The Operator shall provide to **tie** any information reasonably requested (including pursuant to Clause 49 (*Information and audit access*) in connection with the amount of VAT chargeable in relation to any supply made, payment made or reimbursed in accordance with this Agreement and payable by the Operator. To the extent **tie** suffers any Losses through irrecoverable VAT as a consequence of inaccurate or inadequate VAT related documentation provided by the Operator or a delay in the provision of such documentation, the Operator shall reimburse **tie** in respect of any such Losses.
- 23.5 **tie** shall not be liable to pay the Operator any irrecoverable VAT incurred by the Operator through his own oversight or omission, in particular with regard to VAT assessment of payments made pursuant to the Pain Gain Share Mechanism (set out at paragraphs 18 to 21 of Schedule 3 to the Operating Appendix) or the KPI Regime.
- 23.6 For the avoidance of doubt, a change in the rates of VAT during the Term shall not be treated as a Qualifying Change in Law but VAT shall be applied to any invoice submitted in accordance with this Agreement and shall be payable at the rate which is current as at the date of any such invoice.

24. TAXATION

- 24.1 Subject to Clause 23 (*VAT*) and Clauses 24.2 to 24.4 below, the Operator shall pay all Tax whatsoever whether parliamentary, local or otherwise which are payable in respect of (i) any rights or interests enjoyed by the Operator under this Agreement during any Project Phase and (ii) the income (other than the Operating Revenue collected by the Operator as agent for *tie* and remitted to *tie* pursuant to Clause 18 (*Payment of Operating Revenue to tie*) of the Operating Appendix) or profits generated by the Project Operations or the Tram Business. With the exception of rates in respect of the business use or occupation of premises to perform its obligations under this Agreement (which the Operator shall be entitled to include in the Operating Costs), all other payments made as described under this provision shall be for the Operator's account.
- 24.2 In the event the Operator is notified or otherwise becomes aware of the first Rateable Value to be assigned to the System (or of any subsequent re-evaluation) it shall promptly notify *tie*. If *tie* wishes to appeal, *tie* shall notify the Operator of its intention and the Operator shall co-operate with and provide all reasonable assistance in the prosecution of the appeal, including the provision of relevant documentation, accounts and financial and technical information, the availability of relevant managers and other material evidence reasonably required by *tie*.
- 24.3 *tie* shall indemnify the Operator against any demand made in respect of the Rateable Value of the System and the Operator shall be entitled to 30% of the financial benefit of any reduction in the Rateable Value of the System resulting from any appeal made under Clause 24.2 above. The Operator shall indemnify *tie* in relation to any failure to retain, keep or produce proper and complete records which adversely affects *tie*'s ability to pursue such appeal.
- 24.4 For the avoidance of doubt, no amount shall be included in the Target Operating Costs or the Fixed Costs in respect of the Rateable Value of the System, and any payment by *tie* pursuant to the indemnity in Clause 24.3 shall be made separately from the Payment Mechanism.
- 24.5 To the extent that an Infrastructure Provider is assessed as liable in respect of the Rateable Value of the System and *tie* wishes to appeal, *tie* shall notify the Operator of its intention and the Operator shall co-operate with such appeal in accordance with Clause 24.2.

25. MITIGATION AND COST MANAGEMENT

- 25.1 The Operator shall (and shall procure that each Operator Party shall) take all reasonable steps to manage, minimise and mitigate:
- 25.1.1 all Project Development Costs during Project Phases A, B and C1, and actual costs for the Project Development Services carried out during Project Phase C2 ; and
 - 25.1.2 the adverse effects of any Base Case Assumption proving to be an Inappropriate Base Case Assumption.
- 25.2 At all times during the Term, each Party shall take all reasonable steps to minimise and mitigate any loss for which that Party is entitled to bring a claim against the other Party pursuant to this Agreement.
- 25.3 Without prejudice to Clause 25.2, the Operator shall (and shall procure that its Operator Parties shall) take all reasonable steps to minimise the adverse effects of any Relief Event (including by seeking damages from third parties or other remedies where proceedings would have a reasonable chance of success and would not be economically imprudent having regard to the likely level of damages or the nature of the remedies and the estimated cost or duration of the proceedings).

PART V - WARRANTIES, INDEMNITIES AND LIABILITY

26. WARRANTIES

26.1 The Operator hereby represents, warrants and undertakes to tie that:

26.1.1 none of the Operator, the Operator Parties or any of their respective representatives or Affiliates or professional advisers or employees or anyone acting on behalf of any of them have committed any Prohibited Act;

26.1.2 all information which has been given by any of the Operator, the Operator Parties or any of their respective representatives or Affiliates or advisers or employees or anyone acting on behalf of any of them to any member, officer, employee or adviser of tie was, when given true, complete and accurate in all material respects and there is no fact or matter not disclosed in writing to tie which:

26.1.2.1 renders any such information untrue, inaccurate or misleading; or

26.1.2.2 might, if disclosed, adversely affect the decision of anyone considering whether or not to contract with the Operator;

26.1.3 the Operator:

26.1.3.1 is duly incorporated under the law of Scotland and has the power to own its own assets and carry on its own business; and

26.1.3.2 has full power and authority to enter into and perform this Agreement which constitutes a valid and binding obligation on the Operator in accordance with its terms; and

26.1.3.3 will not, by performing its obligations under this Agreement, be in breach of any undertaking to any third party or of any applicable law so as to have a material adverse effect on its ability to discharge its obligations under this Agreement;

26.1.4 the Operator, the Operator's immediate parent company and TRANSDEV plc is not involved in any dispute with HM Inland Revenue, HM Customs & Excise, the European Commission, the OFT, or any other fiscal or regulatory authority in any jurisdiction concerning any matter which could materially and adversely affect the business of the Operator or the Project in any way;

- 26.1.5 the Operator does not use any processes and is not engaged in any activities which involve the misuse of any confidential or proprietary information belonging to any third party;
- 26.1.6 no claim is presently being assessed and no litigation, arbitration or proceeding is in progress or, to the best of the knowledge and belief of the Operator pending or threatened, against the Operator or any of its management or assets which might have an adverse effect on the ability of the Operator to perform the obligations in this Agreement or the Operating Appendix;
- 26.1.7 the Operator's use and the use by tie of the Project Development Services and any materials provided to it as part of the Project Development Services has not infringed and shall not infringe any third party's Intellectual Property Rights;
- 26.1.8 there has been no material adverse change to the financial condition the Operator's immediate parent company and TRANSDEV plc since the audited accounts for the financial year 2003 including any matter resulting in a downgrade of the Operator's immediate parent company's and TRANSDEV plc's credit rating with any commercially acknowledged independent rating agency reporting the transport sector; and
- 26.1.9 the performance of the Project Development Services does not create any situation in which a conflict of interest arises for the Operator.
- 26.2 Each of the warranties, representations and undertakings given under Clauses 26.1.1 to 26.1.9 shall be construed as a separate and independent warranty, representation and undertaking and shall not be limited or restricted by reference to or inference from any other terms of this Agreement.
- 26.3 The Operator shall immediately disclose in writing to tie any event or circumstance which may arise or become known to it after the Effective Date which is materially inconsistent with any of the warranties, representations or undertakings given under Clauses 26.1.1 to 26.1.9 or which has or is likely to have a material adverse effect on the Project.
- 26.4 The warranties, representations or undertakings given under Clauses 26.1.1 to 26.1.9 shall be repeated by the Operator (save that Clause 26.1.8 shall apply to the Operator

from time to time to be treated as Core Staff Fixed Rates. All Core Staff Fixed Rates shall be Indexed at Premium;

"Default Interest Rate" means the interest rate per annum equivalent to two percent above the base rate of the Bank of England current on the date on which the relevant payment first becomes overdue adjusted to reflect any changes to the rate during the period over which the payment remains overdue;

"Depot(s)" means the facilities for:

- (a) the stabling, servicing, cleaning and/or maintenance of Trams and/or elements of infrastructure; and/or
- (b) accommodation for operational and maintenance staff;

"Design Manual" means the design manual to be developed by the tie Advisers during Project Phases A and B, with input from the Operator pursuant to the Project Development Output Specification, as such Design Manual is amended during Project Phases A and B, and otherwise from time to time in accordance with this Agreement ;

"Development Assumptions" means those assumptions made by tie or the tie Advisers, in relation to the development of the System, and potential revenues and costs, and as such Development Assumptions may be modified at tie's option pursuant to Schedule 2 (*Project Development Output Specification*) during Project Phase A and Project Phase B in relation to each Line or Phase (as appropriate);

"Development Phase" means in respect of each Line or Phase (as appropriate);: Project Phase A, Project Phase B and Project Phase C in respect of such Line or Phase (as appropriate);;

"Dispute" means any dispute, difference or unresolved claim between the Parties in connection with or arising from this Agreement;

"Dispute Resolution Procedure" means the procedure set out in Clause 43 (*Dispute Resolution Procedure*) and Schedule 7 (*Dispute Resolution Procedure*);

"Document Management Plan" means the plan referred to in paragraph 26.10 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance the terms of this Agreement;

"DPOFA Variation Date" means 20 December 2007;

"Due Date for Payment" means the dates calculated in accordance with Clauses 16.4, 16.8, 18.2 and 18.6 as appropriate;

"Edinburgh" means the geographical area of the unitary authority of the City of Edinburgh Council as at the Effective Date and any other geographical area which comes within the area of responsibility of CEC at any time during the Term, provided that to the extent that the System serves areas outside Edinburgh from time to time, references to "Edinburgh" shall be deemed to apply to such areas to the extent appropriate in the context;

"Edinburgh Holiday" means any day which is a public holiday recognised by the CEC;

"Edinburgh Tram Network" means any part of Phase 1a of the tramway which is to be designed, constructed, maintained and operated in Edinburgh (forming part of Line 1 and Line 2 as described in the Tram Legislation) as may be amended from time to time, together with Phase 1b, any Network Expansion, modification, line extension, spur, interconnection and any additional line which may be instructed by tie in accordance with the provisions of this Agreement;

"Edqual Indicator" has the meaning given in Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of the Operating Appendix;

"Effective Date" shall mean 28 June 2004;

"Electricity Usage Forecast" has the meaning given in Clause 3.13.1 of the Operating Appendix and includes such forecast as may be amended from time to time in accordance with Clause 3.13 of the Operating Appendix;

"Emergency Services" means Lothian and Borders Police, Lothian and Borders Fire Brigade, Scottish Ambulance Services and HM Coastguard;

"Employment Liabilities" means any award, loss, fine, compensation, damages order, payment made by way of settlement, costs and expenses (including legal costs on an indemnity basis) properly incurred in connection with a claim made by or in respect of any of the Project Development Staff or Project Operations Staff (including a claim made by a trade union, a governmental or statutory body or local authority or commission), and also including the costs of any investigation by the Equal Opportunities Commission, the Commission for Racial Equality or the Disability Rights Commission, and of costs of implementing any requirements that may arise from any such investigation;

"**EMU**" means Economic and Monetary Union as contemplated in the Treaty of European Union;

"**EMU Legislation**" means legislative measures of the European Council for the introduction of, changeover to or operation of a single or unified European currency (whether known as the Euro or otherwise), being in part the implementation of the third stage of EMU;

"**Enabling Legislation**" means such Legislation, in the form of Scottish Private Bills, Acts or otherwise, as gives permanent authority to CEC and to tie to finance, build, commission, operate, maintain and decommission the Edinburgh Tram Network;

"**Environmental and Sustainability Management Plan**" means the plan referred to in paragraph 26.13 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance with the terms of this Agreement;

"**Environmental Statement**" means the environmental statements supporting each of the Scottish Private Bills;

"**Escrow Agent**" means the agent to be agreed between tie and the Operator in the event that any Operator Software and/or Specially Written Software and/or Third Party Software is upgraded or updated, and deposited in accordance with Clause 47.9;

"**Escrow Agreement**" means the agreement to be agreed between tie and the Operator in the event that any Operator Software and/or Specially Written Software and/or Third Party Software is upgraded or updated, and deposited in accordance with Clause 47.9;

"**Estimate**" means the estimate to be provided by the Operator pursuant to Clause 24.3 of the Operating Appendix;

"**Euro**" means the single currency of Participating Member States of the European Union;

"**Euro Compliant**" has the meaning given in Clause 9.10 of the Operating Appendix;

"**Expiry Date**" means, subject to tie's right to extend the Expiry Date pursuant to Clause 2.2 or any agreement between tie and the Operator (pursuant to Clause 2.3), 02.00 hours on the date which is the fifteenth anniversary of the Effective Date;

"**Fares**" means the prices being charged from time to time for journeys on the System;

"**Final Date for Payment**" means the dates calculated in accordance with Clauses 16.6, 16.10, 18.4 and 18.8 as appropriate;

"Final Persistent Breach Notice" means a notice served by tie pursuant to Clause 34.2;

"Financial Panel" has the meaning given to it in paragraph 5.4 of Schedule 7 (*Dispute Resolution Procedure*);

"Financial Proposals" means the financial proposals presented by the Operator and approved by tie and agreed at the DPOFA Variation Date as Schedule 4 (*Financial Proposals*) to this Agreement as may be adjusted from time to time in accordance with this Agreement or otherwise by agreement between tie and the Operator;

"First Party" has the meaning given in Clause 3.3;

"First Tram" means a timetabled Tram that is the first to operate in passenger service on any route in each direction on any day;

"Fixed Costs" means the Category One Fixed Costs, the Category Two Fixed Costs, the Category Three Fixed Costs, the Category Four Fixed Costs, the Category Five Fixed Costs, and any other costs which tie and the Operator may agree from time to time should be treated as "fixed costs" whether within one of the already defined categories of costs or otherwise. Indexed at Premium provided that where there is a time interval between the Service Commencement Date and the Full Service Commencement Date for a Phase, the Fixed Costs for the System (including such Phase) for such period shall be the Interim Fixed Costs;

"Fixed Rates" means the Core Staff Fixed Rates, the Non-Core Staff Fixed Rates and/or any other rates which tie and the Operator may agree from time to time should be treated as "fixed rates" whether within one of the already defined categories of rates or otherwise as Indexed at Premium;

"Force Majeure Event" means the occurrence after the Effective Date of:

- (a) war, civil war, armed conflict or terrorism; or
- (b) nuclear, chemical or biological contamination unless the source or cause of the contamination is the result of actions of the Operator; or
- (c) pressure waves caused by devices travelling at supersonic speeds.

"Full Service" has the meaning given in Clause 8.7 of the Operating Appendix;

"Full Service Commencement" means, in respect of any Phase, the provision of the full level of the Transport Services in respect of that Phase as specified in the Operating Output Specification;

"Full Service Commencement Date" means, in respect of each Phase, the date specified in the Certificate of Full Service Commencement in respect of that Phase;

"Full Service Day" means pursuant to the terms of Clause 8 (*Special Events*) of the Operating Appendix, a day falling during the Service Period in respect of which tie have given prior written notice to the Operator requiring the Operator to provide a Full Service over all or part of the System;

"Good Industry Practice" means using standards, practices, methods and procedures conforming to the Law and exercising that degree of skill, care, diligence, prudence and foresight that would reasonably be expected from a large, reputable, professionally qualified, competent and skilled organisation experienced in carrying out activities of a similar nature, scope and complexity to those comprised in the Project Development Services and the Project Operations and seeking in good faith to comply with its contractual obligations and all duties owed by it;

"Guidance" means any applicable guidance, direction or determination issued by any regulatory body with which tie and/or the Operator is bound to comply;

"Handback Package" means the information referred to in Clause 28 (*Transition on Termination or Expiry*) of the Operating Appendix, as updated by the Operator from time to time in accordance with the provisions of that Clause;

"Headway" means, in relation to the Transport Services, the period in minutes and whole seconds between a Tram and the subsequent Tram either departing from an Originating Tramstop or a Headway Measurement Tramstop;

"Headway Measurement Tramstop" means any Tramstop so designed by agreement between the Operator and tie;

"Helpdesk" has the meaning given to it in Clause 12.2 of the Operating Appendix;

"HMRI" means Her Majesty's Railway Inspectorate (or any successor authority);

"HS Act" has the meaning given to it in Clause 4.4;

"Inappropriate Base Case Assumption" means any Base Case Assumption which is agreed or determined in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) to be:

- (a) outwith any threshold set within the relevant Base Case Assumption or,
- (b) where there is no stated threshold within the Base Case Assumption, any such Base Case Assumption which is incorrect to a material extent following the further development of the Project pursuant to this Agreement;

"Inception Report" means the report to be submitted by the Operator to be pursuant to paragraph 5.5.6 of Schedule 2 (*Project Development Output Specification*), setting out details of the Operator's proposals for the Partnering Methodology and Programme;

"Incident Management Plan" means the plan referred to in paragraph 26.11 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance with the terms of this Agreement;

"Indemnified Liabilities" means actions, claims, (including third party claims) demands, proceedings, losses, damages, liabilities, costs and expenses (including reasonable legal fees and expert witness fees);

"Indexed" means in relation to an amount, that amount to be multiplied by the value of RPIX at the Point of Indexation, divided by the Base Case RPIX to generate a percentage movement;

"Indexed at Premium" means in relation to an amount, that amount to be multiplied by a factor calculated as the value of RPIX at the Point of Indexation, divided by Base Case RPIX to generate a percentage movement, with a further 0.5% added to this percentage movement;

"Indirect Loss" means any business interruption, loss of profits, loss of business, loss of business opportunity, loss of or damage to or corruption of data or loss of management time or time of other employees;

"Infraco Event" means

- (a) any delay or significant disruption against agreed milestone or programme dates for the delivery, testing or installation or making available in accordance with the Project Programme of Infrastructure and Equipment and any related services and supplies including the Project Programme;

- (b) any delay or significant disruption in the execution of Infrastructure Maintenance Obligations and Tram Maintenance Obligations and/or response to any request from the Operator to assist in relation to unforeseen damage to, obstruction on or interference with the System caused by third party or weather conditions;
- (c) any defect or fault in the Infrastructure and Equipment or the Works (whether apparent or latent), including the requirement for unscheduled remedial works, repairs or replacement of defective components or any failure or omission in the provision of Infrastructure Provider services pursuant to the IDA;
- (d) any defect or fault in overall System integration, (whether deriving from deficient interface between any components of the System or a combination of such components); or
- (e) failure by an Infrastructure Provider to materially comply with the Code of Construction Practice or Code of Maintenance Practice.

"Infraco Snagging List" means the list of defects or outstanding and/or incomplete items in the Infrastructure and Equipment to be provided to the Operator pursuant to Clause 12.9.1;

"Infrastructure and Equipment" means in respect of each Phase, all infrastructure and equipment and all other elements of the System to be made available for the operation of the System in respect of that Phase, including:

- (a) track, power, signalling and communications equipment and related information technology (IT);
- (b) Tramstops;
- (c) Depot(s);
- (d) the Control Centre;
- (e) Trams;
- (f) CCTV and hand-held ticket vending machines; and
- (g) asset management system.

"Infrastructure and Equipment Output Specification" means, in respect of each Phase, the output specification contained in the Infrastructure Delivery Agreement in respect of that Phase;

"Infrastructure Delivery Agreement" means, in respect of each Phase (or Network Expansion), the agreement to be entered into between **tie** and the Infrastructure Provider for that Phase, part Phase or Network Expansion in respect of (inter alia) the delivery and/or maintenance of the Infrastructure and Equipment for that Phase, part Phase or Network Expansion (and "IDA" shall be interpreted accordingly);

"Infrastructure Provider" means any party with whom **tie** concludes an Infrastructure Delivery Agreement, which party for the purposes of this Agreement shall be fully responsible for all Infrastructure Provider Parties

"Infrastructure Provider Maintenance" means all maintenance of the System other than the Operator Maintenance;

"Infrastructure Provider Party" means each and any of the Infrastructure Provider's agents and contractors (including TramCo) and its or their subcontractors (of any tier) and its or their directors, officers and employees in relation to the Project and **" Infrastructure Provider Parties"** shall be construed accordingly;

"Initial Fares" means the fares charged in accordance with the TEL Fares Policy and notified to the public no less than 60 days in advance of Service Commencement;

"Initial Response" has the meaning given in paragraph 26.5.5 of Schedule 2 (*Project Development Output Specification*);

"Insolvency Event" means any of the following events:

- (a) the Operator is unable to pay its debts as they fall due or is insolvent or admits in writing inability to pay its debts as they fall due;
- (b) the Operator suspends for a period of two months making payments on all or any class of its debts or a moratorium is declared by the Operator in respect of its indebtedness;
- (c) the Operator ceases business or announces an intention to do so;
- (d) the following are entered into:

- (i) a voluntary arrangement (other than a solvent one) for a composition of debts of the Operator;
 - (ii) a scheme of arrangement in respect of the Operator pursuant to the Insolvency Act 1986 or the Companies Act 1985; or
 - (iii) a material composition or arrangement other than a solvent one with the Operator's creditors;
- (e) either of the following:
- (i) the winding-up of the Operator (including passing a shareholders' resolution or the presentation of a petition by the Operator for the purpose of winding up the Operator); or
 - (ii) its administration (including where an application is made by the Operator, or petition is presented by the Operator for or any meeting of its directors or members resolves to make an application for an administration order);
- (f) an order for the winding-up or administration of the Operator is made;
- (g) any liquidator, judicial custodian, receiver, administrative receiver, administrator or the like is appointed in respect of the Operator or any material part of the Operator's assets;
- (h) possession is taken of, or any execution or other process (other than on the dependence or inhibition) is levied or enforced upon, any material part of the property (whether real or personal) of the Operator by or on behalf of any creditor or encumbrancer of the Operator; or
- (i) anything analogous to any of the events mentioned in paragraphs (a) to (h) above occurs in relation to the Operator under the law of any relevant jurisdiction;

"Integrated Management System" or **"IMS"** has the meaning given in paragraph 26.1 of Schedule 2 (*Project Development Output Specification*);

"Integrated Transport Initiative" means CEC's transportation enhancement and investment programme approved in principle by the Scottish Executive as set out in the report prepared by the entitled 'A Vision for Edinburgh' dated 2nd September 2002 and known as the Integrated Transport Initiative for South East and Central Scotland (encompassing the

Edinburgh Tram Network as a major core project) which is currently being managed and procured by tie on behalf of CEC;

"Intellectual Property Rights" means any rights in or to any patent, petty patent, copyright, sui generis database right, design right, utility model, trade mark, brand name, service mark, trade name, business name, internet domain name, business get-up, trade dress, chip topography right, know how or confidential information and any other rights in respect of any industrial or intellectual property, whether capable of being registered or not, including all rights to apply for any of the foregoing rights or for an extension, revival or renewal of any of the foregoing rights and any similar or analogous rights to any of the above, whether arising or granted under the law of England or of any other jurisdiction;

"Interim Fixed Costs" means, where there is a time interval between the Service Commencement Date and the Full Service Commencement Date for a Phase, the Fixed Costs for the System including such Phase for such period. Such Interim Fixed Costs shall be Indexed at Premium;

"Interim Target Operating Costs" means, where there is a time interval between the Service Commencement Date and the Full Service Commencement Date for a Phase, the Target Operating Costs for the System including such Phase for such period. Such Interim Target Operating Costs shall be Indexed;

"Interim Target Patronage" means, where there is a time interval between the Service Commencement Date and the Full Service Commencement Date for a Phase, the Target Patronage for the System including such Phase for such period;

"Internal Dispute Resolution" means the procedure set out in paragraph 2 of Schedule 7 (*Dispute Resolution Procedure*);

"Joint Names Insurance" has the meaning given in Clause 27.3;

"Joint Revenue Committee" means the committee to be established by tie in accordance with Clause 20 (*Adjustment of Fixed Costs, Target Operating Costs and Target Patronage*), of the Operating Appendix;

"Key Performance Indicators" means those performance indicators described in Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) to the Operating Appendix, as such Key Performance Indicators may be amended from time to time in accordance with this Agreement;

"**Key Personnel**" means those Project Development Staff specified as such in Schedule 3 (*Key Personnel*);

"**KPI Monitoring Report**" means the report included with the Service Quality Report;

"**KPI Regime**" means the regime for deductions from the KPI Regime Profit Element depending on the Operator's performance against the Key Performance Indicators, as set out in Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) to the Operating Appendix;

"**KPI Regime Profit Element**" shall mean the Profit Element multiplied by a factor of 1.1;

"**KPI Warning Notice**" means the notice served by tie in accordance with paragraphs 13, 14 and/or 15 of Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) on the Operator following service of a Major KPI Beach Notice;

"**Last Tram**" means each of the timetabled Trams which are the last to operate in passenger service on each route in each direction prior to the Edinburgh Tram Network shutting down for the night;

"**Late Tram**" has the meaning given in Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of the Operating Appendix;

"**Law**" means:

- (a) any applicable Legislation;
- (b) any applicable Guidance; and
- (c) any applicable judgment of a relevant court of Law which is a binding precedent,

in each case in force in Scotland;

"**Legal Panel**" has the meaning given to it in paragraph 5.4 of Schedule 7 (*Dispute Resolution Procedure*);

"**Legislation**" means any Act or instruments of the Scottish Parliament or the United Kingdom Parliament (where in force in Scotland) or subordinate legislation within the meaning of section 21(1) of the Interpretation Act 1978, any exercise of the Royal Prerogative, and any enforceable community right within the meaning of section 2 of the European Communities Act 1972, in each case with respect to Scotland;

"Line" means each of Line 1 (or part thereof), Line 2 (or part thereof) and any Network Expansion agreed pursuant to Clause 11 (*Network Expansion*) (or part thereof);

"Line 1" means the tramway works as authorised by the Edinburgh Tram (Line One) Act 2006;

"Line 2" means the tramway works as authorised by the Edinburgh Train (Line Two) Act 2006;

"Line 3" means a proposed south-eastern line from Edinburgh city centre to Cameron Toll, the New Royal Infirmary, Craigmillar, Fort Kinnaird and Newcraighall with a possible extension to Musselburgh, as such route may be further developed and/or amended during Project Phase A or Project Phase B in respect of Line 3;

"Local Authority" has the meaning given it under Section 235(1) of the Local Government (Scotland) Act 1973;

"Local Services" shall have the meaning given by section 2 of the Transport Act 1985;

"Local Transport Strategy (LTS)" means CEC's plans and priorities for the development of an integrated transport policy within Edinburgh, designed to serve the people of Edinburgh in a way which is consistent with the Scottish Executive's overall sustainable development objectives, and as such LTS is amended by CEC from time to time;

"Long-Term Roads Change" means a Relevant Roads Change which persists for more than 3 months but is not permanent;

"Losses" means all damages, losses, liabilities, costs, expenses (including legal and other professional charges and expenses) and charges whether arising under statute, contract or at common law or in connection with judgments, proceedings or demands;

"Major KPI Breach Notice" has the meaning given in paragraph 13 of Schedule 3 to the Operating Appendix (*Project Phase D Payment Mechanism and KPI Regime*);

"Marketing Plan" means the plan referred to in paragraph 26.15 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance with the terms of this Agreement;

"Minimum Profit Element" means £450,000 (as Indexed);

"Mobilisation Certificate" means the certificate to be issued by tie pursuant to paragraph 41.3 of Schedule 2 (*Project Development Output Specification*);

"Mobilisation Services" means the activities performed by the Operator in accordance with this Agreement during Project Phase C2 to support the testing and commissioning of the System as described in paragraph 48 of Schedule 2 (*Project Development Output Specification*);

"National Currency Unit" means the unit of currency (other than a Euro unit) of a Participating Member State;

"Necessary Consents" means without limitation all permissions, consents, approvals, non objections, certificates, permits, licences, statutory agreements and authorisations, required by Law , and all necessary consents and agreements from any third parties or Relevant Authority, any Planning Permission, building fixing agreement, building control approval, consent from Network Rail, consent from HMRI (whether by simple application or by ongoing approval process), needed to plan, commence, carry out or complete (i) the Construction Works, or (ii) the Project Operations in accordance with this Agreement;

"Network Effects Study" means the study commissioned by tie to determine the effects on costs and revenues of operating all the Lines together as a single network, and referred to in paragraph 5.1 of Schedule 2 (*Project Development Output Specification*);

"Network Expansion" means expansion beyond Phase 1a and Phase 1b, which could include any further light rail system connecting either with or within the System or with any other light rail system which connects with the System;

"Network Rail" means Network Rail Limited (company number 4402220) and any Affiliate or any successors to any part of its assets and/or undertakings which is relevant to the performance of the Project Operations;

"No Better and No Worse" shall be construed by reference to the Operator's:

- (a) rights, anticipated receipts, duties and liabilities under or arising pursuant to performance of this Agreement; and
- (b) ability to perform its obligations and exercise its rights under the Agreement;

so as to ensure that:

- (c) the ability of the Operator to meet the requirement of the Operating Appendix is not adversely affected or improved as a consequence of the Relevant Event;
- (d) the ability of the Operator to achieve Target Costs for Project Phase C2, Target Operating Costs and Target Patronage is not materially adversely affected or materially improved; and
- (e) the ability of the Operator to continue to perform its obligations in terms of this Agreement in respect of the Fixed Costs is not materially adversely affected or materially improved;

and any reference in this Agreement to leaving the Operator in "No Better and No Worse position" shall be construed accordingly;

"Noise and Vibration Policy" means the policy going by that name and referred to in the Tram Legislation;

"Non-Core Staff Fixed Rates" means the costs numbered "8" in the tables included in the Base Case Assumptions, which are set in accordance with Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) at a level in accordance with Table 1 of the Project Development and Operating Costs, and such other rates as tie and the Operator may agree from time to time to be treated as Non-Core Staff Fixed Rates. All Non-Core Staff Fixed Rates shall be Indexed at Premium;

"Notice of Adjudication" has the meaning given to it in paragraph 5.1 of Schedule 7 (*Dispute Resolution Procedure*);

"Notice of Intention to Withhold Payment" means a notice specifying the amount to be withheld and the ground for withholding payment, or if there is more than one ground, each ground and the amount attributable to it;

"Notification" has the meaning given to it in paragraph 2.1 of Schedule 7 (*Dispute Resolution Procedure*);

"OCIP Insurances" means the insurances referred to in Clause 27 (*Insurances*) and set out in part 3 of Schedule 10 (*Insurances*) which may as a tie Change be amended, extended, renewed or supplemented/complemented by other insurances and notified (as required) to the Operator from time to time in accordance with Clause 27;

"OFT" means the Office of Fair Trading or its successor entity;

"One Ticket" means the through ticketing scheme currently operated by SESTRAN Travelticket Limited or any successor to such scheme nominated by tie;

"Open Book Basis" means the availability and disclosure (consistent with operation of Clause 49 (*Information and Audit Access*)) of all underlying data and calculations used by the Operator to create and justify costings and financial analysis presented to tie during all Project Phases;

"Operating and Maintenance Manual" means a manual setting out the procedures for operating and maintaining the System in sufficient detail to enable tie or a Successor Operator to operate and maintain the System to the same standards as those required of the Operator under this Agreement;

"Operating Appendix" means Appendix 1 to this Agreement in relation to (inter alia) the operation of the Transport Services on the System as amended from time to time pursuant to this Agreement;

"Operating Costs" means the actual operating costs incurred by the Operator in a Reporting Period ;

"Operating Deficit" means Operating Costs exceed Operating Revenues in respect of a Reporting Period;

"Operating Effective Date" means the date that tie notifies the Operator that each of the Operator Conditions Precedent (with the exception of any Operator Conditions Precedent that have been expressly waived by tie in writing) have been satisfied in accordance with Schedule 1 (*Conditions Precedent*) to the Operating Appendix;

"Operating Method Statements" means the method of performing the Project Operations (and, to the extent relevant, the Project Development Services) developed by the Operator and tie pursuant to the Project Development Output Specification, and as amended from time to time in accordance with:

- (a) the Project Development Output Specification in relation to each additional Line or Phase (as appropriate), or Network Expansion on which the Operator is to provide the Transport Services in accordance with this Agreement; or
- (b) Schedule 9 (*Review Procedure*);

"Operating Output Specification" means tie's requirements as regards the Project Operations to be performed by the Operator during the Service Period, as set out in Schedule 4 (*Operating Output Specification*) to the Operating Appendix, and developed by tie and the Operator pursuant to the Project Development Output Specification, and as varied from time to time in accordance with:

- (a) this Agreement in relation to each additional Line or Phase (as appropriate), or Network Expansion on which the Operator is to provide the Transport Services in accordance with this Agreement; or
- (b) Clause 53 (*Variations and Waivers to be in Writing*) and Clauses 23 (*Performance and Financial Adjustments*), 24 (*tie Changes*) and 25 (*Operator Changes*) of the Operating Appendix;

"Operating Revenues" means the revenues collected from the operation of the System, including all Patronage Revenue but, for the avoidance of doubt, excluding any amounts paid by tie to the Operator pursuant to this Agreement;

"Operations Management Plan" means the plan referred to in paragraph 26.2 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance with the terms of this Agreement;

"Operations Panel" has the meaning given to it in paragraph 5.4 of Schedule 7 (*Dispute Resolution Procedure*);

"Operator Change" means a change in the Project Operations proposed by the Operator during Project Phase C or Project Phase D and which tie accepts pursuant to Clause 25 (*Operator Changes*) of the Operating Appendix;

"Operator Conditions Precedent" means the conditions specified in Schedule 1 (*Conditions Precedent*) to the Operating Appendix;

"Operator Default" means one of the following events:

- (a) a breach by the Operator of any of its material obligations under this Agreement;
- (b) failure to comply with the Service Integration Plan;
- (c) failure to provide the resources to support Mobilisation Services in accordance with the Recruitment and Training Plan and the Project Programme;

- (d) an Insolvency Event save where caused directly by the being in breach of its obligations under this Agreement;
- (e) the Operator commits any breach of Clause 44 (*Assignment, Sub-Contracting and Changes in Control*);
- (f) the Operator abandons the Project Development Services or the Project Operations (or a material part of them) at any time and in this context 'abandon' shall mean:
 - (i) during the Development Phase, a failure to deploy the level of agreed resources which results in substantial failure to provide the Project Development Services for a period exceeding 5 Business Days save as may be agreed from time to time;
 - (ii) during the Service Period, if no Transport Services are provided on the System (or a material part of it), for a period exceeding 5 consecutive days, by reason (in whole or material part) of any industrial dispute directly affecting the Operator which causes a breach by the Operator of its obligations under this Agreement or for a period exceeding 2 consecutive days, by reason (in whole or material part) of any matter other than an industrial dispute directly affecting the Operator which constitutes breach by the Operator of its obligations under this Agreement;
- (g) the Service Commencement Date for a Phase is not achieved on or before the date falling three months after the Planned Service Commencement Date as same may be amended for that Phase, to the extent that the reason for such delay is caused by a breach by the Operator of any of its obligations under this Agreement ;
- (h) after the issue of a Major KPI Breach Notice, the issue of a second such notice at any time during the 13 Reporting Periods following the issue of the Major KPI Breach Notice;
- (i) a breach by the Operator of its obligations to take out and maintain the Required Insurances in accordance with the terms of this Agreement; or
- (j) except in the first three years of operation following the issue of the first Certificate of Services Commencement, if the Operating Costs exceed the Target Operating Costs and any Fixed Costs at any other time during the Service Period in 6 Reporting Periods out of any rolling period of 12 months; and

- (k) under performance as stipulated by paragraph 15 of Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of the Operating Appendix.

"Operator Equipment and Software" has the meaning given in Clause 9.11 of the Operating Appendix;

"Operator Financial Model" means the financial model presented by the Operator and approved by tie and agreed as of the DPOFA Variation Date as Schedule 5 (*Operator Financial Model*) to this Agreement as may be adjusted from time to time in accordance with this Agreement or otherwise by agreement between tie and the Operator;

"Operator IPR" means:

- (a) all Intellectual Property Rights (including Intellectual Property Rights in relation to the Operator Software) which the Operator can demonstrate by documentary evidence were already existing and owned by or licensed to the Operator prior to the Effective Date; and
- (b) any modifications or developments of any of the rights listed in paragraph (a) above or the Project Operations and which are generic in nature and not specific to the Project;

"Operator Maintenance" means such maintenance of the System to be carried out by the Operator as outlined in paragraphs 26.5.3 and 26.5.4 of the Project Development Output Specification;

"Operator Maintenance Plan" means the plan referred to in paragraph 26.5 of Schedule 2 (*Project Development Output Specification*) in relation to the Operator Maintenance of the Infrastructure and Equipment, as such plan is modified from time to time in accordance with the terms of this Agreement;

"Operator Necessary Consents" means:

- (a) any Necessary Consents from HMRI and/or Competent Person for the provision by the Operator of the Transport Services; and
- (b) any Necessary Consents which the Operator is required to obtain which are specified in the Approvals Management Plan; and
- (c) such other Necessary Consents which the Operator is required to obtain that tie may from time to time specify by notice to the Operator,

"Operator Notice of Change" means a notice served by the Operator pursuant to Clause 25 (*Operator Changes*) of the Operating Appendix;

"Operator Party" means each and any of the Operator's agents and contractors and its or their subcontractors (of any tier) and its or their directors, officers and employees in relation to the Project and **"Operator Parties"** shall be construed accordingly;

"Operator Project Manager" shall have the meaning given to it in Clause 6.7;

"Operator Snagging Matters" means minor failures by the Operator to comply with either (i) the Completion Requirements or (ii) the Operating Output Specification where such minor failures and their rectification:

- (a) would not materially impair provision of the Transport Services by the Operator or the use and enjoyment of the System or Transport Services by the Operator or members of the public; and
- (b) would not cause any material (i) cost, (ii) nuisance, (iii) hindrance or (iv) annoyance to any person;

"Operator Software" means programs, the Intellectual Property Rights in which are (a) owned by the Operator; and (b) used by the Operator to carry out its obligations under this Agreement;

"Operator's Core Team" means those members of the Operator's core team set out in the Base Case Assumptions and the Project Development and Operating Costs, and such substitutes as may be agreed from time to time;

"Operator's Non-Core Staff" means those members of the Operator's non-core staff set out in the Base Case Assumptions and the Project Development and Operating Costs, and such substitutes as may be agreed from time to time;

"Originating Tramstop" means the Tramstop where a Tram is scheduled in the Timetable to begin its service journey and will be a Monitoring Point (as defined in Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*)) of the Operating Appendix;

"Overall Approvals Management Plan" means that plan to be developed by the Operator and the Operator's advisers referred to in paragraph 26.8 of Schedule 2 (*Project Development Output Specification*) to this Agreement;

"Pain/Gain Share Period" means a period of, in continuous alternating fashion during Project Phase D, six consecutive Reporting Periods and then seven Reporting Periods provided that:

- (a) the first Pain/Gain Share Period shall commence on the Service Commencement Date of the first Phase to become operational;
- (b) each Pain/Gain Share Period shall start on the day following the last day of the preceding such period; and
- (c) the last Pain/Gain Share Period shall end on the date of termination or expiry of this Agreement;

"Panels" has the meaning given to it in paragraph 5.4 of Schedule 7 (*Dispute Resolution Procedure*);

"Participating Member State" means each state so described in any EMU Legislation;

"Partnering Methodology and Programme" means the programme for the development of the Project during Project Phase A, Project Phase B and Project Phase C in respect of each Phase, and the methodology for such development, as agreed between tie and the Operator pursuant to paragraph 5.5.6 of the Project Development Output Specification (taking account of the Inception Report), as such Partnering Methodology and Programme is amended from time to time pursuant to this Agreement;

"Party" means each and any of the parties to this Agreement and Parties shall be construed accordingly;

"Patronage Revenue" means all revenue collected by the Operator from fares levied on-board Trams in respect of passengers;

"Payment Mechanism" means the payment mechanism as set out in Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) to the Operating Appendix;

"Performance Bond" means an 'on demand' bond provided by the Operator and issued by a surety acceptable to tie and in the form of that set out in Schedule 14 (*Performance Bond*);

"Performance Indicators" means those performance indicators referred to in paragraph 25 of the Project Development Output Specification;

"Performance Monitoring Regime" means the detailed regime (as may be amended from time to time in accordance with an agreed tie Change or agreed Operator Change or as may be otherwise amended in accordance with the Agreement) produced by the Operator and tie pursuant to paragraph 25 of the Project Development Output Specification setting out how the Operator will monitor its compliance with the Operating Output Specification and its obligations under this Agreement in a way which will enable (i) the Operator to produce the Service Quality Reports; (ii) tie to satisfy itself as to the level of the Operator's compliance with the Operating Output Specification and other relevant obligations under this Agreement; and (iii) the Parties to perform their respective responsibilities pursuant to and as described in Clause 16 (*Best Value and Project Phase D Benchmarking*) of the Operating Appendix;

"Performance Points" means points allocated for good/poor performance in accordance with Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of the Operating Appendix;

"Permanent Roads Change" means a Relevant Roads Change which is permanent;

"Persistent Breach Notice" means a notice served by tie pursuant to Clause 34 (*Persistent Breach*);

"Personal Loss" means any personal injury or death, illness, disability, shock, mental anguish, injury or trauma to any person (including one of the Parties);

"Phase" means each of Phase 1a (or part thereof), Phase 1b (or part thereof) and/or any Network Expansion agreed pursuant to Clause 11 (*Network Expansion*) (or part thereof);

"Phase 1a" means the section of Line 1 from Newhaven to Roseburn Junction and the section of Line 2 from Roseburn Junction to the Airport;

"Phase 1b" means the section of Line 1 from Roseburn Junction to Granton Square;

"Planned Service Commencement Date" means, in respect of any Phase thereof, the date fixed by the Project Programme by which Service Commencement in respect of that Phase is planned to occur;

"Planning Permission" means planning permission, listed building consent, conservation areas consent and/or other consent or approval reasonably required from time to time for construction and/or installation and/or operation of the System (including for any Variation);

"Point of Indexation" shall be January each year to be applied annually as of 1st April each year;

"Position Paper" has the meaning given to it in paragraph 2.2 of Schedule 7 (*Dispute Resolution Procedure*);

"PPCN" means a Project Phase Completion Notice;

"Pre-Mobilisation Certificate" means the certificate to be issued by tie pursuant to paragraph 41.1 of Schedule 2 (*Project Development Output Specification*);

"Profiled Fixed Costs" means the Fixed Costs as profiled in accordance with Clause 10.14;

"Profiled Profit Element" means the Profit Element as profiled in accordance with Clause 10.14;

"Profiled Target Operating Costs" means the Target Operating Costs as profiled in accordance with Clause 10.14;

"Profiled Target Patronage (boarders)" means the Target Patronage as profiled in accordance with Clause 20.7 (*Adjustment of Fixed Costs, Target Operating Costs and Target Patronage*) of the Operating Appendix;

"Profit Element" means, as the context admits (i) the Operator's profit element for Project Phase C2 which shall be Indexed and (ii) the Operator's profit element during Project Phase D which shall be Indexed, both as set out in the Financial Proposals;

"Prohibited Act" means:

- (a) offering, giving or agreeing to give to the Scottish Executive, CEC, tie, or any tie Party or any other public body or any person owned or employed by any of them any gift or consideration of any kind as an inducement or reward:
 - (i) for doing or not doing (or for having done or not having done) any act in relation to the obtaining or performance of this Agreement; or
 - (ii) for showing or not showing favour or disfavour to any person in relation to this Agreement;
- (b) paying commission or agreeing to pay commission to any person in connection with the award of this Agreement;

- (c) committing any offence:
 - (i) under the Prevention of Corruption Acts 1889-1916 or section 68(2) of the Local Government (Scotland) Act 1973;
 - (ii) under any Law creating offences in respect of fraudulent acts; or
 - (iii) at common law in respect of fraudulent acts in relation to this Agreement or any other relevant agreement with the Scottish Executive, tie, CEC or any other public body; or
- (d) defrauding or attempting to defraud or conspiring to defraud the Scottish Executive, tie or any other public body;

"Project" means tie's proposal to obtain relevant statutory powers, land and other rights and consents for, and to procure the design, development, construction, operation, maintenance, expansion and funding of, the Edinburgh Tram Network;

"Project Data" means all drawings, reports, documents, plans, photographs, formulae, calculations, data, equipment and materials:

- (a) relating to the design, construction, testing, commissioning, completion, operation, funding, maintenance and/or expansion of the Edinburgh Tram Network and/or System and/or Project; and/or
- (b) brought into existence in the course of tendering for the Project and/or performing, and/or used in connection with the performance of, the Project Development Services;

"Project Development and Operating Costs" means the costs and other information presented by the Operator and approved by tie and agreed at the DPOFA Variation Date as Schedule 6 (*Project Development and Operating Costs*) to this Agreement, as may be adjusted from time to time in accordance with this Agreement or otherwise by agreement between tie and the Operator;

"Project Development Costs" means, in respect of Project Phase A, Project Phase B and Project Phase C1:

- (a) in respect of the Operator's Core Team the amount of budgeted time (subject to Clause 16.4) during that period in the provision of the Project Development Services by persons within the Operator's Core Team multiplied by the Core Staff Fixed Rates ; and

- (b) in respect of each member of the Operator's Non-Core Staff involved in the provision of the Project Development Services in accordance with Clause 16 (*Project Development Costs*), the amount of time spent during that period in the provision of the Project Development Services by such additional staff members multiplied by the Non-Core Staff Fixed Rates;

"Project Development Objectives" means the objectives of tie and the Operator set out in paragraph 2 of Schedule 2 (*Project Development Output Specification*) during Project Phase A, Project Phase B and Project Phase C in respect of each Phase, including the facilitation of the achievement of the Project Vision during Project Phase D;

"Project Development Output Specification" means tie's requirements as regards the services and works to be provided by the Operator during Project Phases A, B and C as set out at Schedule 2 (*Project Development Output Specification*), as varied from time to time in accordance with this Agreement;

"Project Development Services" means the services to be provided by the Operator to tie pursuant to this Agreement in respect of any Phase or Network Expansion, as described in Clause 4 (*The Project Development Services*) and supplemented by Schedule 2 (*Project Development Output Specification*);

"Project Development Staff" means any employees, contractors or other personnel engaged by the Operator or any Operator Party from time to time in the provision of the Project Development Services, the identity of all such persons to be notified to tie and approved by tie in accordance with Clause 4.2.9;

"Project IPR" means all Intellectual Property Rights in the Project Data and the Specially Written Software and any other Intellectual Property Rights created in the performance of the Project Development Services and/or the delivery of the Project, which are specific in nature to the Project;

"Project Operations" means the performance of:

- (a) the Transport Services on the System (including the operation of the Control Centre);
- (b) the Operator Maintenance; and
- (c) all other obligations of the Operator under this Agreement performed during Project Phase D from time to time;

in each case, subject to Variations;

"Project Operations Staff" means any employees, contractors or other personnel engaged by the Operator or any Operator Party from time to time in the provision of the Project Operations;

"Project Phase" means Project Phase A, Project Phase B, Project Phase C and/or Project Phase D as appropriate;

"Project Phase A" means the phase of the Project in respect of a Phase described in paragraphs 4 to 14 of the Project Development Output Specification;

"Project Phase B" means the phase of the Project in respect of a Phase described in paragraphs 15 to 31 of the Project Development Output Specification;

"Project Phase C" means the phase of the Project in respect of a Phase described in paragraphs 33 to 47 of the Project Development Output Specification;

"Project Phase C1" means the phase of the Project in respect of a Phase described in paragraphs 36 to 40 of the Project Development Output Specification;

"Project Phase C2" means the phase of the Project in respect of a Phase described in paragraphs 42 to 47 of the Project Development Output Specification;

"Project Phase Completion Notice" or "PPCN" means, in respect of each Phase, the notice issued by tie on the date of:

- (a) for Project Phase A, the grant of Royal Assent to the relevant Scottish Private Bill;
- (b) for Project Phase B, the award by tie of an IDA for the first Phase (or part thereof) authorised by a Scottish Private Bill;
- (c) for Project Phase C1, the issue by tie of the Mobilisation Certificate pursuant to paragraph 41.3 of the Project Development Output Specification;
- (d) for Project Phase C2, Full Service Commencement; or

in each case, or as otherwise determined by tie;

"Project Phase D" means the phase of the Project in respect of any Phase after the Service Commencement Date for such Phase;

"Project Programme" means the programme set out in Schedule 8 (*Project Programme*) which has been developed by tie with input from the Infrastructure Provider and the Operator as amended from time to time as a tie Change notified to the Operator in accordance with Clause 24 (*tie Changes*) of the Operating Appendix;

"Project Return" means the return for each relevant Project Phase set out in the Financial Proposals;

"Project Safety Committee" means the committee which shall include tie, the Operator, TEL, CEC (Roads), and the Infrastructure Provider;

"Project Vision" means tie's and CEC's vision for the Project as set out at Recital D of this Agreement;

"Property Loss" means any loss of or damage to any property, real or personal, of any person (including one of the Parties);

"Public Liaison and Media Plan" means the plan referred to in paragraph 26.16 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance with the terms of this Agreement;

"Punctuality Service Element" has the meaning given in Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of the Operating Appendix;

"Qualifying Change in Law" means a Change in Law which comes into effect during Project Phase C or Project Phase D which involves additional Project Development Costs, Operating Costs and/or necessitates amendment of this Agreement and/or the Project Operations and, in each case, which was not reasonably foreseeable prior to the issue of the PPCN for Project Phase B for the relevant Phase;

"Quality Management Plan" means the plan referred to in paragraph 26.9 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance the terms of this Agreement;

"Quality Manager" means the person to be appointed by the Operator pursuant to Clause 7.3 of this Agreement or Clause 14.2 of the Operating Appendix (as appropriate);

"Quarter" means each period in any year:

- (a) beginning on 1 April and ending on 30 June;

- (b) beginning on 1 July and ending 30 September;
- (c) beginning on 1 October and ending on 31 December; and
- (d) beginning on 1 January and ending on 31 March;

in each case, to the extent only that such period falls during the Term of this Agreement, provided that the first Quarter will commence on the Effective Date and end on 30 June 2004, and the final Quarter will end on the final day of each Project Phase C1;

"RA 1984" means the Roads (Scotland) Act 1984;

"Rateable Value" means the rateable value assigned annually to the System by the Scottish Ministers or Relevant Authority;

"Recruitment and Training Plan" means the plan referred to in paragraph 26.7 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance the terms of this Agreement;

"Referral Notice" has the meaning given to it in paragraph 5.12 of Schedule 7 (*Dispute Resolution Procedure*);

"Referring Party" has the meaning given to it in paragraph 5.1 of Schedule 7 (*Dispute Resolution Procedure*);

"Related Contracts" has the meaning given to it in paragraph 6.1 of Schedule 7 (*Dispute Resolution Procedure*);

"Related Dispute" has the meaning given to it in paragraph 6.1 of Schedule 7 (*Dispute Resolution Procedure*);

"Relevant Authority" means any court with the relevant jurisdiction and any local authority, national authority or supra national agency, inspectorate, minister, Scottish Executive, body, official or public or statutory person of the government of the United Kingdom or of the European Union;

"Relevant Event" means a tie Change, a Qualifying Change in Law or a Permanent Roads Change;

"Relevant Roads Change" means the occurrence at any time during Project Phase C2 or Project Phase D of :

- (a) works by or on behalf of CEC or any Roads Authority resulting, once completed, in a physical change to the road layout affecting the operation of the System;
- (b) a change to the permitted uses of the road as a result of the making, revocation or variation of a traffic regulation order by CEC or other Roads Authority, excluding any traffic regulation order made, revoked or varied at the request of any third party consequential to any works carried out by that third party;
- (c) a decision by CEC or other Roads Authority to alter or cease providing the priorities given by the CEC UTC System to Trams over other classes of vehicle from those priorities agreed between **tie** and the Operator during Project Phase B or Project Phase C1 in respect of the relevant Phase; or
- (d) the carrying out of works to Roads or the carrying out of works to the CEC UTC System;
- (e) a delay after the Service Commencement Date by CEC or other Roads Authority in bringing into operation the priorities to be given by the CEC UTC System to Trams over other classes of vehicle in accordance with the agreement reached between **tie** and the Operator in respect of UTC priorities during Project Phase B or Project Phase C1 in respect of the relevant Phase;

in each case affecting the passage of Trams or the provision of the Transport Services and directly resulting in failure by the Operator to meet the Operating Output Specification;

"Relief Event" means (save to the extent any of the following events arise as a result of any act or omission of the Operator and/or an Operator Party):

- (a) at any time on or after the Effective Date:
 - (i) fire, explosion, lightning, tempest, flood, bursting or overflowing of water tanks, apparatus or pipes, ionising radiation (to the extent it does not constitute a Force Majeure Event), earthquakes, riots or civil commotion;
 - (ii) failure by any statutory undertaker, utility company, or other like body to carry out works or provide services;
 - (iii) any accidental loss of or damage to a material part of the System;
 - (iv) any failure or shortage of power or fuel;

- (v) any blockade or embargo which does not constitute a Force Majeure Event; or
 - (vi) any official or unofficial strike, lockout, go-slow or other industrial dispute and generally affecting the public transport industry in Scotland or a significant part thereof;
- (b) at any time during the Service Period or during Project Phase C2 the exercise by CEC or a Roads Authority of any authority to close or restrict roads or streets pursuant to their powers under the Road Traffic Regulation (Special Events) Act 1994 or other Legislation;

where such occurrence materially and adversely affects the Operator's performance of its obligations in the operation of the System.

"Reporting Period" means a period of 28 days provided that:

- (a) the first such period during the Term shall commence on the Service Commencement Date of the first Phase to become operational;
- (b) the first such period in the Term may be varied by up to 7 days by notice from tie to the Operator;
- (c) each such period shall start on the day following the last day of the preceding such period; and
- (d) the last such period during the Term shall end on the Expiry Date or termination of this Agreement;

"Required Insurances" means the insurances set out in Part 1 of Schedule 10 (*Insurances*) and such other insurances as the Operator itself may be required from time to time to maintain by Law (save to the extent provided under OCIP Insurances) or may be required from time to time by tie as a tie Change to take out and maintain in respect of the Project Development Services and Project Operations;

"Reset Decision Date" has the meaning given to it under Clause 21 (*Reset of the Fixed Costs, the Target Operating Costs and the Target Patronage*) of the Operating Appendix;

"Responding Party" has the meaning given to it in paragraph 5.2 of Schedule 7 (*Dispute Resolution Procedure*);

"Retention" means the sums calculated in accordance with Clauses 16.5 and 18.3 as appropriate;

"Review Procedure" means the procedure set out in Schedule 9 (*Review Procedure*);

"Roads" has the meaning given to it in the RA 1984;

"Roads Authority" has the meaning given it under RA 1984 and, where appropriate, shall include any parties responsible for private roads;

"ROGS" means the Railways and Other Guided Transport Systems (Safety) Regulation 2006;

"RPIX" means the general index of retail prices for all items excluding mortgage interest payments (Office of National Statistics: Series Identifier: CHMK) as published or any replacement thereof or, in the event such index ceases to exist, such other similar index as the Parties shall agree from time to time (or, if the Parties cannot so agree, as determined under the Disputes Resolution Procedure on the referral of either Party) provided that, if the basis of computation of such index shall have changed between the two relevant months, any official reconciliation between the two bases of computation published by a United Kingdom government department shall be binding on the Parties and, in the absence of such official reconciliation, such adjustment shall be made to the figure of such index for the second of those months to make it correspond as nearly as possible to the method of computation for the first of those months and such adjusted figure shall be considered for the purpose of this Agreement to the exclusion of the actual published figure;

"Safety Management System Plan" means the plan referred to in paragraph 26.6 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance the terms of this Agreement;

"Scottish Private Bill(s)" means the enabling legislation promoted by tie and/or CEC pursuant to the relevant Scottish Parliamentary process granting the permanent legal authority to fund, construct, operate and maintain the Edinburgh Tram Network;

"Second Party" shall have the meaning given in Clause 3.3;

"Section A" means completion of Gogar Depot (including energization) and the first tram delivered to site and assembled;

"Section B" means completion of Test Track (including energization), assumed as Depot to Airport, and 5 trams in total delivered to site, assembled with the first tram to have completed

the Tram Type Test and the other 4 to have completed the Site Acceptance Test (ref. part 1c Employers Requirements);

"Section C" means completion of remainder of Phase 1a to Newhaven including energization and the spur or delta at Roseburn Junction;

"Section D" means Shadow Running completed and commencement of revenue service approval obtained;

"Security Interest" means any mortgage, pledge, lien, hypothecation, security interest or other charge or encumbrance or any other agreement or arrangement having substantially the same economic effect and includes any Security as defined in section 248(b) of the Insolvency Act 1986;

"Security Management Plan" means the plan referred to in paragraph 26.14 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance with the terms of this Agreement;

"Service Commencement" means, in respect of each Phase or Network Expansion, the commencement of the Transport Services on such Phase or Network Expansion;

"Service Commencement Date" means, in respect of each Phase or Network Expansion, the date specified in the Certificate of Service Commencement in respect of that Phase or Network Expansion;

"Service Integration Plan" means the plan being developed by Transport Edinburgh Limited with the support of the Operator in conjunction with others to achieve integration of the Transport Services and the System with all modes of public transportation operating within the City of Edinburgh, as such plan may be amended from time to time as a *tie* Change and notified to the Operator in accordance with Clause 24 (*tie Changes*) of the Operating Appendix;

"Service Period" means the period:

- (a) in respect of any Phase or Network Expansion, from (and including) the Service Commencement Date in respect of that Phase or Network Expansion;
- (b) until (and including) the earlier of the Expiry Date and the Termination Date;

"Service Quality Report" means the report to be submitted by the Operator pursuant to Clause 12 (*Service Performance and Quality Monitoring*) of the Operating Appendix in the

form developed and containing the information agreed by the Parties in accordance with the Project Development Output Specification and the Operating Output Specification;

"**Shadow Run Validation Plan**" means the plan referred to in paragraph 26.4 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance the terms of this Agreement;

"**Shadow Running**" means the period after the Edinburgh Tram Network has been handed over to the Operator after successful completion of the T2 system acceptance tests as defined in the Operating Output Specification and as indicated on the Project Programme unless at tie's discretion it instructs the Operator to commence shadow running despite any of the T2 system acceptance tests not being completed successfully provided that the Competent Person has expressed no material concerns;

"**Shareholders**" means any person from time to time holding share capital in the Operator;

"**Snagging Notice**" means the notice to be issued by tie to the Operator, which shall specify Operator Snagging Matters;

"**Special Event**" means any event:

- (a) notified by tie to the Operator pursuant to Clause 8 (*Special Events*) of the Operating Appendix which will, or may, affect the Project Operations; or
- (b) notified by the Operator to tie pursuant to Clause 8 (*Special Events*) of the Operating Appendix which the Operator considers requires an amendment to the Project Operations (including, without limitation, the Timetable), and which tie agrees;

"**Special Event Notice**" means a notice to be given by (i) tie to the Operator or (ii) the Operator to tie, in either case pursuant to the terms of Clause 8 (*Special Events*) of the Operating Appendix;

"**Special Event Plan**" means a plan to be produced by the Operator and forwarded to tie pursuant to the terms of Clause 8.3 (*Special Events*) of the Operating Appendix;

"**Specially Written Software**" means programs which are written by or on behalf of the Operator specifically to enable the Operator to carry out its obligations under this Agreement;

"**STAG II Approval**" means approval under part II of the Scottish Transport Appraisal Guidance (as such guidance may be amended from time to time);

"Staffing Information" has the meaning given to it in Clause 42.11;

"Submitted Item" has the meaning given to it in paragraph 1.2 of Schedule 9 (*Review Procedure*);

"Successor Operator" means any person notified by the Operator as having been, or intended to be, appointed to operate and/or maintain the System following termination or expiry of this Agreement;

"System" means the light rail transit system to be developed pursuant to this Agreement and the Trams, Infrastructure and Equipment, plant, machinery, apparatus, equipment, furniture, street furniture and facilities, track, station and Tramstop structures and platforms, Depots, Control Centre, electrical sub-stations, overhead line equipment (including bases and poles, building fixings, catenaries and wiring), closed circuit television system, signalling system and spares and consumables and offices and office furniture and office equipment in such offices and other items to be provided in accordance with the Operating Appendix or used by the Operator to perform its obligations under the Operating Appendix;

"System Acceptance Tests" means the series of tests included in the employer's requirements set out within the IDA, which will be used to demonstrate that the Infrastructure and Equipment have been successfully delivered to enable delivery of the Transport Services in accordance with this Agreement;

"System Integration Plan" means the plan referred to in paragraph 26.17 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance with the terms of this Agreement;

"System Land" is the land:

- (a) on which the Project Operations are carried out;
- (b) which is maintained by the Infrastructure Provider(s); and/or
- (c) which is impacted upon as a result of the Project Operations or the provision of the Transport Services;

"Systems Assurance Plan" means the plan referred to in paragraph 26.12 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance with the terms of this Agreement;

"Target Costs for Project Phase C2" means the target costs numbered "6" in the tables included in the Base Case Assumptions and such other costs as the Operator may agree from time to time should be treated as "Target Costs for Project Phase C2"; which are estimated to be expended in regard to the performance of the Project Development Services to conclusion of Project Phase C2 as developed during Project Phase A from the Base Case Assumptions, the Financial Proposals, the Operator Financial Model and the Project Development and Operating Costs, and agreed by the Parties prior to the completion of Project Phase B which shall be Indexed and may otherwise be adjusted from time to time in accordance with this Agreement;

"Target Operating Costs" means the annual target costs numbered "6" in the tables included in the Base Case Assumptions and such other costs as the Operator may agree from time to time should be treated as "Target Operating Costs"; which are estimated to be incurred by the Operator during Project Phase D as developed from the Base Case Assumptions, the Financial Proposals, the Operator Financial Model and the Project Development and Operating Costs, and agreed by the Parties prior to completion of Project Phase B which shall be Indexed and may otherwise be adjusted from time to time in accordance with this Agreement provided that where there is a time interval between the Service Commencement Date and the Full Service Commencement Date for a Phase, the Target Operating Costs for the System (including such Phase) for such period shall be the Interim Target Operating Costs;

"Target Patronage" means the annual target number of boarders of the System as set by the Joint Revenue Committee to be included in the Financial Proposals and the Operator Financial Model and as may be adjusted from time to time in accordance with this Agreement provided that where there is a time interval between the Service Commencement Date and the Full Service Commencement Date for a Phase, the Target Patronage for the System (including such Phase) for such period shall be the Interim Target Patronage;

"Tax" means any kind of tax, duty, levy, imposition, assessment or other charge (other than VAT) whether or not similar to any in force at the Effective Date and whether imposed by a local, governmental authority or other Relevant Authority in the United Kingdom or elsewhere;

"TEL" or "Transport Edinburgh Limited" or means Transport Edinburgh Limited a company incorporated under the Companies Act with registered number SC269639 and having its registered office at 55 Annandale Street, Edinburgh, EH7 4AZ;

"TEL Fares Policy" means any policy developed and applied by TEL concerning the level and/or structure of ticket pricing for the Edinburgh Tram Network;

"Temporary Roads Change" means a Relevant Roads Change which persists for less than 3 months;

"Term" means the period from (and including) the Effective Date until (and including) the earlier of the Expiry Date and the Termination Date;

"Terminated Phase" shall have the meaning given to it in Clause 32.3;

"Termination Date" means 02.00 hours on any date of early termination of this Agreement;

"Termination Notice" means a notice to terminate this Agreement served by either Party in accordance with the terms of this Agreement;

"Testing and Commissioning Plan" means the plan referred to in paragraph 37 of Schedule 2 (*Project Development Output Specification*), as such plan is modified from time to time in accordance with the terms of this Agreement;

"Third Party Shareholder" means such party nominated by the Operator and approved by tie:

"Third Party Software" means programs, the Intellectual Property Rights in which are (a) owned by a third party and (b) used by the Operator to carry out its obligations under this Agreement;

"tie Advisers" means the advisers appointed by tie in relation to the Edinburgh Tram Network;

"tie Change" means:

- (a) a change in the Project Operations proposed by tie during Project Phases C1, C2 or Project Phase D;
- (b) a truncation of Line 1 and/or Line 2 and/or Line 3 from what was anticipated to form part of the Edinburgh Tram Network during any Project Phase;
- (c) a change to the Required Insurances and/or the OCIP Insurances during any Project Phase;
- (d) a change to the number of Depots (including a change from one to two depots) during any Project Phase;

- (e) a tie discretionary item numbered "7" in the tables included in the Base Case Assumptions during any Project Phase;
- (f) during any Project Phase, any other change stated to be a tie Change in accordance with this Agreement or proposed by tie in accordance with this Agreement, which is stated to be considered or treated as a tie Change;
- (g) a change to the Project Programme from the version as at the DPOFA Variation Date save to the extent that such change and the consequences of such change have been agreed or determined pursuant to the provisions of Clause 12 (*Interface with the Infrastructure Provider*); and
- (h) a change to the Code of Construction Practice and/or the Code of Maintenance Practice

which the Operator is obliged to implement under Clause 24 (*tie Changes*) of the Operating Appendix;

"tie Completion Requirements" means the requirements set out in Schedule 2 (*tie Completion Requirements*) to the Operating Appendix;

"tie Customer Satisfaction Survey" means the customer satisfaction survey produced annually (or with such frequency as may be determined by tie) in accordance with Clause 16.4 of the Operating Appendix;

"tie Default" means one of the following events:

- (a) an expropriation, sequestration or requisition of a material part of the System and/or shares in the Operator by tie or any Relevant Authority;
- (b) a failure by tie to make payment of any amount of money exceeding £200,000 (Indexed) that is due and payable by tie to the Operator under this Agreement, where that amount fell due and payable two (or more) Reporting Periods prior to the date of service of the Termination Notice;
- (c) a breach by tie of its obligations under this Agreement which substantially frustrates or renders it impossible for the Operator to perform its obligations under this Agreement for a continuous period of 90 days during Project Phases A, B, C and/or D; or
- (d) a breach by tie of Clause 44 (*Assignment, Sub-Contracting and Changes in Control*);

"tie Full Service Notice" means a notice to be given by tie to the Operator pursuant to the terms of Clause 8.7 of the Operating Appendix;

"tie Inspectors" means the inspectors appointed by tie for the purposes set out in Clause 17.3 of the Operating Appendix;

"tie Notice of Change" means a notice served by tie pursuant to Clause 24.1 of the Operating Appendix, setting out the matters specified in Clause 24.2 of the Operating Appendix;

"tie Party" means the tie Advisers or any of tie's agents, contractors and sub-contractors of any tier and its or their directors, officers and employees but excluding the Operator, any Operator Party and statutory undertakers and utilities;

"tie Project Manager" shall have the meaning given to it in Clause 6.1;

"Timetable" means:

- (a) subject to paragraph (ii), the timetable of all Transport Services to be run on the System, such Timetable to be agreed between tie and the Operator during Project Phase C2, and amended from time to time in accordance with this Agreement;
- (b) in respect of any day when a Special Event Plan is in effect, the revised Timetable specified in such Special Event Plan, if different to the Timetable referred to in paragraph (i) or if an unscheduled Special Event such Timetable as the Operator can reasonably provide;

"Tram" means any vehicle (whether or not used for the carriage of passengers) carried on flanged wheels along the rails of a Tramway;

"Tram Business" means the business of providing the Project Operations;

"TramCo" means, as the context permits, either or both of the supplier or maintenance provider of the Trams for the Edinburgh Tram Network;

"Tram Legislation" means the Edinburgh Tram (Line One) Act 2005 and the Edinburgh Tram (Line Two) Act 2005, which received Royal Assent on 8 May 2006 and 27 April 2006 respectively and which confer on CEC all requisite authorities and statutory powers to procure the construction, operation and maintenance of Line 1 and Line 2;

"Tramstop" means the places (including termini) at which fare paying passengers are permitted to board and/or leave Trams;

"Tramway" means a system of transport used wholly or mainly for the carriage of passengers and employing parallel rails which provide support and guidance for vehicles carried on flanged wheels;

"Transfer Date" has the meaning given to it in Clause 42.2;

"Transferring Project Staff" has the meaning given to it in Clause 42.1;

"Transport Scotland" means an agency within the Scottish Executive Enterprise, Transport and Lifelong Learning Department which was established in January 2006 and having its principal office at Buchanan House, 58 Port Dundas Road, Glasgow, H4 0HF;

"Transport Services" means the public passenger transport services to be provided by the Operator on the System (or any part thereof) in accordance with the Operating Appendix;

"Treaty of European Union" means the Treaty of Rome of 25 March 1957, as amended by the Single European Act 1986 and the Maastricht Treaty (which was signed at Maastricht on 7 February 1992 and came into force on 1 November 1993), as amended from time to time;

"TUPE" means the Transfer of Undertakings (Protection of Employment) Regulations 2006;

"Uninsurable" means that:

- (a) insurance is not available to the Operator in respect of the Project in the European insurance market with reputable insurers of good standing in respect of that matter; or
- (b) the insurance premium payable for insuring that matter is at such a level that such matter is not generally being insured against in the European insurance market with reputable insurers of good standing;

"UTC" means the urban traffic control systems and monitoring functions operated by CEC or other Roads Authority (as appropriate);

"Variation" means a tie Change or an Operator Change;

"VAT" means any value added taxes;

"Year" means each period beginning on 1 April and ending on the following 31 March, where any part of such period is during the Term.

2. In this Agreement, except where the context otherwise requires:

- 2.1 words importing gender include masculine, feminine and neuter;
- 2.2 the singular includes the plural and vice versa;
- 2.3 a reference to any part, Clause, sub-clause or Schedule is, except where it is expressly stated to the contrary, a reference to such part, Clause or sub-clause of or Schedule to this Agreement;
- 2.4 a reference in any Schedule to any part, paragraph or sub-paragraph is, except where it is expressly stated to the contrary, a reference to such part, paragraph or sub-paragraph of that Schedule (as the case may be);
- 2.5 for the avoidance of doubt, any reference to this Agreement shall be interpreted as including the Operating Appendix;
- 2.6 any reference to this Agreement or to any other document shall include any variation, amendment, or supplement to such document expressly permitted under the terms of this Agreement;
- 2.7 any reference to any enactment, order, regulation or other similar instrument (including any EU instrument) (whether specifically named or not) shall be construed as a reference to the enactment, order, regulation or instrument as amended, replaced, consolidated or re-enacted and shall include any orders, consents, regulations, legally binding codes of practice or subordinate legislation (within the meaning of section 21(1) of the Interpretation Act 1978) made thereunder;
- 2.8 a reference to a person includes individuals, firms, partnerships, bodies corporate, joint ventures, government departments and any organisation capable of suing or being sued and references to any of the same include the others and their successors and assignees and transferees to the extent that such assignment and transfer are expressly permitted under the terms of this Agreement;
- 2.9 headings and the contents list are for convenience of reference only and do not affect the interpretation of this Agreement;
- 2.10 the ejusdem generis rule does not apply and the meaning of general words is not to be restricted by any particular examples preceding or following those general words;
- 2.11 a reference to a time of day is a reference to the time in Scotland;

2.12 subject to the restrictions imposed by this Agreement on subcontracting, an obligation to do something includes an obligation to procure it to be done;

2.13 an obligation not to do something includes an obligation not to wilfully allow it to be done;

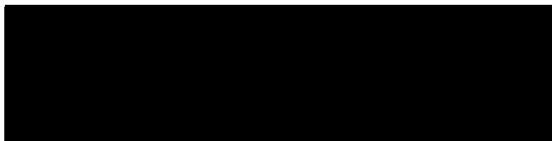
2.14 the word "including" means "including without limitation"; and

2.15 a reference to "consent" shall mean consent in writing.

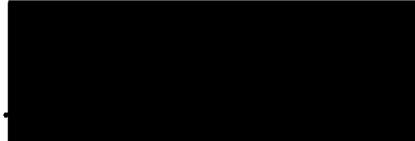
3. This Agreement shall be interpreted and construed as a whole provided that in the event of any inconsistency or conflict between the main body of this Agreement and/or the Schedules and/or the appendices, then:

3.1 the main body and the Operating Appendix shall prevail to the extent of any such conflict or inconsistency over the Schedules; and

3.2 **tie** and the Operator shall agree which of the Schedules shall prevail to the extent of any such conflict or inconsistency between the Schedules.



Director/Authorised Signatory
tie Limited



Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

This is Schedule 2 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 2

Project Development Output Specification

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1. OVERALL SYSTEM REQUIREMENTS

1.1 The System shall be an electrically powered light rail system using Trams to carry passengers and may include all or any of the following Lines and/or Phases (as appropriate):

1.1.1 Phase 1a;

1.1.2 Phase 1b;

1.1.3 Line 1;

1.1.4 Line 2;

1.1.5 Line 3; and

1.1.6 any Network Expansion

1.2 The System's overall requirements of the System are that it shall facilitate the achievement of the Project Vision and be:

1.2.1 safe and secure;

1.2.2 reliable;

1.2.3 attractive;

1.2.4 delivered within the Affordability Limits;

1.2.5 affordable for passengers;

1.2.6 efficient;

1.2.7 environmentally acceptable;

1.2.8 sustainable;

1.2.9 easy for passengers to use;

1.2.10 accessible to all including mobility impaired passengers;

1.2.11 able to provide a minimum level of service specified in the Operating Output Specification;

- 1.2.12 able to support the policy, planning and system aspirational objectives of the City of Edinburgh Council and TEL;
 - 1.2.13 integrated with other transport modes;
 - 1.2.14 capable of Network Expansions; and
 - 1.2.15 able to project a System wide high quality brand image.
- 1.3 tie requires that operation of the System shall reflect a high standard of presentation and public image and that the System shall be operated efficiently with minimum disturbance to the public and minimum delay to passengers.
 - 1.4 All aspects of the operation of the System shall take account of the need to react safely and quickly to emergencies.
 - 1.5 The System shall incorporate such staffing, surveillance and alarm equipment as is appropriate to ensure the safety of the public, especially lone and mobility impaired travellers.
 - 1.6 tie requires that the System shall be capable of responding to any Network Expansion and increased ridership resulting from such Network Expansion without adverse impact on quality.
 - 1.7 The System shall be constructed, maintained and operated in accordance with Good Industry Practice at all times and in accordance with the Law.

2. PROJECT DEVELOPMENT OBJECTIVES

The objectives of tie and the Operator during Project Phase A, Project Phase B and Project Phase C in respect of each Line and/or Phase (as appropriate) shall be to:

- 2.1 develop a System that complies with the requirements set out in paragraph 1 above;
- 2.2 promote the Enabling Legislation for each Line through the Scottish Private Bill parliamentary process;
- 2.3 procure all Necessary Consents, all works, Trams, Infrastructure and Equipment, services and supplies and to secure all funding and insurance required for the design, construction, funding, operation and maintenance of the Edinburgh Tram Network;

- 2.3.1 in accordance with the Partnering Methodology and Programme, and the Project Programme;
 - 2.3.2 in accordance with the terms of the Agreement including this Project Development Output Specification, the Operating Appendix, the Operating Output Specification, the Operating Method Statements, the Environmental Statements for each Line and/or Phase (as appropriate), and the Design Manual, as amended from time to time in accordance with this Agreement;
 - 2.3.3 within the Affordability Limits;
 - 2.3.4 in relation to the Operator's operating expenditure, at no greater aggregate cost to tie than as projected in the Operator Financial Model; and
 - 2.3.5 in accordance with the Law and Good Industry Practice;
- 2.4 develop the technical definition of the Project including, without limitation, the Infrastructure and Equipment Output Specification for the procurement of Infrastructure and Equipment for each Line and/or Phase (as appropriate), and in particular:
- 2.4.1 to jointly review the technical work carried out by the tie Advisers for Line 1, Line 2 and Line 3 prior and subsequent to the Effective Date;
 - 2.4.2 where necessary to refine the Operator's forecasts of operating expenditure as set out in the Operator Financial Model;
 - 2.4.3 to identify network effects through co-operation with the tie Advisers carrying out the Network Effects Study;
 - 2.4.4 to support TEL in carrying out work required to achieve the integration of the Project with existing transport operators in Edinburgh;
 - 2.4.5 to engage with relevant regulatory authorities regarding Project Phase D for each Line and/or Phase (as appropriate);
 - 2.4.6 to examine innovative contractual arrangements for the interface between operation and maintenance of the Edinburgh Tram Network;
 - 2.4.7 to ensure that System design and operational methods take into account Good Industry Practice with regard to urban traffic control;

- 2.4.8 to review the demand / revenue forecasts produced by the tie Advisers; and
- 2.4.9 to ensure System and network integration.
- 2.5 support the development by TEL of coordination arrangements with local bus operators regarding bus-tram integration, including integrated ticketing;
- 2.6 to develop and refine the Target Costs for Project Phase C2 and the Target Operating Costs in accordance with paragraph 7 below; and
- 2.7 to assist the Joint Revenue Committee to set the Target Patronage.

3. DELIVERY OF INFRASTRUCTURE AND EQUIPMENT

- 3.1 Subject to the passage of the Enabling Legislation referred to in relation to Project Phase A in respect of the relevant Line, the satisfaction of the tie Affordability Limits, the successful development of the Infrastructure and Equipment Output Specification pursuant to Project Phase B, and any termination rights of either Party under this Agreement, tie shall procure the Infrastructure and Equipment for each Line and/or Phase (as appropriate), through one or more Infrastructure Providers.
- 3.2 In relation to the design of the System, tie is committed to the provision of a System which is, as far as possible, in harmony with its surroundings. Central Edinburgh is designated as a World Heritage Site and it is essential that intrusion is minimised and that opportunities for enhancement are realised. The quality of the Infrastructure and Equipment design and construction is a critical factor in achieving this objective.
- 3.3 A Design Manual is under development by CEC, tie and the tie Advisers which will consider, amongst other factors, the following:
- 3.3.1 power provision and its means of support:
- preference to fix to buildings;
 - lightweight support systems, minimising visual impact;
 - multi-function support systems to combine overhead line equipment with street lighting or signing;
 - design of masts;
 - location and spacing of masts;

- use of central supports on two-line sections;
- ground fixings; and
- screening by landscape.

3.3.2 Station design:

- location in relation to passenger convenience and existing features and buildings;
- quality of structural design to realise all necessary functions (shelter, seating, information systems, security needs, etc) in a simple structure;
- choice of materials and finishes;
- maintenance issues;
- signage and street furniture;
- access;
- colour schemes; and
- advertising.

3.3.3 Track layouts:

- choice of surface materials to distinguish primary uses;
- opportunities for urban enhancement;
- use of grass-ballasted track;
- treatment of level changes; and
- use of landscape/planting to minimise impact.

3.4 Whilst providing advice related to Infrastructure and Equipment Output Specification during Project Phase A or Project Phase B, or at any other time during the Term, the Operator shall at all times take into consideration the objectives of the Design Manual and its underlying purpose. The Operator shall, where appropriate, from time to time

recommend for consideration by *tie* and the *tie* Advisers amendments or additions to the Design Manual.

- 3.5 Similarly, when developing the Operating Method Statements for the System, the Operator shall endeavour to minimise any adverse impact of the System on the general quality of life in Edinburgh whilst maintaining Transport Services of the requisite quality and reliability.
- 3.6 As regards advertising on the System, pursuant to Clause 15 (*Advertising*) of the Operating Appendix, there shall be no Operator advertising permitted on or in any of the Trams and/or the Tramstops nor at any other location on the System save that recognition of the corporate identity of the Operator shall be permitted (a) in appropriate tram specific publications issued by *tie*; (b) on paper letterhead; and (c) within the interior of the Trams, subject to the Operator proposing such Operator recognition under (a), (b) or (c) to *tie*, and *tie* agreeing to any such proposals (such agreement to be at *tie*'s absolute discretion). Instructions will also be encompassed within the Design Manual in respect of advertising and graphic design at Tramstops and on Trams. The Design Manual will reflect *tie*'s policies and requirements as at the DPOFA Variation Date Such policies may be subject to amendment pursuant to Clause 24 (*tie* Changes) or Clause 25 (*Operator* Changes) of the Operating Appendix.

PROJECT PHASE A

Development

4. INTRODUCTION

- 4.1 The primary objective of **tie**, the **tie** Advisers and the Operator during Project Phase A in respect of any Line shall be to promote the Enabling Legislation for that Line through the Scottish Private Bill parliamentary process.
- 4.2 The Project Development Services to be provided by the Operator during Project Phase A in respect of each Line are intended to coincide with the other activities of **tie** directed towards promoting the Enabling Legislation for that Line through the Scottish Private Bill parliamentary process.
- 4.3 As at the Effective Date, it is possible that:
- 4.3.1 the Enabling Legislation for each Line will be promoted separately, on a sequential basis, through the Scottish Private Bill parliamentary process; or
 - 4.3.2 the Enabling Legislation for two of the Lines will be promoted together through the Scottish Private Bill parliamentary process, with the other Line being promoted separately.
- 4.4 Whichever option described in paragraph 4.3 is chosen by **tie**:
- 4.4.1 the **tie** Advisers will prepare, with support from the Operator to the extent requested by **tie**, technical and financial information in respect of each Line separately or in any combination of Lines, in support of the promotion of the Enabling Legislation;
 - 4.4.2 the Transport Services on the System will be operated by a single operator with incremental expansion of the System as relevant approvals and funding are obtained; and
 - 4.4.3 part only or combination of parts of the Lines may be authorised.

5. PROJECT DEVELOPMENT ACTIVITIES DURING PROJECT PHASE A

- 5.1 **tie** has commissioned individual studies by the **tie** Advisers to investigate each of the Lines comprised in the Edinburgh Tram Network. Each of these studies considers

each Line in isolation. tie has also commissioned a study to determine the effects on costs and revenues of operating all the Lines together as a single network ("**Network Effects Study**"). These studies have provided, or will provide, documentation to support the promotion of the Enabling Legislation for each Line through the Scottish Private Bill parliamentary process including:

- 5.1.1 plans and sections;
 - 5.1.2 a book of reference;
 - 5.1.3 an estimate of the operating costs and revenue for each Line (on a stand alone basis), based upon the Development Assumptions;
 - 5.1.4 estimates of the network effects for operating costs and revenues for different combination of Lines, based upon the Development Assumptions;
 - 5.1.5 an estimate of the capital costs for each Line; and
 - 5.1.6 relevant documentation to obtain STAG II Approval.
- 5.2 In support of the primary objective for Project Phase A set out in paragraph 4.1 above, the Operator will be expected, during Project Phase A in respect of each Line, to comply with the requirements of paragraphs 5.3 to 5.6 below.
- 5.3 The Operator shall co-operate with tie, the tie Advisers and the Joint Revenue Committee in relation to the development and/or refinement of:
- 5.3.1 the items listed in paragraphs 5.1.1 to 5.1.6 above;
 - 5.3.2 preliminary Target Costs for Project Phase C2, preliminary Target Operating Costs and preliminary Target Patronage;
 - 5.3.3 the Development Assumptions;
 - 5.3.4 the Infrastructure and Equipment Output Specification for the relevant Line and/or Phase (as appropriate);
 - 5.3.5 the Operating Output Specification;
 - 5.3.6 liaison with City of Edinburgh Council, TEL and third parties;
 - 5.3.7 the Network Effects Study; and

5.3.8 the Partnering Methodology and Programme and the Project Programme.

5.4 If so required by tie, the Operator shall advise upon any operational issues or assumptions which may be queried during the passage of the Enabling Legislation for each Line through the Scottish Private Bill parliamentary process. This may include, without limitation:

5.4.1 provision of oral or written expert evidence during the committee hearings and process; and

5.4.2 participation in the management of any objections to, or petitions against implementation of the System and the Transport Services, including the drafting of responses.

5.5 Without prejudice to paragraphs 5.3 and 5.4, the Operator shall:

5.5.1 review tie's financial model and business case and make recommendations as to how the Project can be delivered and funded within the Affordability Limits (or so as to minimise any excess above such Affordability Limits);

5.5.2 provide support to tie and the tie Advisers in respect of the production and refinement of technical, operating and maintenance designs, specifications and programmes for each Line including system specifications, technical drawings, land plans, sections and other detailed design work required to apply for the Scottish Private Bill(s) and related ancillary statutory authority to implement the Project;

5.5.3 provide support to tie and the tie Advisers in respect of the preparation of any applications, notices, designs, statements and relevant factual or technical evidence and all other procedures to obtain the Scottish Private Bill(s) and any other Necessary Consents required for the Project;

5.5.4 provide support to tie and the tie Advisers in respect of discussions and negotiations and the conclusion of any undertakings, agreements or other commitments with third parties as may be necessary or desirable to remove any objections to the Project or to secure the grant of any Necessary Consents or otherwise facilitate the construction, installation, operation and maintenance of any of the proposed Lines and/or Phases (as appropriate) in the Edinburgh Tram Network. Such third parties may include, in particular (i) owners or occupiers of land required for or potentially affected by the

Project, (ii) Network Rail and statutory undertakers and (iii) key stakeholders or influencers;

5.5.5 provide assistance to tie in negotiating developer or other local contributions to the Project;

5.5.6 provide an Inception Report to tie within 60 days of the Effective Date based on the outline partnering methodology and programme prepared by the Operator during the tender process leading to the execution of this Agreement, and tie and the Operator shall agree the Partnering Methodology and Programme taking account of such Inception Report; and

5.5.7 provide support to tie and the tie Advisers in respect of the development of the programme for works required in connection with the construction and installation of any Line and/or Phase (as appropriate), and the co-ordination of such works with any roads, utility, development or other works or projects in the vicinity of that Line and/or Phase (as appropriate);

5.6 The extent of the support and assistance to be provided by the Operator in respect of each of the matters set out in paragraphs 5.3 to 5.5 above will be determined from time to time by tie.

6. OPERATOR'S PROJECT DEVELOPMENT RESOURCES DURING PROJECT PHASE A

In addition to the Operator's Project Manager appointed pursuant to Clause 6.7 of the Agreement, the Operator's Core Team shall include the resources set out in the Project Development and Operating Costs during Project Phase A.

7. DEVELOPMENT OF PRELIMINARY TARGET OPERATING COSTS, PRELIMINARY TARGET PATRONAGE, PRELIMINARY TARGET COSTS FOR PROJECT PHASE C2, FIXED COSTS AND DEVELOPMENT ASSUMPTIONS

7.1 The starting point for the development of the preliminary Target Costs for Project Phase C2, the preliminary Target Operating Costs, the Fixed Costs (excluding the Category One Fixed Costs and the Category Five Fixed Costs) and preliminary Target Patronage will be:

7.1.1 the information in the Financial Proposals, the Operator Financial Model, the Project Development and Operating Costs, in relation to (i) the costs for

Project Phase C2, and (ii) operating costs for Phase D, and the indicative patronage forecasts prepared by the Joint Revenue Committee; and

7.1.2 the Development Assumptions prepared by the tie Advisers.

7.2 tie, the tie Advisers, and the Operator shall work together in good faith to:

7.2.1 review (and agree any changes to) the Development Assumptions and any methods for calculating the Target Costs for Project Phase C2, the Target Operating Costs, , the Fixed Costs (excluding the Category One Fixed Costs and the Category Five Fixed Costs) where not otherwise agreed and the setting of the Target Patronage by the Joint Revenue Committee; and

7.2.2 develop the Operator Financial Model, the Target Costs for Project Phase C2, the Target Operating Costs and the Fixed Costs (excluding the Category One Fixed Costs and the Category Five Fixed Costs)

7.3 The review and development of the Development Assumptions, the Target Costs for Project Phase C2, the Target Operating Costs and the Fixed Costs (excluding the Category One Fixed Costs and the Category Five Fixed Costs) pursuant to paragraph 7.2 shall take account of any developments agreed between tie and the Operator at the relevant time in relation to, without limitation:

7.3.1 the Operating Output Specification; and

7.3.2 the Infrastructure and Equipment Output Specification in respect of each Line and/or Phase (as appropriate).

7.4 The Operator and tie shall agree all the major principles in the Development Assumptions by the end of Project Phase B, provided that tie and the Operator acknowledge that further minor amendments to the Development Assumptions may be required in Project Phase C1 as discussed below. Without limitation, the major principles for the purposes of this paragraph 7.4 shall include:

7.4.1 those matters listed in paragraphs 9.1.1 to 9.1.13 below; and

7.4.2 the patronage forecast model prepared by the Joint Revenue Committee and used by the tie Advisers, and the principal inputs and assumptions used in such model.

7.5 The Operator and tie shall also agree the preliminary Target Costs for Project Phase C2, and the preliminary Target Operating Costs by the end of Project Phase A. The only changes between such preliminary targets, and the final targets to be agreed by the end of Project Phase B shall be those changes resulting from amendments to the Operating Output Specification and Infrastructure and Equipment Output Specification during Project Phase B.

7.6 All changes to the Financial Proposals, the Operator Financial Model, the Project Development and Operating Costs, the Target Costs for Project Phase C2, and the Target Operating Costs to be discussed by tie and the Operator pursuant to this paragraph 7 shall be developed such that the Operator shall be in No Better and No Worse position as a result of the relevant change.

8. DEVELOPMENT OF THE INFRASTRUCTURE AND EQUIPMENT OUTPUT SPECIFICATION

8.1 Prior to the date of this Agreement, or at the commencement of Project Phase A in respect of each Line and/or Phase (as appropriate), the tie Advisers will provide to the Operator an outline Infrastructure and Equipment Output Specification for that Line and/or Phase (as appropriate). This outline Infrastructure and Equipment Output Specification will take into account, where necessary and appropriate, the requirements of the Design Manual, which are intended to include, without limitation, proposals in relation to:

8.1.1 operations and Control Centre and stabling facilities;

8.1.2 power supply;

8.1.3 command, control and communications including System Control and Data Acquisition (SCADA) and signalling;

8.1.4 turn-round facilities;

8.1.5 lay-over provision;

8.1.6 vehicles and fleet size;

8.1.7 stop facilities (including ease of physical access between the System and other transport modes wherever interchange opportunities are available);

8.1.8 park-and-ride facilities;

- 8.1.9 ticket sales points;
 - 8.1.10 public information provisions;
 - 8.1.11 UTC equipment and its compatibility with CEC installations including potential road user charging equipment;
 - 8.1.12 whole-life costs;
 - 8.1.13 security installations; and
 - 8.1.14 capital costs.
- 8.2 **tie** requires a high standard of reliability in the operation of the Transport Services. Accordingly the Operator shall work together with **tie** and the **tie** Advisers to develop the Infrastructure and Equipment Output Specification in respect of each Line and/or Phase (as appropriate), starting from the outline Infrastructure and Equipment Output Specification referred to in paragraph 8.1 and observing the provisions of the Design Manual, to ensure that the Infrastructure and Equipment to be provided pursuant to each Infrastructure Delivery Agreement shall enable the achievement of a high standard of reliability in operation of the Transport Services.
- 8.3 In carrying out the development under paragraph 8.2, the Operator, **tie** and the **tie** Advisers will use reliability analyses which utilise wherever possible historical operating data from similar equipment.
- 8.4 The **tie** Advisers will also provide to the Operator draft plans indicating the land required for the construction and/or operation of each Line and/or Phase (as appropriate).
- 8.5 The Operator will provide comments and support to **tie** and/or the **tie** Advisers in relation to:
- 8.5.1 the outline Infrastructure and Equipment Output Specification in respect of any Line and/or Phase (as appropriate) referred to in paragraph 8.1, and any subsequent drafts of the Infrastructure and Equipment Output Specification developed pursuant to paragraph 8.2; and
 - 8.5.2 the land identified for the Project, in particular the siting of Depots and stabling facilities

taking into account particularly the Operator's reasonable operational requirements to deliver the Operating Output Specification during Project Phase D in respect of the relevant Line and/or Phase (as appropriate).

- 8.6 The Operator will provide an initial review and comments pursuant to paragraph 8.5 within 60 days of commencement of Project Phase A in respect of the relevant Line, and will provide further reviews and comments in a timely manner throughout Project Phase A.

9. REFINEMENT OF THE OPERATING OUTPUT SPECIFICATION

- 9.1 The Operator and tie may agree amendments to the Operating Output Specification for Project Phase D in respect of each Line and/or Phase (as appropriate). Such amendments shall include any amendments resulting from the refinement of the operating assumptions made by the tie Advisers (following comments from the Operator) in respect of at least the following in relation to each Line and/or Phase (as appropriate), or combination of Lines and/or Phases (as appropriate):

- 9.1.1 service patterns and route km;
- 9.1.2 timetabling;
- 9.1.3 Tram frequencies;
- 9.1.4 journey times;
- 9.1.5 Tram priority at junctions;
- 9.1.6 carrying capacities;
- 9.1.7 fleet size;
- 9.1.8 highway interface / UTC priority;
- 9.1.9 service integration;
- 9.1.10 fare structure;
- 9.1.11 demand and patronage;
- 9.1.12 maintenance regimes; and
- 9.1.13 Operating Costs.

- 9.2 The amendments to the Operating Output Specification shall take account of, without limitation:
- 9.2.1 developments arising from the promotion of the Enabling Legislation for the relevant Line through the Scottish Private Bill parliamentary process; and
 - 9.2.2 the development of the Infrastructure and Equipment Output Specification for the relevant Line and/or Phase (as appropriate) pursuant to paragraph 8.
- 9.3 The Operator will provide an initial review and comments pursuant to paragraph 9.1 above within 60 days of commencement of Project Phase A in respect of the relevant Line, and will provide further reviews and comments in a timely manner throughout Project Phase A.
- 9.4 **tie** and the Operator shall also have preliminary discussions regarding the development of the KPI Regime, taking into account any agreed amendments to the Operating Output Specification. The issues for development as regards the KPI Regime are as set out in paragraph 24 below.

10. NETWORK EFFECTS

- 10.1 As referred to in paragraph 5.1 above, **tie** has commissioned the **tie** Advisers to conduct the Network Effects Study to investigate the changes in Operating Costs, Operating Revenues and other benefits which would result from operating the Edinburgh Tram Network (or combinations of two of the Lines) as a single system rather than as separate Lines. To the extent that this study is still in progress during Project Phase A in respect of any Line, the Operator shall work in conjunction with the study team of the **tie** Advisers and prior to the end of Project Phase A shall review, agree and endorse the major principles of the Development Assumptions made by the **tie** Advisers in respect of the network effects from the operation of two or three of the Lines as a network.
- 10.2 The review to be carried out by the Operator of the network effects will take into account the reviews to be carried out by the Operator pursuant to paragraphs 8 and 9 for the individual Lines as outlined above and without limitation will cover:
- 10.2.1 any increase in Operating Revenues resulting from enhanced passenger journey opportunities made possible by the operation of the Lines as part of a network; and

10.2.2 any reduction in Operating Costs as a result of synergies made possible by the operation of the Lines as part of a network.

11. LIAISON WITH CITY OF EDINBURGH COUNCIL AND OTHERS

11.1 The Operator shall, in consultation with **tie**, manage arrangements and reach agreements with CEC and others (including police and emergency services) with respect to any operational aspects of the interface with roads, railways or properties in the proximity of the System, including:

11.1.1 safety in operations;

11.1.2 impact of and response to System failures, breakdowns, etc.;

11.1.3 interface with Network Rail and train operators but not in relation to Service Integration Plan matters;

11.1.4 design and construction of on-street Tramway;

11.1.5 actions consequential on obstruction of the System resulting in disruption to the Transport Services;

11.1.6 maintenance of shared facilities including roadway, pavement, verges, etc.

11.1.7 maintenance of road/tram signals; and

11.1.8 access arrangements;

and such arrangements and agreements shall be subject to approval by **tie** and shall be incorporated into the Operations Management Plan to be developed in Project Phase B and Project Phase C.

12. SERVICE INTEGRATION PLAN

12.1 The Operator shall keep itself fully informed of the policies, strategies and plans being promoted and implemented by TEL, CEC and any other relevant Local Authority in respect of transport and their integration with other policies such as health, safety and environment.

12.2 Taking account of the policies, strategies and plans being referred to in paragraph 12.1, the Operator shall support engagement by **tie** and TEL with other transport operators including but not exclusively bus operators, Scotrail and other

train operators and British Airports Authority, with the objective of maximising use of public transport and increasing mode transfer from the private car. The Operator shall also support engagement by tie and TEL with the operators of any park-and-ride facilities near but not directly related to the Tram operations.

12.3 Building upon any discussions with other public transport operators pursuant to paragraph 12.2, the Operator shall support the development of the Service Integration Plan by tie and TEL through which the Transport Services will complement and dovetail with other public transport services in Edinburgh and any areas outside Edinburgh served by the Transport Services. This process shall, whenever possible, include appropriate agreements between TEL with other transport operators (as appropriate) to support these objectives.

12.4 Matters to be addressed by the Service Integration Plan will cover, but not exclusively, the following:

12.4.1 operating timetable;

12.4.2 hours of operation;

12.4.3 journey times;

12.4.4 service integration (the Tram System as part of a wider public transport system);

12.4.5 competition;

12.4.6 Special Events planning;

12.4.7 interchange facilities;

12.4.8 ticketing arrangements;

12.4.9 maintenance of shared facilities; and

12.4.10 incident management and provision of alternative service

12.5 The Service Integration Plan shall be based on the following principles:

12.5.1 ease of physical access between the System and other transport modes shall be facilitated wherever interchange opportunities are available; and

12.5.2 wherever practicable, publicity, particularly Timetable and fares information shall be presented in a common format and the Operator agrees to the inclusion of any relevant information regarding the Transport Services (provided by the Operator) in such common format.

12.6 The Operator shall use its best endeavours, in a manner compliant with Law, consistent with the Service Integration Plan, and consistent with the Operator's obligations (including as to resources and personnel, and build up of the same) to support measures to achieve Timetable coordination with other operators' services. These may include coordination of feeder buses and train services with the Transport Services and late night or last Tram services departing from Haymarket or Waverley stops providing advertised connections from arriving main line services.

12.7 tie shall establish a consultation process whereby the Operator shall be given reasonable opportunity, in respect of the development of the Service Integration Plan during Project Phase B, Project Phase C and Project Phase D, to comment upon the Service Integration Plan. tie shall meet with the Operator to discuss the development of the Service Integration Plan. tie shall use reasonable endeavours to procure that other key decision makers also meet with the Operator to discuss the development of the Service Integration Plan.

12.8 In relation to the ticketing arrangements referred to in paragraph 12.4.8 above, the Operator shall support TEL in the development with other public transport operators of measures for promoting integrated ticketing (through One Ticket or its successor ticket nominated by tie).

12.9 The Operator shall assist and co-operate with the Joint Revenue Committee in the modelling of any impacts on patronage in the development of the Service Integration Plan.

13. INTEGRATION COMPLIANT WITH THE SERVICE INTEGRATION PLAN

13.1 The Operator shall be responsible, subject to the provisions of paragraph 12.6, for ensuring that its support for delivery of integrated Transport Services with bus and train operations in Edinburgh is in accordance with the Service Integration Plan (as amended from time to time).

13.2 The Operator shall keep tie informed from time to time of all actions being taken by the Operator to ensure compliance with paragraph 13.1.

14. GATEWAY FROM PROJECT PHASE A TO PROJECT PHASE B

- 14.1 Subject to paragraph 14.2, the Operator will notify **tie** when the Operator considers that it has completed each of the tasks to be carried out pursuant to Project Phase A in respect of a Line and that all matters to be agreed during Project Phase A have been agreed between the Operator and **tie**. If **tie** agrees that all of such tasks have been completed and/or relevant matters agreed, **tie** shall notify the Operator that Project Phase B shall commence in respect of that Line.
- 14.2 **tie** and the Operator acknowledge that the parliamentary process in relation to the Scottish Private Bill(s) (including obtaining Royal Assent to the Scottish Private Bills(s)) may take considerably longer than the other tasks to be carried out pursuant to Project Phase A in respect of a Line. Accordingly, the Operator may give notice to **tie** pursuant to paragraph 14.1 when the Operator considers that:
- 14.2.1 each of the tasks to be carried out pursuant to Project Phase A in respect of the relevant Line has been completed (other than obtaining the Royal Assent to the Scottish Private Bills(s)) and that all matters to be agreed during Project Phase A have been agreed between the Operator and **tie**; and
- 14.2.2 the progress of the parliamentary process in relation to the Scottish Private Bill(s) is such that it is reasonable (having regard to the Project Programme) to commence the Project Development Services under Project Phase B.
- 14.3 If following a notice under paragraph 14.2, **tie** agrees that (i) all of such tasks have been completed (other than obtaining the Royal Assent to the Scottish Private Bills(s)) and/or relevant matters agreed, and (ii) it is reasonable (having regard to the Project Programme) to commence the Project Development Services under Project Phase B:
- 14.3.1 **tie** shall notify the Operator that Project Phase B shall commence in respect of that Line by issuing a PPCN; and
- 14.3.2 the Operator shall continue to provide the Project Phase A Project Development Services in respect of support for the parliamentary process in relation to the Scottish Private Bill(s) until the Royal Assent to such bill(s) is obtained.
- 14.4 Following a notice from the Operator pursuant to paragraph 14.1 or 14.2, to the extent that **tie** considers that any relevant task has not been completed by the Operator and/or

relevant matter agreed, tie will notify the Operator accordingly, including details of the further activities to be carried out by the Operator in order to complete such task.

14.5 During Project Phase A, tie may, in its sole discretion, give two weeks notice to the Operator that Project Phase B shall commence in respect of any Line, and in such circumstances:

14.5.1 tie may direct that some or all of the Project Phase B Project Development Services shall be commenced; and

14.5.2 the Operator shall continue to provide the Project Phase A Project Development Services in respect of that Line until (i) the relevant tasks have been completed, and (ii) all matters to be agreed during Project Phase A have been agreed between the Operator and tie, or until tie otherwise directs.

PROJECT PHASE B

Procurement of the Infrastructure and Equipment

15. INTRODUCTION

The primary objectives of tie, the tie Advisers and the Operator during Project Phase B in respect of any Phase shall be to:

- 15.1 finalise the Infrastructure and Equipment Output Specification in respect of that Phase;
- 15.2 conduct a competition to appoint the Infrastructure Provider, including the execution of the Infrastructure Delivery Agreement, in respect of that Phase;
- 15.3 agree:
 - 15.3.1 the Operating Output Specification for Project Phase D in respect of that Phase (such Operating Output Specification for Project Phase D to also relate to the operation of that Phase as a network with any Phase already operational at the relevant time);
 - 15.3.2 the Target Costs for Project Phase C2 in respect of that Phase; and
 - 15.3.3 the Target Operating Costs to take effect at the commencement of Project Phase D in respect of that Phase.
- 15.4 agree any other amendments to the Operating Appendix consequential on the terms of the Infrastructure and Equipment Output Specification and the Infrastructure Delivery Agreement in respect of that Phase;
- 15.5 obtain final funding approval from the Scottish Executive in respect of that Phase and conclude any contracts for the provision of funding by CEC local development contributions; and
- 15.6 co-operate with and assist tie, the tie Advisers and the Joint Revenue Committee in relation to the development and/or refinement of the patronage forecast model and the setting of Target Patronage.

16. PROJECT DEVELOPMENT ACTIVITIES DURING PROJECT PHASE B

- 16.1 In support of the primary objectives for Project Phase B set out in paragraph 15 above, the Operator will be expected, during Project Phase B in respect of each Phase, to comply with the requirements of paragraphs 16.2 to 16.4 below.
- 16.2 The Operator shall co-operate with tie and the tie Advisers in support of the primary objectives for Project Phase B set out in paragraph 15 above, including in relation to:
- 16.2.1 any refinements to the Development Assumptions agreed between the Operator and tie in Project Phase A, and the agreement of any such refinements;
 - 16.2.2 the further development and subsequent finalisation of the Infrastructure and Equipment Output Specification and the terms of the IDA for the relevant Phase;
 - 16.2.3 the procurement process in relation to the IDA for the relevant Phase , including the evaluation of bids and the subsequent appointment of the Infrastructure Provider for the relevant Phase;
 - 16.2.4 the further development and subsequent agreement of the Operating Output Specification;
 - 16.2.5 the further development and subsequent agreement of the Target Costs for Project Phase C2; and
 - 16.2.6 the further development and subsequent agreement of the Target Operating Costs.
- 16.3 Without prejudice to paragraphs 16.2, the Operator shall:
- 16.3.1 review tie's financial model and business case and make recommendations as to how the Project can be delivered and funded within the Affordability Limit (or so as to minimise any excess above such Affordability Limit);
 - 16.3.2 provide support to tie and the tie Advisers in respect of the preparation of any applications, notices, designs, statements and relevant factual or technical evidence and all other procedures to obtain any Necessary Consents required for the Project;

- 16.3.3 provide support to tie and the tie Advisers in respect of discussions and negotiations and the conclusion of any undertakings, agreements or other commitments with third parties as may be necessary or desirable to remove any objections to the Project or to secure the grant of any Necessary Consents or otherwise facilitate the construction, installation, operation and maintenance of any of the proposed Phases in the Edinburgh Train Network. Such third parties may include, in particular (i) owners or occupiers of land required for or potentially affected by the Project, (ii) Network Rail and statutory undertakers, (iii) key stakeholders or influencers;
 - 16.3.4 provide assistance to tie in negotiating developer or other local contributions to the Project;
 - 16.3.5 provide support to tie and the tie Advisers in respect of the development of the programme for works required in connection with the construction and installation of any Phase and the co-ordination of such works with any roads, utility, development or other works or projects in the vicinity of that Phase; and
 - 16.3.6 provide support to tie and the tie advisers in respect of the commissioning by tie of a system operational model of a form and extent to be agreed. The Operator shall provide all information related to Project Operations to facilitate specification and execution of such model.
- 16.4 The extent of the support and assistance to be provided by the Operator in respect of each of the matters set out in paragraph 16.2 or 16.3 will be determined from time to time by tie.
- 16.5 Further to paragraph 16.3.6 above, tie shall procure or provide the output from a system operational model and complimentary software that shall in respect of the System only:
- 16.5.1 simulate the Tram and the infrastructure to provide "laws of physics" run time estimates;
 - 16.5.2 simulate the operation of a Timetable with simulated perturbations;
 - 16.5.3 have the capacity to provide standalone vehicle and driver scheduling, driver rostering and Timetable production; and

16.5.4 the driver scheduling and driver rostering shall be kept confidential by **tie** and the Operator, and **tie** shall procure that TEL shall also keep such scheduling and rostering confidential with security and password protection provisions, so that, if there is a shared system or others have access, the Operator can use the software in a secure environment without **tie** or others having access to the development by the Operator of sensitivity analyses of driver scheduling and driver rostering.

16.6 If **tie** is unable to provide the Operator with an entitlement without cost to access and use such model software in accordance with paragraph 16.5 and unless **tie** can otherwise procure that the data and software necessary shall be made available to the Operator, the Operator shall be required to procure such system operational model and complementary software. Such requirement shall be a **tie** Change and shall be considered in accordance with Clause 24 (*tie* Changes) and Clause 23 (*Performance and Financial Adjustments*) of the Operating Appendix.

17. OPERATOR'S PROJECT DEVELOPMENT RESOURCES DURING PROJECT PHASE B

In addition to the Operator Project Manager appointed pursuant to Clause 6.7, the Operator's Core Team shall include the following resources set out in the Project Development and Operating Costs during Project Phase B.

18. DEVELOPMENT OF THE INFRASTRUCTURE AND EQUIPMENT OUTPUT SPECIFICATION

18.1 The Operator, **tie** and the **tie** Advisers shall continue the development of the Infrastructure and Equipment Output Specification in respect of the relevant Phase, based on the work carried out during Project Phase A pursuant to paragraph 8 above. As in Project Phase A, the provisions of the Design Manual shall be observed as a means of ensuring that System delivery shall be to the requisite quality.

18.2 As referred to in paragraph 15 above, the Infrastructure and Equipment Output Specification for the relevant Phase must be finalised during Project Phase B for that Phase.

18.3 Final decisions on the Infrastructure and Equipment Output Specification will be made by **tie**, although the Operator will be expected to participate actively in discussions related to the function, performance and quality of items to be specified,

taking into account such matters as reliability and whole life costs. Such items will include, for example:

- 18.3.1 alignment (sight lines; safety aspects; crossovers and turnbacks);
- 18.3.2 wheel/rail interface issues, especially those which relate to safety, operability and overall System performance;
- 18.3.3 vehicle design (internal layout; provisions for mobility impaired (including any accessibility Legislation), cycles, prams/pushchairs; communications within vehicle);
- 18.3.4 vehicle performance and dynamics;
- 18.3.5 noise;
- 18.3.6 Tramstop design (provisions for mobility impaired, including requirements of Disability Discrimination Act 1995) including overall layout and provision of passenger facilities;
- 18.3.7 materials (Tramstops; vehicle interiors; anti-vandal);
- 18.3.8 Control Centre (size; layout; equipment);
- 18.3.9 customer Helpdesk;
- 18.3.10 staff facilities (size; detailed requirements);
- 18.3.11 public address system;
- 18.3.12 lighting;
- 18.3.13 communications systems;
- 18.3.14 Depot and stabling facilities including equipment provision;
- 18.3.15 routine maintenance and the equipment necessary to undertake it;
- 18.3.16 ticketing systems, integration and revenue collection, including ensuring that:
 - (a) the fare revenue collection systems have no adverse impact on dwell times of Trams at Tramstops, do not cause undue delay to passengers and that tickets are not sold or validated by Tram drivers; and

- (b) any ticket vending facilities are easy to use by all passengers including unassisted wheelchair users;

18.3.17 Any proposals to use smartcards for ticketing (and any connections to any regional smartcard scheme);

18.3.18 ticket validation systems;

18.3.19 security of the System (CCTV, security lighting, emergency call systems);

18.3.20 passenger information systems; and

18.3.21 inspection and testing.

18.4 In addition, the Operator will also actively participate in development of the IDA documentation to include infrastructure elements to facilitate the Operator's future management of the following:

18.4.1 statutory and third party interface, including road, rail and utilities;

18.4.2 environmental management; and

18.4.3 System integration

19. DEVELOPMENT OF THE TERMS OF THE INFRASTRUCTURE DELIVERY AGREEMENT AND TENDER DOCUMENTATION

19.1 The Operator shall provide such input as tie may reasonably require in relation to the development of the terms of the Infrastructure Delivery Agreement and tender documentation in respect of the relevant Phase. Without limitation, tie shall invite comments from the Operator in respect of the following terms of the Infrastructure Delivery Agreement:

19.1.1 the acceptance tests for the Infrastructure and Equipment (including the extent to which tie will delegate responsibility to the Operator for carrying out such acceptance tests);

19.1.2 reliability tests;

19.1.3 the ongoing maintenance obligations of the Infrastructure Provider;

19.1.4 performance regimes and the output of the Infrastructure and Equipment needed to support them;

- 19.1.5 integration with other Phases;
- 19.1.6 Roads interface;
- 19.1.7 warranty and latent defects content and periods;
- 19.1.8 as-builts, maintenance manuals and spares;
- 19.1.9 environment management; and
- 19.1.10 safety.

19.2 In relation to the ongoing maintenance obligations of the Infrastructure Provider, the Operator shall provide such input as tie may reasonably require in relation to the development of the Infrastructure Maintenance Plan (including the details of any possession of any Phase required for track maintenance), having regard to the effect of such possession on the Timetable, the Fixed Costs (excluding the Category Five Fixed Costs), the Target Patronage and Target Operating Costs.

20. INFRASTRUCTURE TENDER EVALUATION AND NEGOTIATION OF INFRASTRUCTURE DELIVERY AGREEMENT

- 20.1 The Operator shall provide such input as tie may reasonably require in relation to the evaluation of tenders received from prospective Infrastructure Providers, and the negotiation of the terms of the Infrastructure Delivery Agreement.
- 20.2 tie will disclose to the Operator such elements of the tenders received from prospective Infrastructure Providers as are necessary to enable the Operator to provide input pursuant to paragraph 20.1. To the extent that additional confidentiality undertakings are required from the Operator in connection with such disclosure (including without limitation, undertakings by the Operator direct to the prospective Infrastructure Providers), the Operator and tie will discuss such requirements in good faith.

21. AMENDMENTS TO THE OPERATING APPENDIX DURING PROJECT PHASE B

- 21.1 As stated in Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) of the Agreement tie acknowledges that the Operator has agreed (i) the Operator Financial Model as at the DPOFA Variation Date and (ii) the terms

of the Operating Appendix on the basis of the Base Case Assumptions and the Law as at the DPOFA Variation Date .

21.2 During Project Phase B in respect of each Phase, the Operator and tie shall develop and then agree:

21.2.1 any amendments to the Operating Output Specification in respect of such Phase or on the System in accordance with paragraph 22;

21.2.2 amendments to the Operating Appendix, the Base Case Assumptions, the Financial Proposals, the Operator Financial Model, the Project Development and Operating Costs, and/or the Operating Output Specification in accordance with paragraph 23, including:

- a) the Target Costs for Project Phase C2;
- b) the Target Operating Costs to apply in the Operating Appendix from the Service Commencement Date in respect of such Phase and
- c) the Fixed Costs (except for the Category One Fixed Costs and the Category Five Fixed Costs)

21.2.3 amendments to the KPI Regime set out in the Operating Appendix to apply from the Service Commencement Date in respect of such Phase in accordance with paragraph 24;

21.2.4 amendments to the Performance Monitoring Regime set out in the Operating Appendix to apply from the Service Commencement Date in respect of such Phase or impact on the System in accordance with paragraph 25;

21.2.5 the Operating Method Statements in accordance with paragraph 26 based on the outlines for the Operating Method Statements prepared by the Operator during the tender process leading to the execution of this Agreement; and

21.2.6 any other changes to the Operating Appendix in accordance with the mechanism in Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) of the Agreement;

and all such changes shall be developed on the basis that the Operator shall be in No Better and No Worse position as a result of the relevant change.

21.3 Any changes to the Operating Appendix (including the Target Costs for Project Phase C2, the Target Operating Costs and the Fixed Costs (except for Category One Fixed Costs and Category Five Fixed Costs)) as a result of all developments during Project Phases A and B in respect of a Phase shall be agreed before the date of execution of the Infrastructure Delivery Agreement in respect of that Phase.

22. AMENDMENTS TO THE OPERATING OUTPUT SPECIFICATION

22.1 The Operator, tie and the tie Advisers shall continue the refinement of the Operating Output Specification for Project Phase D, based on the work carried out during Project Phase A pursuant to paragraph 9 above.

22.2 As referred to in paragraph 15 above, the Operating Output Specification for Project Phase D for each Phase shall be finalised during Project Phase B for that Phase, provided that such Operating Output Specification shall also relate to the operation of that Phase as a network with any Phase already operational at the relevant time.

22.3 Any amendments to the Operating Output Specification shall be agreed in writing between the Operator and tie and shall take account of, without limitation, the development of the terms of:

22.3.1 the Infrastructure and Equipment Output Specification pursuant to paragraph 18;

22.3.2 the Infrastructure Delivery Agreement and tender documentation pursuant to paragraph 19; and

22.3.3 the Transport Services regime, including hours of operation, Tram frequencies and operating pattern.

23. DEVELOPMENT OF THE OPERATOR FINANCIAL MODEL (INCLUDING THE TARGET COSTS FOR PROJECT PHASE C2, AND THE TARGET OPERATING COSTS)

23.1 The Operator, tie and the tie Advisers shall continue the development of the Operator Financial Model (including the Target Costs for Project Phase C2, and the Target Operating Costs) based on the work carried out during Project Phase A pursuant to paragraph 7 above.

23.2 To the extent that any refinements of the Development Assumptions are necessary during Project Phase B, such refinements shall be agreed between tie and the Operator

and shall be taken into account for the purposes of the development of the Operator Financial Model pursuant to paragraph 23.1.

23.3 tie and the Operator acknowledge that:

23.3.1 amendments to the Operating Output Specification;

23.3.2 amendments to the KPI Regime;

23.3.3 amendments to the Performance Monitoring Regime;

23.3.4 the terms of the Operating Method Statements;

23.3.5 the terms on which Necessary Consents are procured;

23.3.6 the terms of the Infrastructure Delivery Agreement (including the Infrastructure and Equipment Output Specification) in respect of each Phase; and

23.3.7 other changes during the development of the Project during Project Phases A and B;

may mean that some of the Base Case Assumptions are Inappropriate Base Case Assumptions.

23.4 Subject to Clause 10.6 of the Agreement, to the extent that any of the Base Case Assumptions prove to be Inappropriate Base Case Assumptions, tie and the Operator shall discuss and seek to agree amendments to the Operating Appendix, the Financial Proposals, Base Case Assumptions, the Operator Financial Model, the Project Development and Operating Costs, and/or the Operating Output Specification in accordance with the mechanism described in Clause 10 (*Amendments to the Operating Appendix, the Operator Financial Model and the Operating Output Specification, and the Setting of Fixed Costs and Rates*) of the Agreement.

23.5 The amendments to the Target Operating Costs, and/or Fixed Costs (except for the Category One Fixed Costs and the Category Five Fixed Costs) shall take into account:

23.5.1 any possession of a Phase required for track maintenance; and

23.5.2 any planned roads maintenance.

23.6 Without prejudice to paragraphs 23.1 to 23.4, the Operator will in addition periodically review and recommend adjustments to tie's business case, economic model and risk management plan to reflect events and developments during the course of Project Phase B.

24. DEVELOPMENT OF THE KPI REGIME

24.1 The KPI Regime shall be directly linked to the Operator's performance of the following Key Performance Indicators:

24.1.1 Punctuality Service Element (including the First Tram and the Last Tram);

24.1.2 Edqual Indicator for cleanliness, information provision (including signage) and responses to alarms and information requests;

24.1.3 -response times for the correction of service deficiencies; and

24.1.4 revenue protection.

24.2 The Operator shall, in conjunction with tie and the tie Advisors, develop the KPI Regime to apply during Project Phase D (including any changes to the Key Performance Indicators and/or the relevant benchmarks) to the extent appropriate to take account of the developments to the Project during Project Phases A, B and C, all such refinements to be agreed between the Operator and tie.

24.3 The Operator shall develop methods to monitor the performance and quality of the Transport Services and the Project Operations during Project Phase D against the Key Performance Indicators, such methods to be acceptable to tie. Wherever possible and practicable, performance shall be monitored electronically. The Operator shall be responsible for all processing and analysis of such performance using, where possible and practicable, the electronic monitoring equipment in order to ensure that tie receives direct Service Quality Reports and supporting data in form and format to be agreed.

24.4 Where performance against a Key Performance Indicator cannot be electronically monitored or it is not practicable to do so, actual performance shall be measured in accordance with the following:

- 24.4.1 **tie** Inspectors will assess in good faith Trams, Tramstops and/or the Transport Services and assess the level of performance against the relevant Key Performance Indicator; and
- 24.4.2 in each Reporting Period, **tie** will inspect such number of Tramstops and Transport Services as **tie** may acting reasonably consider appropriate.
- 24.5 Target benchmark performance levels shall be agreed for each Key Performance Indicator. Performance Points shall be allocated based on levels of performance in Project Phase D above or below the target benchmark, subject to an agreed scoring system detailed in Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of the Operating Appendix, as developed during Project Phase B. Deductions from the KPI Regime Profit Element for each Reporting Period shall be directly linked to the number of Performance Points scored.
- 24.6 **tie** will notify the Operator following the end of each Reporting Period (within such time period as may be agreed between **tie** and the Operator) where performance in that Reporting Period against a Key Performance Indicator is above or below the target benchmark, whether such performance is measured:
- 24.6.1 electronically;
- 24.6.2 by the **tie** Inspectors; or
- 24.6.3 by some other monitoring method agreed between **tie** and the Operator pursuant to paragraph 24.4.
- 24.7 The Punctuality Service Element relates to the operation of the Transport Services against the service intervals or clock times in the Timetable, as measured at agreed monitoring points. Where the scheduled service interval is 10 minutes or less, monitoring will be carried out against scheduled Headway. Where the actual service interval exceeds the relevant service interval in the Timetable by 2 minutes or more a Late Tram shall be awarded. Where the scheduled service interval exceeds 10 minutes, trams shall be monitored against scheduled clock departure times. Where the actual departure time is more than one minute earlier or more than two minutes later than the scheduled departure time, a Late Tram shall be awarded.
- 24.8 The Punctuality Service Element relates also to the punctuality of the first and last passenger services, on each service route. First or Last Late Trams shall be allocated for each occasion when either:

- 24.8.1 no passenger service which completes its journey over the length of a service route, stopping at every stop on that service route, departs the relevant Originating Tramstop within 2 minutes of the time scheduled in the Timetable for the first passenger service of the day for that service route; or
 - 24.8.2 no passenger service which completes its journey over the length of a service route, stopping at every stop on that service route, departs the relevant Originating Tramstop within 2 minutes of the time scheduled in the Timetable for the last passenger service of the day for that service route.
- 24.9 The Edqual Indicator for cleanliness of Tram interiors and stops shall be developed to reflect the Operator's obligations in respect of Operator Maintenance and shall be measured against a number of service elements, such as:
- 24.9.1 cleaning of shelters, seating and waiting rooms;
 - 24.9.2 cleaning of poster cases and signage;
 - 24.9.3 cleaning of lifts and escalators (if any);
 - 24.9.4 cleaning of stairs and footbridges;
 - 24.9.5 cleaning of platforms;
 - 24.9.6 cleaning of tram system car parks;
 - 24.9.7 cleaning of cycle parking facilities;
 - 24.9.8 cleaning of ticket vending machines;
 - 24.9.9 cleaning of public and staff telephones;
 - 24.9.10 cleaning of Tram interior; and
 - 24.9.11 reporting of items requiring attention by the Infrastructure Provider.
- 24.10 The Edqual Indicator for information requests will be developed to ensure that sufficient information is consistently provided to make passenger journeys easy. This will also reflect the objectives of the Marketing Plan and Public Liaison and Media Plan, and shall include at least the following:

24.10.1 provision of advance information on planned disruptions to the Transport Services, such as maintenance works and Special Events;

24.10.2 response times to calls from "help points" on Tramstops and

24.10.3 quality of information announced through public address system.

24.11 From time to time **tie** shall undertake a customer survey by means of passenger questionnaire. **tie** shall allow the Operator a reasonable opportunity, in respect of the development of the questionnaire, to comment upon such questionnaire. **tie** shall meet with the Operator to discuss such comments and **tie** shall take due account of these comments provided that such comments are reasonable.

24.12 The Key Performance Indicator for revenue protection relates to the number of people travelling on the System with a valid ticket and will be developed to ensure a high level of compliance at all times. Measurement (in addition to Operator methodology) shall include spot checks by the monitoring inspectors. An agreed minimum number of inspections shall be undertaken each monitoring period and will include checks of at least the following:

24.12.1 availability of facilities for purchasing tickets;

24.12.2 availability of full range of tickets; and

24.12.3 numbers of passengers travelling with a valid ticket and the ticket type used.

25. DEVELOPMENT OF THE PERFORMANCE MONITORING REGIME AND THE PERFORMANCE INDICATORS

25.1 The Operator shall, in conjunction with **tie** and the **tie** Advisors, refine the Performance Indicators (including the benchmarks) that will monitor and measure the overall performance of the System during Project Phase D. Such refinements shall take account of the developments to the Project during Project Phases A and B and all such refinements shall be agreed between the Operator and **tie**.

25.2 The Performance Indicators shall cover the following disciplines:

25.2.1 safety & environment;

25.2.2 operations; and

25.2.3 maintenance

25.3 Each discipline may include the following components and unless otherwise agreed will be attributable to the Operator, the Infrastructure Provider or both, as indicated below. Automatic monitoring techniques shall be adopted for the Performance Monitoring Regime except where the Operator can demonstrate that this is not practicable. Where the responsibility for monitoring Performance Indicators does not lie solely with the Operator, the Operator shall be responsible for receiving relevant data from all other concerned parties, for reviewing the completeness of the data, for collation of data from all sources and for reporting to **tie**.

25.4 Safety & Environment Performance Indicators

25.4.1 Operator + Infrastructure Provider

- staff fatalities, accidents or injuries;
- derailments;
- planned general environmental inspections;
- staff competencies (safety critical);
- drugs & alcohol compliance;
- environmental audits (carried out and outstanding);
- maintenance corrective action reports (including track closures);
- staff working time exceedances;
- staff hours lost through sickness; and
- staff turnover

25.4.2 Operator

- fatalities, accidents or injuries to members of the public;
- passenger fatalities, accidents or injuries;
- collisions involving trams and other vehicles;
- SPASs (severe and / or technical);

- incidents of speeding;
- near misses (public or vehicles);
- instances of crime/vandalism; and
- malicious acts

25.4.3 Infrastructure Provider

- Phase and/or Line (as appropriate) closure (maintenance) irregularities;

25.5 Operations Performance Indicators

25.5.1 Operator + Infrastructure Provider

- Cancellations due to Operator and/or Infrastructure Provider;

25.5.2 Operator

- service regularity;
- service punctuality;
- service availability;
- number of operational incidents by type and severity;
- service delay/disruption by type/location/minutes delay;
- overcrowding and operational hindrance; and
- journey times over key stages;

25.5.3 Infrastructure Provider

- fleet reliability;
- fleet failure by type and frequency;
- Infrastructure and Equipment / System availability; and
- critical failures: System/AC/DC traction equipment;

25.6 Maintenance Performance Indicators

25.6.1 Operator + Infrastructure Provider

- temporary speed restrictions;
- incident response (response to failures);
- System failures (signalling, information, communications);
- signalling failures; and
- removal of graffiti;

25.6.2 Operator

- cleanliness at stops and in vehicles;

25.6.3 Infrastructure Provider

- route availability;
- broken or defective rails;
- incident response (rectification);
- signalling system equipment maintenance against plan;
- track asset equipment maintenance against plan;
- overhead line equipment maintenance against plan;
- structures, buildings (including Tramstop & Depot) maintenance against plan; and
- overhead line failure.

26. DEVELOPMENT OF OPERATING METHOD STATEMENTS

26.1 The content of the Operating Method Statements shall be co-ordinated and formed by the Operator into an integrated management system ("**Integrated Management System**") which shall comply with ISO 9001:2000 or equivalent:

26.1.1 Using as a basis the information prepared by the Operator during the tender process leading to the execution of this Agreement, the Operator shall develop, in consultation with the tie Advisers, and where necessary in conjunction with others, Operating Method Statements covering its duties and obligations during commissioning (Project Phase C) and operations (Project Phase D).

26.1.2 The minimum requirements for the Operating Method Statements are that it shall encompass the following components:

- Management plan;
- Operations Management Plan;
- Shadow Run Validation Plan;
- Operator Maintenance Plan;
- Safety Management System Plan;
- Recruitment and Training Plan;
- Organisation and Job Descriptions Plan;
- Approvals Management Plan;
- Quality Management Plan;
- Document Management Plan;
- Incident Management Plan;
- Systems Assurance Plan;
- Testing and Commissioning Plan;

- Environmental and Sustainability Management Plan;
- Security Management Plan;
- Marketing Plan;
- Public Liaison and Media Plan; and
- System Integration Plan.

26.1.3 The minimum coverage of each of the above plans is provided in the following paragraphs. The terms of the Operating Method Statements shall be subject to tie's approval (tie acting reasonably) prior to the end of Project Phase B.

26.1.4 It is recognised that during Project Phase B, the scheme may not be developed to the extent that all of these plans can be finalised. However, scheme definition will have advanced sufficiently for the plans to be prepared in some detail and sufficiently to identify staff structure and any costs associated with implementation of the plans. These costs will be taken into account when agreeing the Target Operating Costs and any adjustments to the Fixed Costs (excluding the Category One Fixed Costs and the Category Five Fixed Costs) pursuant to paragraph 23 and/or the setting of the Target Patronage by the Joint Revenue Committee.

26.1.5 Any amendment to the Operating Method Statements during Project Phase C or thereafter shall be subject to the approval of tie pursuant to Schedule 9 (*Review Procedure*) and to the extent that any such amendment will affect the operating costs or revenues during Project Phase D, the Target Operating Costs, Fixed Costs (other than the Category Five Fixed Costs) and/or Target Patronage may be amended in accordance with the Variation procedure.

26.2 Operations Management Plan

26.2.1 The Operator shall produce operations management documents covering rules, procedures and actions to be observed in Project Phase D, including incident management. These documents shall describe the rules to be followed by personnel in the course of their duties, whether site based or mobile and when undertaking operational and maintenance activities. The Operator shall ensure that the Operations Management Plan shall where

appropriate encompass the requirement of other more detailed plans within the Operating Method Statements (e.g. with respect to training or Health and Safety). These documents shall cover the following situations:

- normal unperturbed operations for the System;
- arrangements for staff training and competence assessment of all Operator Parties engaged in the operation of the System, including the core competencies applicable to all staff and/or Operator Parties engaged in the Project Operations;
- procedures for managing disruption to the System, however caused;
- disaster recovery procedures and during accidents and emergencies;
- management of alternative transport when required;
- revenue collection;
- the process for integration of the Phases to form common operational procedures;
- operational performance benchmarking, monitoring and reporting;
- provision of appropriate technical resources to investigate, develop and implement solutions to operational problems;
- complaints management;
- the monitoring, review and amendment where necessary of third party interface agreements including in particular road, rail and utility interfaces; and
- feedback of corrective actions into the operational procedures.

26.3 Service Integration Plan

The Operator shall support the development of the Service Integration Plan. Such support shall take account of any developments in planning or transportation matters, or any change in policies of tie, TEL or CEC which might affect service integration

and public transport provision to the extent that these developments and changes are made known to the Operator.

26.4 Shadow Run Validation Plan

26.4.1 The Operator shall prepare a shadow run validation plan ("**Shadow Run Validation Plan**") which shall include but not be limited to the following activities in respect of each stage of introduction and the System as a whole:

- the simulated introduction of Infrastructure and Equipment failure at times unknown to the personnel operating the System;
- the staged introduction of misbehaving passengers at times unknown to the personnel operating the System;
- the staged introduction of large crowds of passengers at times unknown to the personnel operating the System;
- the simulation of a fire with subsequent emergency evacuation of passengers;
- the simulated introduction of operating staff illness;
- the simulated introduction of external influences such as power supply failure, leaves on track, ice and snow conditions, road traffic accidents or other line obstructions;
- the quality management activities necessary to ensure proper performance of tests and reporting;
- the safety management activities necessary to ensure that safety is not jeopardised by the shadow running validation activities;
- other requirements that may be specified by HMRI; and
- where necessary the participation of the emergency services and other authorities.

26.4.2 The Operator shall further develop the Shadow Run Validation Plan in conjunction with the Infrastructure Provider during Project Phase C pursuant to paragraph 35.

26.5 Operator Maintenance Plan

26.5.1 The Operator shall develop, in consultation with the tie Advisers, the Operator Maintenance Plan.

26.5.2 The Operator Maintenance Plan shall require that the Operator shall carry out the Operator Maintenance with the objective of ensuring that the functionality of all Infrastructure and Equipment and elements used in providing the Transport Services (and other Project Operations) is maintained and that the visual and physical appearance of the System does not deteriorate through the build up of litter, dirt, debris, detritus, industrial or bodily fluids.

26.5.3 Operator Maintenance, and the required frequency of such maintenance, shall be as follows:

- cleaning of all Tramstops, access ways and the Depot car park so as to ensure they are clean and free from all litter, dirt, debris, detritus, industrial and bodily fluids; such cleaning to be carried out not less than daily or as may be otherwise agreed by the Parties (both acting reasonably);
- emptying of all litter bins at Tramstops or on the Trams daily or as regularly as necessary to prevent them from becoming full;
- promptly remove any observed or reported rubbish and debris at the Tramstops or on Trams likely to create a risk of fire or other dangers;
- regularly remove any observed or reported litter on Trams throughout each day so as to maintain a reasonably clean travelling environment for passengers. This obligation shall also relate to the cleaning up of observed or reported fluids of any type on the Trams;
- cleaning of the track areas adjacent to the platform faces on the off-street sections of the Edinburgh Tram Network so as to ensure such areas are clean and free from all litter, dirt, debris, detritus, industrial and bodily fluids; such cleaning to be carried out not less than daily or as may be otherwise agreed by the Parties (both acting reasonably);
and

- cleaning of the parts of the Depot for which the Operator is either the main user or which are shared and this shall include offices, Control Room, messing facilities, Operator locker rooms, car parking at the Depot and Depot entrances, so as to ensure such parts are clean and free from all litter, dirt, debris, detritus, industrial and bodily fluids; such cleaning to be carried out not less than daily or as may be otherwise agreed by the Parties (both acting reasonably).

26.5.4 Operator Maintenance shall also include the carrying out of the initial response to a failure of, damage to or other incident occurring on the System which:

- (a) is not specifically identified in paragraph 26.5.3 as the Operator's responsibility to resolve; but
- (b) actually or, in the Operator's reasonable opinion, potentially interrupts or delays the Transport Services.

26.5.5 The initial response referred to in paragraph 26.5.4 ("**Initial Response**") includes the following activities:

- (a) initial reporting of the occurrence of a failure, damage or other incident to the Operator's best estimate of the relevant Infrastructure Provider including (if appropriate) request for urgent maintenance or repair;
- (b) to the extent necessary, attendance at the site of the occurrence of the Operator's operations and/or maintenance staff to assess the cause of the problem;
- (c) determination of the appropriate course of action;
- (d) where possible and safe and within the capabilities immediately available to the Operator, rectification of the problem by the Operator;
- (e) where possible and safe and within the Operator's immediately available capabilities, implementation of temporary repairs; and
- (f) implementation of measures to overcome and/or mitigate the disruption to Transport Services.

26.5.6 The Initial Response will not include the performance of permanent repairs except where these are of a minor or trivial nature.

26.5.7 In relation to any requirement for an Initial Response, the Operator shall initiate a response to an incident requiring an Initial Response within 15 minutes of the earlier of:-

- (a) the Operator identifying that such incident has occurred; and
- (b) an Infrastructure Provider or tie notifying the Operator of such incident; and
- (c) any other third party notifying the Operator of such incident through the Control Room or otherwise.

26.5.8 Without prejudice to paragraph 26.5.7, the Operator shall, acting reasonably, have complete discretion regarding the manner in which it undertakes the Initial Response including any action which it chooses to take to mitigate disruption to Transport Services.

26.5.9 tie confirms that the Operator shall have no liability to tie or any Infrastructure Provider for any liability, damages or loss suffered by tie or any Infrastructure Provider, including in relation to:

- (a) any loss of availability payment by an Infrastructure Provider; or
- (b) any payment of any availability payment by tie to an Infrastructure Provider in respect of any period when the System was not fully available

arising from the Operator's response to the requirement to undertake an Initial Response unless (and to the extent that) the Operator's action in undertaking or failing to respond to the requirement for such Initial Response were:-

- (i) in breach of its undertakings in paragraph 26.5.7; or
- (ii) negligent.

26.5.10 Notification to Infrastructure Provider

- (a) Except where the relevant Infrastructure Provider has notified the Operator, the Operator shall notify the Infrastructure Provider whom the Operator considers to be relevant by telephone or radio (as appropriate) immediately following a report to the Control Centre of the occurrence of a failure, damage or other incident requiring an Initial Response.
- (b) Representatives of the relevant Infrastructure Provider shall be entitled to attend the site of the incident in order to consult on the appropriate measures to be taken to restore normal Transport Services and to observe any actions taken by the Operator.
- (c) As soon as possible following the incident, the Operator shall issue a written report to the Infrastructure Provider whom the Operator considers to be relevant describing the incident, its cause (so far as known), its duration, its location, the actions taken and any follow up actions required.

26.5.11 The Operator Maintenance Plan shall state that in carrying out the Operator Maintenance, the Operator shall use all reasonable endeavours to minimise:

- disruption to Transport Services;
- impairment of access to Transport Services by passengers whose mobility is in any way impaired; and
- the environmental impact of carrying out such obligations.

26.6 Safety Management System Plan

26.6.1 The Operator shall develop a Safety Management System Plan which shall satisfy all relevant Law and shall cover as a minimum the following:

- (a) approach to setting and verification of safety standards;
- (b) management control, monitoring and implementation of corrective action in respect of health and safety;

- (c) benchmarking, monitoring, control and reporting of health and safety related incidents including near misses;
- (d) the confidential reporting system required to be established and maintained;
- (e) arrangements for ensuring security and safety of staff and the public;
- (f) Operator Parties' health and safety scrutiny arrangements;
- (g) approach to discharge of responsibilities under the CDM Regulations;
- (h) approach to human factors and ergonomics; and
- (i) drug and alcohol policy.

26.6.2 tie and the Operator shall ensure (in consultation with the tie Advisers) that by the end of Project Phase C1 in respect of any Phase, the Safety Management System Plan is properly integrated with the safety management system plan of the Infrastructure Provider for that Phase.

26.7 Recruitment and Training Plan

26.7.1 The Operator shall develop a Recruitment and Training Plan to ensure the competencies of all staff and Operator Parties (and their staff) engaged in the operation of the System. The implementation of the Recruitment and Training Plan shall be the direct responsibility of the Operator's managing director. An essential element of the Recruitment and Training Plan is that all staff and Operator Parties (and their staff) receive safety training prior to undertaking any duties related to operation of the System.

26.7.2 The Recruitment and Training Plan shall include as a minimum, the following:

- a recruitment strategy and selection process;
- induction training for all staff which not only embraces the policies and organisation of the Operator but also the safety culture of a public transport system;

- health and safety policy and procedure training for all staff including staff employed by any Operator Party;
- technical training for drivers, controllers or technical/operations staff to the standards as established by HMRI, such training to ensure the safe and competent operation of all Trams and Infrastructure and Equipment;
- incident management procedures for operational and support staff;
- cross training in order to ensure flexibility of working by staff and full understanding of the duties of others;
- staff development and re-training programmes;
- training log for each employee and employee of any Operator Party;
- competence assessment and certification;
- the quality of all training and re-training should meet all health and safety requirements with specific emphasis to that required by the HMRI; and
- as a general principle employees should only be required to carry out tasks for which they have been trained.

26.7.3 The Recruitment and Training Plan shall comprise a comprehensive recruitment, training and certification programme for both Project Phase C (commissioning) and Project Phase D (operational). As regards training in Project Phase C, the Operator shall ensure as far as practicable that such training courses are coordinated with the commissioning of the System to ensure that trainees derive maximum benefit from progressive involvement.

26.7.4 The Recruitment and Training Plan shall include the Operator's proposals for emergency services familiarisation, frontagers and adjacent building owners familiarisation and operator rules and procedures for other contractors providing services in respect of the Edinburgh Tram Network.

26.7.5 The Operator shall produce a base training materials requirement specification which shall be subject to tie's approval and shall be annexed to the Recruitment and Training Plan.

26.8 Overall Approvals Management Plan and Approvals Management Plan

26.8.1 An Overall Approvals Management Plan for the System shall be developed by tie and tie's Advisers, which shall cover at least the following:

- (a) all statutory Necessary Consents to be obtained, identifying in each case the applicable Relevant Authority, the person or body responsible for obtaining the statutory Necessary Consent, and the intended date by which such statutory Necessary Consent is to be obtained;
- (b) all third party Necessary Consents to be obtained, identifying in each case the applicable third party, the person or body responsible for obtaining the third party Necessary Consent, and the intended date by which the third party Necessary Consent is to be obtained;
- (c) procedures to be used in obtaining statutory Necessary Consents and third party Necessary Consents; and
- (d) procedures for maintaining the Overall Approvals Management Plan.

26.8.2 The Operator shall comply with all aspects of the Overall Approvals Management Plan as may be necessary to implement and maintain the Overall Approvals Management Plan.

26.8.3 The Operator shall develop an Approvals Management Plan capable of incorporation within the Overall Approvals Management Plan and covering at least the following:

- (a) all statutory Necessary Consents to be obtained by the Operator and the intended date by which such statutory Necessary Consents are to be obtained;
- (b) all third party Necessary Consents to be obtained, by the Operator and the intended date by which such third party Necessary Consents are to be obtained;

(c) procedures to be used by the Operator in obtaining statutory Necessary Consents and third party Necessary Consents required in terms of paragraphs (a) and (b) above; and

(d) procedures for maintaining the Overall Approvals Management Plan.

26.8.4 The Operator shall comply with all aspects of the Approvals Management Plan as may be necessary to implement and maintain the Approvals Management Plan.

26.9 Quality Management Plan

26.9.1 The Operator shall develop a Quality Management Plan which shall satisfy the requirements of the Operator's independent auditor and shall encompass at least the following:

- quality management and control procedures (including those of Operator Parties engaged in the Project Operations);
- internal and external quality audit programme; and
- change management procedures.

26.9.2 The Quality Management Plan shall comply with BS EN ISO 9001:2000 or equivalent and the Operator shall subject the system described in the Quality Management Plan to regular independent audits at the Operator's own cost. Copies of the audit reports shall be provided to tie on request.

26.10 Document Management Plan

The Operator shall develop a Document Management Plan which shall cover at least the following:

26.10.1 procedures for documentation control (including in relation to the issue of documents to tie); and

26.10.2 a schedule of documents to be prepared by, for or on behalf of the Operator in carrying out the mobilisation, commissioning and operation of the System, including details as to their purpose, distribution, document hierarchy and intended issue date (such schedule to be updated in the event of variation).

26.11 Incident Management Plan

26.11.1 The Incident Management Plan to be developed by the Operator shall consider at least the following possible events and shall develop procedures to be followed should they occur:

- road traffic accident;
- crowd control;
- signalling failure (local or system wide);
- power failure;
- Tram breakdown;
- service obstruction;
- passenger emergency (e.g. heart attack);
- fire;
- criminal or hooligan behaviour; and
- driver illness.

26.11.2 Where appropriate and necessary the Incident Management Plan should be developed in conjunction with the HMRI, CEC, Police, Emergency Services, and Network Rail and should include options for the provision of alternative rail or bus services during periods of closure of all or part of the System.

26.12 Systems Assurance Plan

The Operator shall develop a Systems Assurance Plan which shall incorporate as a minimum the following:

26.12.1 System assurance organisation and key personnel;

26.12.2 responsibilities for delivering the Systems Assurance Plan;

26.12.3 procedures for monitoring and controlling all Operator Parties;

26.12.4 details of the integration of systems assurance analysis with design and construction, including:

- decision making process;
- management of unacceptable risks;
- action management;
- management of programme deviations;

26.12.5 targets to be met (including in relation to the reliability of the Transport Services);

26.12.6 systems assurance programme;

26.12.7 techniques and methods to be employed;

26.12.8 outline of systems assurance demonstration plan;

26.12.9 procedures for the collection, analysis, correction and documentation of failures (FRACAS – Failure Reporting and Corrective Action System); and

26.12.10 internal audit programme, techniques and procedures.

26.13 Environmental and Sustainability Management Plan

The Operator, in conjunction with the tie and the tie Advisers, shall develop an Environmental and Sustainability Management Plan which shall comply with all relevant Legislation, be based on ISO 14000 and shall cover as a minimum the following:

26.13.1 environmental management system (EMS) including the consolidation of all existing Environmental Statements (lodged to support the parliamentary process), obligations and undertakings into a unified EMS for the Edinburgh tram system;

26.13.2 environmental management procedures;

26.13.3 purchasing policy and arrangements regarding the future availability and sustainability of materials together with their potential performance, taking due account of the whole life cost implications of using such materials; and

26.13.4 benchmarking, sustainability and delivering continuous improvement.

26.14 Security Management Plan

26.14.1 The Operator shall develop a Security Management Plan including appropriate security measures utilising the Infrastructure and Equipment provided through the Infrastructure Provider, which shall encompass at least the following:

- (a) passenger and staff personal security arrangements;
- (b) the provision of appropriate levels of illumination (including the avoidance of dark corners) at, and on the approaches to, Tramstops;
- (c) arrangements for working with third parties to effectively control and reduce security risks to passengers and staff when on or about the Edinburgh Tram Network;
- (d) benchmarking, monitoring, control and reporting of security related incidents;
- (e) management, control, monitoring and implementation of corrective action in respect of personal security.
- (f) application of technology in safeguarding passenger and staff security.
- (g) passenger 'help points' at Tramstops linked to the Control Centre and to video recording; and
- (h) application of CCTV surveillance covering platform areas and facilities, ticket vending machines, 'help points', park and ride sites, Tram interiors, and also to areas outside those specifically required to be covered within these requirements.

26.14.2 In addition, the Operator shall provide appropriate security measures to complement the above which must at least include consultation with and consideration of the recommendations of all relevant police authorities and forces (including Lothian and Borders Police and/or British Transport Police) for preventative uniformed patrols on the System, for responses to incidents/accidents and for joint crime-prevention initiatives in schools, youth clubs and in the local community;

26.15 Marketing Plan

The Operator shall support the development by tie of a Marketing Plan having regard to development of the Services Integration Plan by tie which shall encompass, without limitation:

26.15.1 marketing and public relations in respect of the Transport Services generally;

26.15.2 advertising of the Transport Services; and

26.15.3 local community relationships, possibly to include open days.

26.16 Public Liaison and Media Plan

In conjunction with tie, the Operator shall develop, maintain and implement a Public Liaison and Media Plan which shall contain as a minimum the following:

26.16.1 arrangements for the provision of support to tie's and CEC's public liaison team;

26.16.2 information and newsletters proposed to be publicly issued on a regular, periodic or occasional basis;

26.16.3 proposed procedures for notifying affected members of the public or other third parties of planned work comprised in the maintenance of the Edinburgh Tram Network;

26.16.4 proposals to maintain/build up support for the Edinburgh Tram Network;

26.16.5 proposals for informing the public as to the role of the Operator and the Infrastructure Provider;

26.16.6 procedures for replying to queries or complaints from the public;

26.16.7 plans for public information meetings;

26.16.8 procedures for the regular production of press releases;

26.16.9 proposals for the provision of information at local level; and

26.16.10 proposals for website information and co-ordination with the tie tram website.

26.17 System Integration Plan

26.17.1 The Operator shall support the development of a Systems Integration Plan to be implemented when necessary for each occasion when a variation is made to the operating network, whether complete opening of a partially operational Phase, the addition of a new Line to the Edinburgh Tram Network, or the opening of an extension to any Line and/or Phase (as appropriate).

26.17.2 In conjunction with Infrastructure Providers (during Project Phase C) the Operator shall include within the plan proposals for the testing and commissioning of the new Infrastructure and Equipment whilst maintaining operational Transport Services on the existing network. Any interruption of Transport Services in order to achieve System Integration under paragraph 26.17.1 above shall not last longer than one Business Day. The plan shall also address any changes in the maintenance regime arising from the additional Transport Services.

27. PLANNING SUPERVISOR

27.1 Duties as planning supervisor under the requirements of the CDM Regulations are currently undertaken by the tie Advisors for technical, operational and environmental matters for each Phase.

28. SAFETY MANAGEMENT SYSTEM DEVELOPMENT

28.1 The Operator shall develop, to the satisfaction of tie, HMRI and other concerned authorities, a generic safety management system for the commissioning and operation of the System to the level necessary to ensure that relevant safety requirements are included in the tender documentation for the Infrastructure Delivery Agreement.

28.2 The generic safety management system shall be capable of development to a full and final version prior to commencement of commissioning of the System during Project Phase C.

28.3 The preliminary work on the safety management system will include the production of a safety justification framework document that will indicate the likely format and some of the detail of the eventual case for safety that the Operator will be required to present to, and gain approval from, HMRI

- 28.4 The framework document will be drafted in consultation with the HMRI and other relevant bodies. It is expected to embrace the following subject areas:
- 28.4.1 description of the operation: Introductory section giving general description of the System, identification of safety responsibilities and reporting mechanisms;
 - 28.4.2 arrangements during initial access to the Edinburgh Tram Network: Organisation and management of working staff, safety, emergency arrangements, identification of staff, insurance, safety audit, arrangements for keeping and distributing records;
 - 28.4.3 arrangements for testing and staff training: Organisation and management of staff, safety arrangements including staff working on the Tramway, emergency arrangements, identification of staff, insurance, fault analysis, safety audit, arrangements for keeping and distributing records;
 - 28.4.4 infrastructure management: Track, speed limits, public crossings (surface and bridges), fencing, Tramstop infrastructure, monitoring and reporting systems;
 - 28.4.5 Tram operating arrangements: Operating arrangements including route knowledge, signalling etc., fitness and training of staff, certification of staff, Tram preparation, defect and breakdown procedures, communications, control of access to driving cabs, shunting arrangements;
 - 28.4.6 Tramstop arrangements: Operating arrangements, crowd control, emergency planning, access for contractors, control of access and vandalism, security;
 - 28.4.7 Tram maintenance arrangements: Engineering and operational acceptance of Tram vehicles, competence of staff engaged on maintenance, quality assurance, technical audit, monitoring, reporting of defects, procedure for imposing operating restrictions, acceptance of Trams for the Transport Services;
 - 28.4.8 infrastructure maintenance: Inspection procedures, accreditation, control and monitoring, reporting procedures, emergency arrangements, communications, signage and warnings in the operating environment;
 - 28.4.9 Interfaces with other organisations: Liaison with Emergency Services, HMRI, and highways authorities;

28.4.10 risk assessment: Assessment of the risks associated with all aspects of the Project Operations including groups of people most at risk, severity of failure event and likelihood of event occurring;

28.4.11 Health & Safety Policy: Policy statement, monitoring arrangements, alcohol and drugs policy including testing and disciplinary action; and

28.4.12 Code of Practice for working on or near the Edinburgh Tram Network

29. PASSENGER'S CHARTER

29.1 The Operator shall, in conjunction with the, prepare a passengers' charter in plain language to take effect from the Service Commencement Date for each Phase.

29.2 It is intended that elements of the charter shall include:

29.2.1 a statement of the Operator's intentions;

29.2.2 standards of service covering punctuality, availability and reliability;

29.2.3 level of provision and service for passengers with respect to, for example, telephone enquiries and services, provision for passengers with disabilities, bicycles and luggage;

29.2.4 method of dealing with service disruptions;

29.2.5 compensation arrangements in the event of service disruption or below-standard performance;

29.2.6 contact details for comments and complaints;

29.2.7 response times; and

29.2.8 method of dealing with passengers.

29.3 It is also intended that the charter will contain information on the following matters:

29.3.1 interchange facilities;

29.3.2 service integration details (rail, air, bus and Park-and-Ride);

29.3.3 Timetable information display locations;

- 29.3.4 policy on planned disruption of service;
- 29.3.5 available guides and maps;
- 29.3.6 passenger information systems;
- 29.3.7 safety and security arrangements;
- 29.3.8 guidance to passengers (personal stereos, mobile telephones, animal carriage, litter, disabled or mobility impaired passengers);
- 29.3.9 ticket types, purchase and availability;
- 29.3.10 service standards;
- 29.3.11 vehicle and stop standards;
- 29.3.12 maintenance commitment;
- 29.3.13 complaints procedure; and
- 29.3.14 fault reporting procedure.

30. FINAL FUNDING APPROVAL

The Operator shall support tie's applications for final funding approvals and contracts for the provision of funding for the Project by the Scottish Executive, CEC local development contributions or any other source of project funding (other than the Operator and the Operator Parties).

31. DEVELOPMENT OF TEL FARES POLICY

31.1 The Operator shall be required to give input on the development of the TEL Fares Policy and adopt the TEL Fares Policy for Project Phase D. This shall include input to the proposals for:

- 31.1.1 ticket range and user group;
- 31.1.2 special event pricing and travel incentives such as unlimited period travel;
- 31.1.3 ticket integration;
- 31.1.4 fares zoning;

31.1.5 premium on-board tram fares structure and relativity to normal fares; and

31.1.6 minimisation of fare evasion.

32. GATEWAY FROM PROJECT PHASE B TO PROJECT PHASE C

32.1 The Operator will notify **tie** when the Operator considers that it has completed each of the tasks to be carried out pursuant to Project Phase B in respect of a Phase and that all matters to be agreed during Project Phase B have been agreed between the Operator and **tie**. Without limitation, the Operator will not serve such notice until:

32.1.1 the agreement between **tie** and the Operator of:

- (a) the Target Costs for Project Phase C2 in respect of that Phase;
- (b) (if there is to be a time interval between the Service Commencement Date and the Full Service Commencement Date in respect of that Phase), the Interim Target Operating Costs and the Interim Fixed Costs for such period; and
- (c) the Target Operating Costs and Fixed Costs (except for those Fixed Costs which have already been set) to take effect from the Full Service Commencement Date in respect of that Phase;

32.1.2 the execution of the Infrastructure Delivery Agreement in respect of that Phase by the relevant Infrastructure Provider; and

32.1.3 the setting of Interim Target Patronage (if there is to be a time interval between the Service Commencement Date and the Full Service Commencement Date in respect of that Phase), or Target Patronage by the Joint Revenue Committee.

32.2 If **tie** agrees that all of such tasks have been completed and/or relevant matters agreed, **tie** shall notify the Operator that Project Phase C shall commence in respect of that Phase.

32.3 To the extent that **tie** considers that any such task has not been completed by the Operator and/or relevant matter agreed, **tie** will notify the Operator accordingly, including details of the further activities to be carried out by the Operator in order to complete such task.

32.4 To the extent that some but not all of the Project Phase B tasks have been completed and/or relevant matters agreed, **tie** may, in its sole discretion, notify the Operator that Project Phase C shall commence in respect of that Phase and issue a PPCN, and in such circumstances:

32.4.1 **tie** may direct that some or all of the Project Phase C Project Development Services shall be commenced; and

32.4.2 the Operator shall continue to provide the Project Phase B Project Development Services until (i) the relevant tasks have been completed, and (ii) all matters to be agreed during Project Phase B have been agreed between the Operator and **tie**, or until **tie** otherwise directs.

PROJECT PHASE C

Design, Build and Commissioning

33. INTRODUCTION

33.1 The primary objectives of ~~tie~~, the ~~tie~~ Advisers and the Operator during Project Phase C in respect of any Phase shall be to:

33.1.1 project manage the delivery of the Infrastructure and Equipment in respect of that Phase pursuant to the Infrastructure Delivery Agreement for that Phase including, without limitation, in respect of:

- (a) the detailed design of the Infrastructure and Equipment;
- (b) the building of the Infrastructure and Equipment; and
- (c) the testing and commissioning of the Infrastructure and Equipment, including the integration of the Infrastructure and Equipment with that in respect of any other Phase;

33.1.2 prepare for Project Phase D, including the recruitment and training of staff; and

33.1.3 continue to revise the Operating Method Statements and their component plans.

33.2 The Operator shall work together with ~~tie~~ and the ~~tie~~ Advisers during Project Phase C to carry out the functions referred to in the following paragraphs to ensure that the Infrastructure and Equipment to be provided pursuant to each Infrastructure Delivery Agreement shall enable the achievement of a high standard of reliability in the operation of the Transport Services.

33.3 Project Phase C shall be split into 2 parts, Project Phase C1 and Project Phase C2.

33.4 Some of the Project Development Services to be provided by the Operator during Project Phase C shall be provided throughout Project Phase C; others shall be provided only during Project Phase C1 or Project Phase C2, as appropriate. Paragraph 34 provides further details.

34. PROJECT DEVELOPMENT ACTIVITIES DURING PROJECT PHASE C

34.1 In support of the primary objectives for Project Phase C set out in paragraph 33 above, the Operator shall, during Project Phase C in respect of each Phase, comply with the requirements of paragraph 34.2 below.

34.2 The principal obligations of the Operator during Project Phase C1 are:

34.2.1 to advise and support tie upon aspects of the detailed design and construction of the Infrastructure and Equipment; and

34.2.2 to advise tie in the project management of the delivery of the Infrastructure and Equipment;

34.2.3 to prepare and plan for the commissioning and testing process to be carried out in Project Phase C2, without limitation by developing a Testing and Commissioning Plan in conjunction with the Infrastructure Provider, tie and the tie Advisers; and

34.2.4 in conjunction with tie and the tie Advisers, to commence the commissioning and testing process in relation to the Infrastructure and Equipment (including both factory and site acceptance tests).

34.3 The principal obligations of the Operator during Project Phase C2 are:

34.3.1 to recruit, employ and train staff for Project Phase C2 (*Commissioning and Testing*) and Project Phase D (*Operations*); and

34.3.2 in conjunction with tie and tie's Advisers, to complete the commissioning and testing process in relation to the Infrastructure and Equipment (including any factory and site acceptance tests not carried out in Phase C1).

34.4 Throughout Project Phase C, the Operator shall:

34.4.1 continue to maintain up to date, and revise as necessary, the Operating Method Statements;

34.4.2 continue to provide support with regard to any proposed revisions to the Service Integration Plan;

34.4.3 manage and supervise the obtaining of all Operator Necessary Consents for the System, to the extent not already obtained during Project Phase A or Project Phase B; and

34.4.4 comply with any relevant Necessary Consents forming part of the Overall Approvals Management Plan.

34.5 All activities referred to in this paragraph 34 shall be carried out in accordance with the relevant plans in the Operating Method Statements.

35. FURTHER DEVELOPMENT OF THE OPERATING METHOD STATEMENTS

35.1 Using as a basis the Operating Method Statements prepared in accordance with this Project Development Output Specification during Project Phase B, the Operator shall further develop and keep up to date the plans within the Operating Method Statements during Project Phase C, in consultation with tie and/or the Infrastructure Provider and/or any other relevant third parties to the extent appropriate.

35.2 Without limitation to paragraph 35.1, the Operator shall further develop in consultation with the relevant Infrastructure Provider(s):

35.2.1 the Testing and Commissioning Plan;

35.2.2 the Shadow Run Validation Plan;

35.2.3 the Operator Maintenance Plan. To the extent that tie has requested the Operator to manage the performance by an Infrastructure Provider of its obligations under the relevant IDA, the Operator Maintenance Plan shall be extended to cover the management of such maintenance;

35.2.4 the Incident Management Plan, such development to also be in consultation with HMRI, CEC, the Emergency Services, and Network Rail;

35.2.5 the System Integration Plan; and

35.2.6 the Recruitment and Training Plan.

35.3 Any changes to the Operating Method Statements during Project Phase C:

35.3.1 shall be subject to the consent of tie pursuant to Schedule 9 (*Review Procedure*); and

35.3.2 shall not result in any amendment to the Fixed Costs, Target Operating Costs or the Target Patronage, or any other terms of the Operating Appendix, unless otherwise provided for in this Agreement or expressly agreed by tie.

PROJECT PHASE C1

36. OPERATOR'S PROJECT DEVELOPMENT RESOURCES DURING PROJECT PHASE C1

In addition to the Operator Project Manager appointed pursuant to Clause 6.7, the Operator's Core Team shall include the resources set out in the Project Development and Operating Costs during Project Phase C1.

37. OPERATOR'S ROLE DURING CONSTRUCTION

37.1 **tie** intends to establish a joint project management team at the beginning of Project Phase C to oversee delivery of the Infrastructure and Equipment for the System, comprising staff from **tie**, the **tie** Advisors and the Operator.

37.2 The IDA signed during Project Phase B will be concluded directly between **tie** and one or more Infrastructure Providers. **tie** intends to use the joint project management team to administer and engineer the IDA(s) through delegated powers. The Operator shall provide one or more representatives to the joint project management team, as may be required by **tie**, to ensure that the best advice is available to **tie** on all relevant aspects of the scheme, primarily related to operational issues.

37.3 The project management team will:

37.3.1 observe and report on the acceptability of proposed designs against the Design Manual and the Infrastructure and Equipment Output Specification and the ability of the proposals to meet operational objectives;

37.3.2 observe and report on the quality of Infrastructure and Equipment provision and installation and its compliance with the Infrastructure and Equipment Output Specification;

37.3.3 monitor progress of provision and installation;

37.3.4 certify progress to **tie** for payment purposes; and

37.3.5 audit compliance with the Code of Construction Practice.

38. TESTING AND COMMISSIONING PLAN

In conjunction with the Infrastructure Provider in respect of the relevant Phase, and by agreement with tie and the tie Advisers, the Operator shall develop a Testing and Commissioning Plan in respect of that Phase, such plan to be finalised and agreed by the Operator and tie prior to the commencement of Project Phase C2 for such Phase. This plan shall encompass at least the following:

- 38.1 programme and sequence for all testing and commissioning;
- 38.2 procedures for factory acceptance testing;
- 38.3 proposed pre-operational tests;
- 38.4 proposed soak testing of passenger interface equipment or elsewhere as agreed;

"Passenger Interface Equipment" shall comprise dynamic visual displays, public address systems and the like located Tramstops or on board Tram vehicles.
- 38.5 control and monitoring processes for the progression of the testing and commissioning programme;
- 38.6 method for reporting on completed testing and commissioning;
- 38.7 testing and commissioning documentation control procedures;
- 38.8 process for managing non-conformances and re-testing;
- 38.9 management of safety during testing and commissioning (including the training of staff and contingency provisions);
- 38.10 recruitment and training of Project Operations Staff to be coordinated with the commissioning of each Phase and the subsequent commencement of the Transport Services on such Phase; and
- 38.11 process for the acceptance for operational purposes of the Infrastructure and Equipment from the Infrastructure Provider to the Operator.

39. DEVELOPMENT OF TEL FARES POLICY

- 39.1 The Operator shall be required to give updated input on the development of the TEL Fares Policy and adopt the TEL Fares Policy by the end of Project Phase C for Project Phase D.

40. PRE-MOBILISATION SERVICES

- 40.1 By the relevant date shown in the Project Programme, the Operator shall provide a breakdown (within an update to the Quality Management Plan) of the self-certification regime that will be established in relation to the training programme that is to be instituted by the Operator in relation to its own staff;
- 40.2 By the relevant date shown in the Project Programme, the Operator shall provide (within an update to the Recruitment and Training Plan) a statement of:
- 40.2.1 the level of competence that will be required of each type and level of Operator staff member; and
 - 40.2.2 how such competence will be ascertained and certified in detail (including any certification to be carried out by any external body) in respect of (a) passenger operations and (b) supporting test and commissioning activities.
- 40.3 By the relevant date shown in the Project Programme, the Operator shall provide **tie** with a copy of the Operator's proposed recruitment programme for (a) passenger operations and (b) supporting test and commissioning activities.
- 40.4 By the relevant date shown in the Project Programme, the Operator shall provide **tie** with a copy of the Operator's proposed training programme for (a) passenger operations and (b) supporting test and commissioning activities (within an update to the Recruitment and Training Plan).
- 40.5 The Operator shall provide all input reasonably required by **tie** in respect of the development of the Approvals Management Plan, Testing and Commissioning Plan, Shadow Running Validation Plan and Systems Integration Plan being developed by the Infrastructure Provider.
- 40.6 The Operator shall consult with **tie** or (if so requested by **tie**) the Infrastructure Provider in respect of the development of the Operator Maintenance Plan and the Incident Management Plan pursuant to this Agreement. The Operator shall also

consult with tie or (if so requested by tie) the Infrastructure Provider, with a view towards ensuring that the safety management system plans to be developed by the Infrastructure Provider and the Operator are integrated;

- 40.7 Provided tie has supplied to the Operator relevant and appropriate base training materials to the Operator, the Operator shall develop training courses and all relevant documentation required to provide the levels of training required under this Agreement to staff of the Operator. The relevance and appropriateness of the base training materials shall be assessed against the base training materials requirement specification to be produced by the Operator and annexed to the Recruitment and Training Plan.
- 40.8 The Operator shall train its staff for both commissioning and operation in accordance with the requirements of Clause 5.4 of this Agreement, so as to ensure that there are sufficient, subject to the resource cap at different phases, appropriately trained and qualified staff to carry out the Testing and Commissioning Plan as directed by tie in accordance with the Project Programme. Without prejudice to the foregoing generality, the Operator shall ensure that its staff will undergo necessary specialised training in relation to the operation of equipment and, in accordance with the Operator Maintenance Plan, rapid fault finding and first line repair of equipment provided. The Operator shall also ensure that such training is co-ordinated with the Project Programme for commissioning of the System.
- 40.9 The Operator shall pro-actively prepare for provision of the Mobilisation Services, including proposing and planning of (a) all necessary desk top and real world exercises; and (b) shadow running to achieve Operator Necessary Consents.
- 40.10 The Operator shall have the right to attend factory acceptance and site acceptance tests, and tie shall use reasonable endeavours to procure that the Operator is given both prior notice and the requisite access rights in respect of such attendance. The Operator shall attend factory acceptance tests and site acceptance tests (as appropriate) for Trams, plant, machinery or equipment on being given reasonable notice by tie during Project Phase C1.
- 40.11 The Operator shall provide all input reasonably necessary in relation to the development of the Operating Method Statements to be developed by the Operator and the Infrastructure Provider in relation to the Edinburgh Tram Network. The Infrastructure Provider shall be entitled to request the input of the Operator only

insofar as it relates to the Transport Services or the operation of the Edinburgh Tram Network;

40.12 By the relevant date shown in the Project Programme, the Operator shall provide to the details of the persons who will perform the Mobilisation Services and specifically those persons who require to be trained by the Infrastructure Provider in relation to the Edinburgh Tram Network, including:

40.12.1 the roles and responsibilities and details of the qualifications and experience of such persons;

40.12.2 details of the training plan for each person or group of persons to be undertaken prior to being competent to perform the Mobilisation Services;

40.12.3 details of the assessment and accreditation of those persons which are to be provided by the Operator.

40.13 By the relevant date shown in the Project Programme, the Operator shall deliver a project management plan, detailing the manner in which the provision of the Pre-Mobilisation Services and the Mobilisation Services will be managed, including a clear indication of the persons who have responsibility for interface with all relevant parties, including the Infrastructure Provider and HMRI.

40.14 By the relevant date shown in the Project Programme, the Operator shall provide details of the training courses to be provided by the Operator for training the Infrastructure Provider staff as required pursuant to the Mobilisation Services within an update to the Recruitment and Training Plan. When the training courses have been approved by the, the dates for the training courses shall be incorporated into the Project Programme.

40.15 The Operator shall provide as is practicable all input required by the Infrastructure Provider (as notified to the Operator by the) in respect of the development of the Infrastructure Maintenance Plan pursuant to the IDA, provided that the Operator shall only be obliged to provide such input to the extent that the same relates to the Operator's obligations in respect of Project Operations.under this Agreement

40.16 The Operator shall obtain all Operator Necessary Consents which require to be obtained prior to the commencement of the Mobilisation Services in accordance with the Approvals Management Plan.

41. GATEWAY FROM PROJECT PHASE C1 TO PROJECT PHASE C2

- 41.1 **tie** will issue a certificate to the Operator (“**Pre-Mobilisation Certificate**”) to authorise mobilisation of those key staff required in accordance with the Project Programme to initiate preparations (including but not exclusively planning and limited recruitment) for operational capability on the anticipated date for opening of the Phase.
- 41.2 The Pre-Mobilisation Certificate for a Phase shall be issued at a time to be agreed between **tie**, the Operator and the Infrastructure Provider(s) based upon the then current progress towards Planned Service Commencement Date for the Phase in accordance with the Project Programme and in sufficient time to permit an orderly process of staff recruitment in accordance with the Project Programme. For the avoidance of doubt, sufficient time for recruitment in accordance with the Project Programme and Recruitment and Training Plan will be three and one half Reporting Periods before the staff are required to be available for training.
- 41.3 Subject to paragraph 41.5, **tie** will issue a certificate to the Operator (“**Mobilisation Certificate**”) when it considers that the Operator should proceed to commence full mobilisation of all necessary operational staff and the other activities pursuant to Project Phase C2.
- 41.4 Subject to paragraph 41.5, the Mobilisation Certificate for a Phase will be issued not less than nine months prior to the Planned Service Commencement Date for the Phase in accordance with the Project Programme.
- 41.5 **tie** shall not issue a Mobilisation Certificate unless the Operator has provided to **tie** a Performance Bond in the form of Schedule 14 (*Performance Bond*) to this Agreement and issued by a surety acceptable to **tie**.

PROJECT PHASE C2

42. OPERATOR'S PROJECT DEVELOPMENT RESOURCES DURING PROJECT PHASE C2

- 42.1 In addition to the Operator Project Manager appointed pursuant to Clause 6.7, the Operator shall devise and provide a suitable management structure to deliver:

42.1.1 the Project Development Services during Project Phase C2; and

42.1.2 to prepare to the deliver the Transport Services (together with any other Project Operations) during Project Phase D,

such management structure to be subject to the approval of tie, such approval not to be unreasonably withheld or delayed.

42.2 The Operator's management structure will be headed by the Operator Project Manager who will be assisted by experienced managers in all relevant disciplines, to include, as a minimum, operations, finance, quality assurance, human resources, marketing and safety.

42.3 The management structure plan devised pursuant to paragraph 42.2 may be amended during the progress of developments during Project Phase C2 to align with development of the System and its operations, such amendments to be subject to the approval of tie, such approval not to be unreasonably withheld or delayed.

42.4 The management structure plan shall define roles and responsibilities covering all aspects of the operation of the System including operations, maintenance, safety, customer services, public liaison, training and recruitment.

43. OPERATOR'S ROLE DURING TESTING AND COMMISSIONING

43.1 In addition to continued participation in the joint project management team as outlined in paragraph 37 above, the Operator shall also take specific responsibility for operational management of the testing and commissioning process, such responsibilities to be carried out in accordance with the Testing and Commissioning Plan and subject to compliance by others with the Project Programme..

43.2 The responsibilities of the Operator in relation to operational management of the testing and commissioning process shall include:

43.2.1 observation if necessary and appropriate witnessing of any factory acceptance tests on Infrastructure and Equipment to be provided;

43.2.2 attendance and certification of site acceptance tests on Infrastructure and Equipment not completed within Project Phase C1, if necessary and appropriate;

- 43.2.3 coordinating the obtaining of all Necessary Consents for commissioning and public operation and complying with those which are relevant to the Operator;
- 43.2.4 appointment and training of operational staff necessary for operation and maintenance of the System in public operation; and
- 43.2.5 ensuring that all relevant operational subcontracts are in place and that appropriate subcontractor staff training programmes are implemented.

44. MOBILISATION OF STAFF FOR PROJECT PHASE C2 AND PROJECT PHASE D

- 44.1 The Operator shall comply with the provisions of Clause 15 (*Personnel Issues*) of the Agreement in relation to appointing staff to operate and maintain the System.
- 44.2 The Operator shall, in accordance with the Project Programme, safeguard efficient engagement on Project Phase C2 and D of the Project through sufficiency and timeliness of staff mobilisation at all levels.
- 44.3 The Operator shall create a manual describing the roles of each member of the Project Operations Staff and providing specific instructions for the proper performance of their duties. The Operator shall maintain and keep such manual up to date throughout Project Phase C2 and Project Phase D. The Operator shall provide to the tie Project Manager a copy of such manual (and each successive update) as soon as reasonably practicable after its production.

45. STAFF TRAINING

- 45.1 The Operator shall comply with the terms of the Recruitment and Training Plan in relation to the recruitment and training of all staff during Project Phase C2 and D in accordance with the Project Programme and, without limitation, the Operator shall:
 - 45.1.1 arrange for the necessary specialised training to ensure the competence of staff engaged in the provision of the Transport Services in relation to the operation of equipment, rapid fault finding and in the repair and maintenance of equipment provided within initial response scope; and

45.1.2 ensure that such training courses are coordinated with the commissioning of the System to ensure that trainees derive maximum benefit from progressive involvement as far as practicable.

46. MARKETING, PROMOTIONAL PUBLIC LIAISON AND MEDIA ACTIVITIES

46.1 The Operator shall comply with the terms of the Marketing Plan and the Public Liaison and Media Plan during Project Phase C.

47. CONSUMABLES, MATERIALS AND EQUIPMENT

47.1 The Operator shall comply with the provisions of paragraph 14 of the Operating Output Specification during Project Phase C2.

47.2 tie shall provide all power required during Project Phase C in accordance with the Project Programme.

48. MOBILISATION SERVICES

48.1 The Operator shall provide appropriate training for such of the Infrastructure Provider's staff as tie may reasonably require on the following matters:

48.1.1 safety procedures to be observed and complied with while working on the Edinburgh Tram Network following sectional energisation in accordance with the Project Programme; and

48.1.2 movement of trams during the commissioning and operation of the Edinburgh Tram Network.

48.2 Insofar as it has not been possible to train the Operator's staff as part of the Pre-Mobilisation Services, the Operator shall provide all training necessary in accordance with the approved Recruitment and Training Plan to enable such staff to perform the Mobilisation Services including the System Acceptance Tests.

48.3 The Operator shall provide such courses, documentation and materials in respect of the training of the Operator's staff as may be required to achieve all necessary Approvals and Consents.

48.4 The Operator shall propose familiarisation plans and carry out the relevant familiarisation of contractors, shop, office and tenement proprietors who may be affected at any time by the operation of the Edinburgh Tram Network in accordance

with Good Industry Practice in relation to potential hazards of such operation and shall demonstrate to the reasonable satisfaction of the that such persons have been offered such familiarisation as practicable by the Operator using reasonable endeavours;

48.5 The Operator shall provide: :

48.5.1 drivers trained and experienced in driving the Trams;

48.5.2 fully trained control room staff in so far as commissioning of the Edinburgh Tram Network permits; and

48.5.3 competent persons to undertake isolations via the Control Centre of the Edinburgh Tram Network;

in accordance with the Project Programme.

48.6 From the relevant date shown in the Project Programme, the Operator shall perform the following operating activities:

48.6.1 provide 24 hour, 7 day a week staff cover in the Control Room to ensure:

48.6.1.1 security and surveillance equipment is being monitored and recorded as appropriate;

48.6.1.2 carry out emergency and planned isolations from the Control Room;

48.6.1.3 provide communications services with third parties, the public, emergency services and operations and maintenance staff as procedures require;

48.6.1.4 initiate and terminate tram operations according to the agreed timetable or test schedule;

48.6.1.5 monitor and regulate tram movements according to the agreed working timetable or test schedule; and

48.6.1.6 issue and receive "Possessions" of the Edinburgh Tram Network or part thereof as procedures may require.

48.6.2 provide Operator Maintenance;

48.6.3 provide sufficient drivers in accordance with the Project Programme to facilitate all planned commissioning, System Acceptance Tests, and Shadow Running;

48.6.4 provide sufficient drivers in accordance with the Project Programme and the Recruitment and Training Plan to fulfil the requirements of the Shadow Run Validation Plan; and

48.6.5 provide all recording and monitoring services as required by Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of the Operating Appendix as required from time to time by tie;

all as set out in the Operating Method Statements, progressively as the Edinburgh Tram Network, or parts thereof, is energised. The Operator shall maintain, for tie's inspection, full details of all work undertaken pursuant to this paragraph.

48.7 The Operator shall carry out commissioning and Shadow Running and all relevant Mobilisation Services in accordance with:

48.7.1 the Project Programme;

48.7.2 the Operating Method Statements; and

48.7.3 to the extent practicable, each of the following plans as developed by Infrastructure Provider pursuant to the IDA (with the assistance of the Operator);

48.7.3.1 the Infrastructure Provider's Approvals Management Plan;

48.7.3.2 the Infrastructure Provider's Testing and Commissioning Plan; and

48.7.3.3 the Infrastructure Provider's System Integration Plan.

48.8 The Operator shall provide such documentation and other required assistance as shall be required by HMRI, Network Rail, tie and any other Relevant Authority to demonstrate the Operator's capability in its capacity as operator of the Edinburgh Tram Network to undertake Operator Maintenance and emergency procedures in relation to Project Operations.

48.9 The Operator shall provide the Infrastructure Provider and any other party reasonably requested by tie, working and Acceptance Test time tables, information for pre-

recorded announcements and platform indicator display messages and such other data and information as may be practicable and necessary for the Operator and Infrastructure Provider to carry out any tests, Shadow Running, demonstrations to HMRI, and emergency exercises within the Project Operations that are required in relation to the completion tests to be carried out under the IDA in respect of the Edinburgh Tram Network or any part thereof;

48.10 The Operator shall pro-actively engage with the Infrastructure Provider in relation to:

48.10.1 the creation and development of operational procedures;

48.10.2 development and finalisation of the Case for Safety in relation to tram movement and power energisation and power isolation; and

48.10.3 operational safety management.

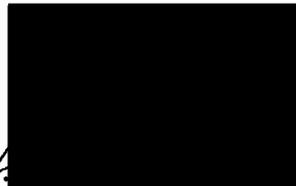
48.11 The Operator shall provide all personal protective clothing, uniforms as appropriate and equipment which may be required by the Operator for performance of the Mobilisation Services.

48.12 The Operator shall provide all non-specialist equipment required by its own staff for performance of the Mobilisation Services, including *inter alia* hand lamps, mobile telephones, notebooks, computers, software and first aid kits.

48.13 The Operator shall provide all transport required by its staff in respect of Mobilisation Services.



Director/Authorised Signatory
tie Limited



Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

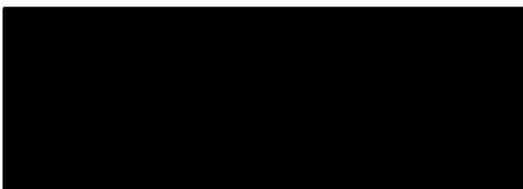
This is Schedule 3 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 3

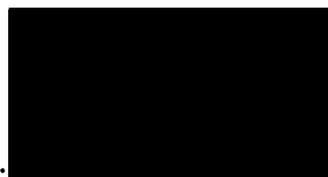
Key Personnel

The Key Personnel listed below shall be as identified in the Project Development and Operating Costs, and/or as may be notified by the Operator to tie in accordance with this Agreement or otherwise.

1. *Project Director*
2. *General Manager*
3. *Technical Engineer*
4. *Senior Commercial Manager*
5. *Operations Manager*
6. *Operator Project Manager*
7. *Deputy Operator Project Manager*
8. *Quality Manager*



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This is Schedule 4 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 4

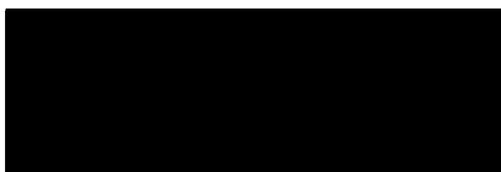
Financial Proposals

This is Schedule 5 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

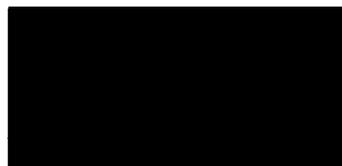
SCHEDULE 5

Operator Financial Model

To be provided in accordance with the Minute of Variation dated 19 and 20 December 2007, which has been agreed by the Parties.



**Director/Authorised Signatory
tie Limited**



**Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited**

This is Schedule 6 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 6

Project Development and Operating Costs

This is Schedule 7 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 7

Dispute Resolution Procedure

1. DISPUTE RESOLUTION PROCEDURE

- 1.1 Any Dispute shall be dealt with in accordance with the procedures contained in this Schedule 7.
 - 1.2 Any Dispute shall, in the first instance, be referred to the **Internal Resolution Procedure** in accordance with paragraph 2 below.
 - 1.3 Save as expressly provided for:
 - 1.3.1 in paragraph 3 in respect of Disputes arising during Project Phases A or B (under exception of Disputes arising under or in relation to Clause 10.5 of the Agreement); and
 - 1.3.2 in paragraph 4 in relation to Disputes arising during Project Phases C or D, or arising under or in relation to Clause 10.5 of the Agreement during any Project Phase;
- neither Party shall commence any court proceedings until the procedures in paragraphs 2 - 6 as appropriate of this Schedule 7 have been completed, under exception that the provisions of this Schedule 7 shall not apply so as to prevent either Party seeking an interim order, or interim relief, in the Scottish courts.
- 1.4 The provisions of this Schedule 7 shall not apply to matters expressly reserved to some other jurisdiction pursuant to the Scottish Private Bill(s).
 - 1.5 In the event that any court proceedings whatsoever are initiated by either Party against the other, the Parties agree that the Court of Session, Scotland, shall have exclusive jurisdiction.
 - 1.6 Neither Party shall be entitled to suspend the performance of its undisputed obligations under this Agreement merely by reason of the reference of any Dispute to the Dispute Resolution Procedure contained in this Schedule 7.

- 1.7 Subject to the discretionary rights set out in paragraph 6 to require that a Dispute and a Related Dispute (as defined in paragraph 6) be dealt with together at an appropriate stage of the Dispute Resolution Procedure, the provisions of this Schedule 7 are mandatory and binding upon the Parties.
- 1.8 Unless a Party refers a Dispute to the Dispute Resolution Procedure contained in this Schedule 7 within three months of the date on which the event, matter or situation giving rise to the Dispute first occurred, such Party shall be deemed to have irrevocably waived any right to refer such Dispute to the Dispute Resolution Procedure contained in this Schedule 7, under exception that if such Party was not aware, and could not with reasonable diligence have been aware, that such event, matter or situation had occurred, this paragraph 1.8 shall have effect as if for the reference herein to the date on which such event, matter or situation occurred, there was substituted a reference to the date when such Party first became, or could with reasonable diligence have become, aware that such event, matter or situation had occurred. This paragraph 1.8 is without prejudice to the right of either Party to raise in defence to any Dispute any defence (including, without prejudice to the foregoing generality, any defence of retention, compensation or set-off) which would otherwise be available to it.
- 1.9 Except in relation to the matters provided for in paragraph 5 ("*Adjudication*"), and subject to the provisions of paragraph 1.10, in the event that either Party pursues any Dispute under the Dispute Resolution Procedure contained in this Schedule 7, and in the event that such Party fails to observe any time limit or timescale provided for in this Schedule 7 in relation to the pursuit or progression of such Dispute, such Party shall, immediately upon such failure occurring, be deemed to have irrevocably waived any right to pursue or progress such Dispute any further. In that event, such Party shall be deemed to have elected not to have referred such Dispute or to have withdrawn such Dispute from the Dispute Resolution Procedure contained in this Schedule 7 and shall be deemed to have irrevocably waived any right to refer the same or substantially the same Dispute to the Dispute Resolution Procedure contained in this Schedule 7 and shall be liable for payment of the whole fees incurred by any mediator or adjudicator who has acted in respect of such Dispute. This paragraph 1.9 is without prejudice to the rights of either Party to raise in defence to any Dispute any defence (including, without prejudice to the foregoing generality, any defence of retention, compensation or set-off) which would otherwise be available to it.

- 1.10 Notwithstanding the provisions of paragraph 1.9, in the event that a Party who pursues any Dispute under the Dispute Resolution Procedure contained in this Schedule 7 fails to observe any time limit or timescale provided for in this Schedule 7 in relation to the pursuit or progression of the Dispute, the other Party may elect to waive such failure, in which event the time limit or timescale to which such failure relates shall be extended at the discretion of such other Party and the Dispute shall progress in accordance with the Dispute Resolution Procedure contained in this Schedule 7, subject that all other time limits and timescales provided for in this Schedule 7 which are affected by such extension shall be deemed to have been extended to give effect to such extension of the time limit or timescale to which such failure relates.
2. The following procedure is the Internal Resolution Procedure referred to in paragraph 1:
- 2.1 In the event of any Dispute arising, the Operator Project Manager and the tie Project Manager shall seek to resolve the Dispute at a meeting to be convened within three Business Days of written notification by either Party to the other that it wishes to initiate the Internal Resolution Procedure in respect of that Dispute ("**Notification**"). Such Notification shall be given in accordance with the provisions of Clause 56 (*Notices*) of the Agreement.
- 2.2 Further meetings may follow the meeting referred to in paragraph 2.1, but in any event, if the Dispute is not resolved within seven Business Days of Notification, each Party shall, before the expiry of the period of ten Business Days from Notification, serve, in accordance with the provisions of Clause 56 (*Notices*) of the Agreement, a written position paper ("**Position Paper**") upon the other Party. Each Party's Position Paper shall state in reasonable detail that Party's position and required objectives in relation to the Dispute; any required redress, and, where possible, any comments on the other Party's position.
- 2.3 Upon such service of a Position Paper by the Party initiating or pursuing the Dispute, the Chairman of the Operator's immediate parent company and the Chief Executive of tie (or their respective deputies in the event of their unavailability) shall seek to resolve the Dispute by meeting in good faith to discuss and negotiate upon the Dispute without recourse to legal or other proceedings.
- 2.4 In the event that resolution of the Dispute is achieved by the Chairman of the Operator's immediate parent company and the Chief Executive of tie, the resolution shall be reduced to writing and, once it is signed by the duly authorised representatives of both Parties, shall be binding on the Parties.

- 2.5 Unless concluded by a written legally binding agreement, all discussions and negotiations connected with the Dispute shall be conducted in confidence and without prejudice to the rights of the Parties in any future legal or other proceedings. Nor may such matters be produced or relied upon in evidence in any such proceedings.
3. In the event that any Dispute arising during Project Phases A or B (under exception of Disputes arising under or in relation to Clause 10.5 of the Agreement) is not resolved by the Internal Resolution Procedure within a period of thirty Business Days from notification (or longer if so agreed by the Parties), such a Dispute shall be litigated before the Court of Session, Scotland, unless the Dispute is withdrawn by the Party initiating or pursuing the Dispute. The summons or petition in any such litigation shall be signetted and served within ten Business Days of the date of expiry of the period of thirty Business Days from notification (or longer if so agreed by the Parties).
4. In the event that any Dispute arising during Project Phases C or D, or arising under or in relation to Clause 10.5 of the Agreement during any Project Phase, is not resolved by the Internal Resolution Procedure within a period of thirty Business Days from notification (or longer if so agreed by the Parties) then the following provisions of this paragraph 4 shall apply;
- 4.1 The Chairman of the Operator's immediate parent company and the Chief Executive of tie (or their respective deputies in the event of their unavailability) shall, within a further period of five Business Days, seek to agree that the Dispute shall be resolved by any one of the following procedures:-
- 4.1.1 mediation in accordance with paragraphs 4.2 to 4.4; or
- 4.1.2 adjudication in accordance with paragraph 5, in which event the Referring Party must give its Notice of Adjudication to the other Party within five Business Days of the date of expiry of the period of thirty-five Business Days from Notification (or longer if so agreed by the Parties); or
- 4.1.3 litigation before the Court of Session, Scotland, in which event the Summons or Petition in any such litigation shall be signetted and served within ten Business Days of the date of expiry of the period of thirty-five Business Days from Notification (or longer if so agreed by the Parties).

In the event that the Chairman of the Operator's immediate parent company and the Chief Executive of tie (or their respective deputies in the event of their unavailability)

are unable to agree that the Dispute be resolved by the procedures described in paragraphs 4.1.1 to 4.1.3, the Party initiating or pursuing the Dispute shall refer the Dispute to mediation (and thereafter, adjudication if necessary) in accordance with paragraphs 4.2 to 4.4.

- 4.2 The Parties shall attempt in good faith to resolve the Dispute by a procedure of mediation in accordance with the Centre for Effective Dispute Resolution mediation rules or Model Mediation Procedure in force at the commencement of the mediation, (or in the event that the Centre for Effective Dispute Resolution has ceased to exist as at the time of the commencement of the mediation, mediation rules or a model mediation procedure offered by any other body offering commercial mediation services which shall be selected by tie), which procedure shall be commenced within five Business Days of the date of expiry of the period of thirty-five Business Days from Notification (or longer if so agreed by the Parties). In the event that any provision of such mediation rules or model mediation procedure conflicts with any provision of this Schedule 7, the provision of this Schedule 7 shall take precedence. In the event that any timescales contained in such mediation rules or model mediation procedure conflicts with the timescales referred to in this Schedule 7, the timescales contained in such mediation rules or model mediation procedure shall be amended accordingly such that the timescales referred to in this Schedule 7 shall be adhered to;
- 4.3 In the event that resolution of the Dispute is achieved in consequence of such mediation procedure, such resolution shall be reduced to writing and, once it is signed by the duly authorised representatives of both Parties, shall be binding on the Parties. Unless concluded by a written legally binding agreement, all discussions and negotiations connected with the mediation procedure referred to in paragraph 4.2 shall be conducted in confidence and without prejudice to the rights of the Parties in any future legal or other proceedings. Nor may such matters be produced or relied upon in evidence in any such proceedings.
- 4.4 If any Dispute to which this paragraph 4 relates is not resolved by the mediation procedure referred to in paragraph 4.2 within a period of 55 Business Days from Notification (or longer if so agreed by the Parties), the mediation procedure shall be terminated and, unless the Party initiating or pursuing the Dispute withdraws the Dispute, the Dispute shall, within a further 5 Business Days, be referred to adjudication in accordance with paragraph 5.

5. ADJUDICATION

In the event that either Party refers a Dispute to adjudication in terms of paragraphs 4.1 or 4.4, or exercises a statutory right available to it (if any) under the Housing Grants Regeneration and Construction Act 1996 to raise adjudication proceedings, such adjudication shall be conducted in accordance with the following conditions. In this paragraph 5, reference to "days" is a reference to calendar days.

Notice of intention to seek adjudication

- 5.1 Either Party may give written notice (the "**Notice of Adjudication**") of his intention to refer the Dispute to adjudication and the Party giving such notice shall be the "**Referring Party**".
- 5.2 The Notice of Adjudication shall be given to the other Party and the Party receiving the Notice of Adjudication shall be the "**Responding Party**".
- 5.3 The notice of adjudication shall set out briefly:
 - 5.3.1 the nature and a brief description of the Dispute and of the parties involved;
 - 5.3.2 details of where and when the Dispute has arisen;
 - 5.3.3 the nature of the redress which is sought; and
 - 5.3.4 the names and addresses of the Parties (including the addresses which the Parties have specified for the giving of notices).
- 5.4 The adjudicator selected to consider the Dispute shall be selected from one of the panels ("**Panels**") appointed by the Parties in accordance with the following:
 - 5.4.1 There shall be four Panels, one in respect of legal matters, ("**Legal Panel**") one in respect of construction matters and construction/operation interface matters ("**Construction Panel**"), one in respect of operational and maintenance matters ("**Operations Panel**") and one in respect of financial matters ("**Financial Panel**").
 - 5.4.2 Each Panel shall be comprised of at least four members, who are listed in Schedule 15 (Panels for the Dispute Resolution Procedure) to the Agreement.

- 5.4.3 If any member of a Panel resigns or dies or becomes incapax or ill to the extent of being unable to reasonably discharge his duties as a member of the Panel, a replacement shall be appointed by the Parties as soon as practicable. Any such replacement shall be wholly independent of the Party, the Party Advisors, any Party, CEC or any Relevant Authority associated with the Edinburgh Tram Network, Network Rail, the Operator, the Operator Parties, any Affiliate of the Operator, any Infrastructure Provider, any Affiliate, sub-contractor or other party connected to any Infrastructure Provider, any of the major competitors of any Infrastructure Provider or the Operator, any supplier of Trams or equipment appointed in respect of the Project, any Affiliate, sub-contractor or other party connected to any supplier of Trams or equipment appointed in respect of the Project, and any successor to or subsidiary or parent of any of the aforementioned parties. If the Parties are unable to agree on the identity of such replacement(s), the President for the time being of the Royal Institution of Chartered Surveyors in Scotland or the Institution of Civil Engineers shall appoint such replacement(s) within thirty days of any application for such appointment by either Party.
- 5.5 The Referring Party shall at the same time as giving the Notice of Adjudication to the Responding Party, send to each of the members of the relevant Panel a copy of the Notice of Adjudication and a request that each member of the relevant Panel advises both Parties within three days as to whether or not he is able and willing to act. The Parties shall attempt to agree within two further days as to which one of the members of the relevant Panel who responded indicating that they are able and willing to act shall be requested to act as adjudicator. In the event that such agreement is reached, the Referring Party shall, within a further period of one day, request the member of the relevant Panel upon whom agreement has been reached to act as adjudicator. In the event that such agreement is not reached, the Responding Party shall, within a further period of two days, select one of the members of the relevant Panel who responded indicating that they are able and willing to act and the Referring Party shall request that member to act as adjudicator.
- 5.6 If no member of the relevant Panel indicates that he is able and willing to act within three days of receiving a request to act as adjudicator, the Referring Party shall request the Royal Institution of Chartered Surveyors in Scotland or the Institution of Civil Engineers to select a person to act as adjudicator.

- 5.7 The requests referred to in paragraphs 5.6 and 5.9 shall be accompanied by a copy of the Notice of Adjudication.
- 5.8 Any person appointed, requested or selected to act as adjudicator in accordance with paragraphs 5.5, 5.6 and 5.9 shall be a natural person acting in his personal capacity. A person appointed, requested or selected to act as an adjudicator shall be wholly independent of **tie**, the **tie** Advisors, the **tie** Inspectors, any **tie** Party, CEC or any Relevant Authority associated with the Edinburgh Tram Network, Network Rail, the Operator, the Operator Parties, any Affiliate of the Operator, any Infrastructure Provider, any Affiliate, sub-contractor or other party connected to any Infrastructure Provider, any of the major competitors of any Infrastructure Provider or the Operator, any supplier of Trams or equipment appointed in respect of the Project, any Affiliate, sub-contractor or other party connected to any supplier of Trams or equipment appointed in respect of the Project, and any successor to or subsidiary or parent of any of the aforementioned parties.
- 5.9 The Royal Institution of Chartered Surveyors in Scotland or the Institution of Civil Engineers must communicate the selection of an adjudicator to the Referring Party within three days of receiving a request to do so.
- 5.10 Where the Royal Institution of Chartered Surveyors in Scotland or the Institution of Civil Engineers fails to comply with paragraph 5.9, the referring Party may:
- 5.10.1 agree with the other Party to the Dispute to request a specified person to act as adjudicator; or
- 5.10.2 request any other adjudicator nominating body to select a person to act as adjudicator. An "adjudicator nominating body" shall mean a body (not being a natural person and not being a Party to the Dispute) which holds itself out publicly as a body which will select an adjudicator when requested to do by a Referring Party.
- 5.11 The person requested to act as adjudicator in accordance with the provisions of paragraph 5.5 or 5.6 shall indicate whether or not he is willing to act within two days of receiving the request.
- 5.12 Where an adjudicator has been selected in accordance with paragraphs 5.5, 5.6 or 5.9, the Referring Party shall, not later than seven days from the date of the Notice of Adjudication, refer the Dispute in writing the ("**Referral Notice**") to the adjudicator.

- 5.13 A Referral Notice shall be accompanied by copies of, or relevant extracts from the Agreement and such other documents as the Referring Party intends to rely upon.
- 5.14 The Referring Party shall, at the same time as he sends to the adjudicator the documents referred to in paragraphs 5.12 and 5.13, send copies of those documents to the Responding Party.
- 5.15 The adjudicator may, with the consent of the Parties to those Disputes, adjudicate at the same time on more than one Dispute under the Agreement.
- 5.16 The Parties may agree to extend the period within which the adjudicator may reach a decision in relation to all or any of these Disputes.
- 5.17 An adjudicator may resign at any time on giving notice in writing to the Parties.
- 5.18 An adjudicator must resign where the Dispute is the same or substantially the same as one which has previously been referred to adjudication, and a decision has been taken in that adjudication.
- 5.19 Where an adjudicator ceases to act under paragraph 5.17 or 5.18, or dies or becomes incapax or ill to the extent of being unable to reasonably discharge his duties;
- 5.19.1 the Referring Party may serve a fresh notice in accordance with paragraphs 5.1 to 5.4 and shall in accordance with paragraphs 5.5 to 5.14 request an adjudicator to act; and
- 5.19.2 if requested by the new adjudicator, the Parties shall supply him with copies of all documents which they had made available to the previous adjudicator.
- 5.20 The Parties to a Dispute may at any time agree to revoke the appointment of the adjudicator and in such circumstances the fees and expenses of that adjudicator shall, subject to paragraph 5.21, be determined and payable in accordance with paragraphs 5.37 and 5.38.
- 5.21 Where the revocation of the appointment of the adjudicator is due to the default or misconduct of the adjudicator, the Parties shall not be liable to pay the adjudicator's fees and expenses.

Powers of the adjudicator

- 5.22 The adjudicator shall:

- 5.22.1 act impartially in carrying out his duties and shall do so in accordance with any relevant terms of the Agreement and shall reach his decision in accordance with Scottish law; and
 - 5.22.2 avoid incurring unnecessary expense.
- 5.23 The adjudicator may take the initiative in ascertaining the facts and the law necessary to determine the Dispute, and shall decide on the procedure to be followed in the adjudication. In particular, he may
- 5.23.1 request either Party to supply him with such documents as he may reasonably require including, if he so directs, any written statement from either Party supporting or supplementing the Referral Notice and any other documents given under paragraphs 5.12 to 5.14;
 - 5.23.2 conduct the adjudication in the English language and decide whether a translation of any document is to be provided and, if so, by whom, by when, and at whose cost ;
 - 5.23.3 meet and question either Party and their representatives;
 - 5.23.4 subject to obtaining any necessary consent from a third party or the Parties, make such site visits and inspections as he considers appropriate, whether accompanied by the Parties or not;
 - 5.23.5 subject to obtaining any necessary consent from a third party or the Parties, procure the carrying out of any tests or experiments, and make directions as to the conditions for and responsibility for the cost of the same;
 - 5.23.6 obtain and consider such representations and submissions as he requires, and, provided he has notified the Parties of his intention, appoint experts, assessors or legal advisers;
 - 5.23.7 give directions as to the timetable for the adjudication, any deadlines, or limits as to the length of written documents or oral representations to be complied with; and
 - 5.23.8 issue other directions relating to the conduct of the adjudication.
- 5.24 The Parties shall comply with any request or direction of the adjudicator in relation to the adjudication.

- 5.25 If, without showing sufficient cause, a Party fails to comply with any request, direction or timetable of the adjudicator made in accordance with his powers, fails to produce any document or written statement requested by the adjudicator, or in any other way fails to comply with a requirement under these provisions relating to the adjudication, the adjudicator may:
- 5.25.1 continue the adjudication in the absence of that Party or of the document or written statement requested;
 - 5.25.2 draw such inferences from that failure to comply as may, in the adjudicator's opinion, be justified in the circumstances;
 - 5.25.3 make a decision on the basis of the information before him, attaching such weight as he thinks fit to any evidence submitted to him outside any period he may have requested or directed;
 - 5.25.4 disqualify any part or parts of that Party's submissions affected by the failure to comply; and
 - 5.25.5 grant the other Party proper opportunity to consider and respond to any evidence or representation made late.
- 5.26 Subject to any agreement between the Parties to the contrary, either Party may be assisted by, or represented by, such advisers or representatives (whether legally qualified or not) as he considers appropriate.
- 5.27 The adjudicator shall consider any relevant information submitted to him by either Party and shall make available to them any information to be taken into account in reaching his decision.
- 5.28 The adjudicator and the Parties shall not disclose to any other person any information or document provided in connection with the adjudication which the Party supplying it has indicated is to be treated as confidential, except to the extent that disclosure is necessary for the purposes of, or in connection with, the adjudication, or the information is already in the public domain.

Adjudicator's decision

- 5.29 Unless otherwise agreed in accordance with paragraphs 6.2.1 or 6.3.1, the adjudicator shall reach his decision not later than:

- 5.29.1 twenty eight days after the date of the Referral Notice mentioned in paragraph 5.12;
- 5.29.2 forty two days after the date of the Referral Notice if the Referring Party so consents; or
- 5.29.3 such period exceeding twenty eight days after the Referral Notice as the Parties may, after the giving of that notice, agree.
- 5.30 Where the adjudicator fails, for any reason, to reach his decision in accordance with paragraph 5.29
- 5.30.1 either of the Parties to the Dispute may serve a fresh notice in accordance with paragraphs 5.1 to 5.4 and shall request an adjudicator to act in accordance with paragraphs 5.5 to 5.14; and
- 5.30.2 if requested by the new adjudicator the Parties shall supply him with copies of all documents which they had made available to the previous adjudicator.
- 5.31 As soon as possible after he has reached a decision, the adjudicator shall deliver a copy of that decision to each of the Parties.
- 5.32 The adjudicator shall decide the matters in Dispute and may make a decision on different aspects of the Dispute at different times.
- 5.33 The adjudicator may take into account any other matters which the Parties agree should be within the scope of the adjudication or which are matters under the Agreement which he considers are necessarily connected with the Dispute and, in particular, he may
- 5.33.1 open up, review and revise any decision taken or any notice certifying payment given by any person referred to in the Agreement, unless the Agreement states that the decision or notice certifying payment is final and conclusive;
- 5.33.2 decide that any of the Parties to the Dispute is liable to make a payment under the Agreement (whether in sterling or some other currency) and, subject to the terms of the Agreement, when that payment is due and the final date for payment;
- 5.34 The adjudicator shall provide written reasons for his decision.

Effects of the decision

- 5.35 In his decision, the adjudicator may, if he thinks fit, order either or both of the Parties to comply peremptorily with his decision or any part of it. In the absence of any directions by the adjudicator relating to the time for performance of his decision, the Parties shall be required to comply with any decision of the adjudicator immediately on delivery of the decision to the Parties in accordance with paragraph 5.31.
- 5.36 The decision of the adjudicator shall be binding on the Parties, and they shall comply with it, until the Dispute is finally determined by legal proceedings or by agreement between the Parties.
- 5.37 The adjudicator shall be entitled to the payment of such reasonable amount as he may determine by way of fees and expenses incurred by him and the Parties shall be jointly and severally liable to pay that amount to the adjudicator.
- 5.38 Without prejudice to the right of the adjudicator to effect recovery from either Party in accordance with paragraph 5.37, the Parties shall each be liable to pay one-half share of the adjudicator's fees and expenses.
- 5.39 The adjudicator shall not be liable for anything done or omitted in the discharge or purported discharge of his functions as adjudicator unless the act or omission is in bad faith, and any employee or agent of the adjudicator shall be similarly protected from liability.

6. RELATED DISPUTES

- 6.1 Notwithstanding the terms of paragraphs 1.2, 1.3, 1.7, 1.8, 1.9 and 1.10, in the event that a dispute or potential dispute under, or in connection with any of the Infrastructure Delivery Agreements (referred to in this paragraph 6 as ("**Related Contracts**")), has arisen or arises out of substantially the same issues of fact and/or law (as the case may be) as a Dispute under the Agreement (a "**Related Dispute**"), then providing that the Related Contract contains dispute resolution provisions in terms substantially the same as set out in this Schedule 7 (Dispute Resolution Procedure) (save for necessary changes), tie may require and direct that the Dispute and the Related Dispute be dealt with together at an appropriate stage of the Dispute Resolution Procedure.
- 6.2 In the event that a Related Dispute has already been referred to the decision of an adjudicator in accordance with the provisions of the Related Contract, and tie is of the

opinion that a Dispute is to be (but has not yet been) referred to adjudication under this Schedule 7, **tie** may refer the Dispute, or may by notice in writing to the Operator require that the Dispute be referred (as the case may be) to the adjudicator appointed under the Related Contract to decide upon the Related Dispute, and:-

6.2.1 the adjudicator shall, if practicable, hear the Dispute at the same time as the Related Dispute and shall request such extension of time for producing his decision or award as he may require in order to reach a decision in respect of each of the Dispute and the Related Dispute at the same time. The Parties shall agree to such request for an extension of time, except in the event that the Dispute or the Related Dispute relates to "construction operations" within the meaning ascribed to that term by the Housing Grants, Construction and Regeneration Act 1996 (if applicable) (unless otherwise agreed by the Parties, all parties to the Related Dispute and the Adjudicator);

6.2.2 except in the event that the Dispute or the Related Dispute relates to "construction operations" within the meaning ascribed to that term by the Housing Grants, Construction and Regeneration Act 1996 (if applicable) (unless otherwise agreed by the Parties, all parties to the Related Dispute and the Adjudicator), the adjudicator shall have power (if so requested by **tie**) to make his decisions or awards in the Dispute and the Related Dispute in such a manner as if the rules applicable in the Court of Session, Scotland as to the joining of one or more defenders or third parties or conjoining actions were applicable to the Parties to the Dispute and the Related Dispute, and to the adjudicator.

6.2.3 **tie** shall procure that, as soon as practicable, the other party or parties to the Related Dispute shall give the Operator copies of the Related Contract, the Referral Notice in the Related Dispute and any other documentation provided to the adjudicator by any party to the Related Dispute.

6.3 In the event that a Dispute has already been referred to the decision of an adjudicator, and **tie** is of the opinion that a Related Dispute is to be (but has not yet been) referred to adjudication, **tie** may refer the Related Dispute to the adjudicator appointed under this Schedule 7 to decide upon the Dispute, and:

6.3.1 the Adjudicator shall, if practicable, hear the Related Dispute at the same time as the Dispute and shall request such extension of time for producing his decision or award as he may require in order to reach a decision in respect of

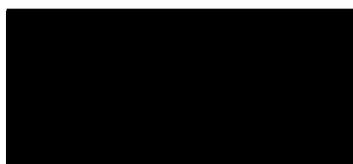
each of the Dispute and the Related Dispute at the same time. The Parties shall agree to such request for an extension of time, except in the event that the Dispute or the Related Dispute relates to "construction operations" within the meaning ascribed to that term by the Housing Grants, Construction and Regeneration Act 1996 (if applicable) (unless otherwise agreed by the Parties, all parties to the Related Dispute and the Adjudicator).

6.3.2 except in the event that the Dispute or the Related Dispute relates to "construction operations" within the meaning ascribed to that term by the Housing Grants, Construction and Regeneration Act 1996 (if applicable) (unless otherwise agreed by the Parties, all parties to the Related Dispute and the Adjudicator), the adjudicator shall have power (if so requested by tie) to make his decisions or awards in the Dispute and the Related Dispute in such a manner as if the rules applicable in the Court of Session, Scotland as to the joining of one or more defenders or third parties or conjoining actions were applicable to the Parties to the Dispute and the Related Dispute, and to the adjudicator.

6.3.3 as soon as practicable, tie shall give to the Operator copies of the Related Contract, the Referral Notice in the Related Dispute and any other documentation provided to the adjudicator by any party to the Related Dispute.



Director/Authorised Signatory
tie Limited



Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

This is Schedule 8 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 8

Project Programme

This is Schedule 9 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 198December 2007

SCHEDULE 9

Review Procedure

1. Introduction

- 1.1 The provisions of this Schedule 9 (*Review Procedure*) shall apply whenever any item, document or course of action is required to be reviewed, approved or otherwise processed in accordance with Schedule 9 (*Review Procedure*).
- 1.2 Each submission by the Operator to tie under the Review Procedure shall be accompanied by a copy of the proposed document (in appropriate agreed format) to be reviewed or a statement of the proposed course of action (the entire contents of a submission being referred to as a "**Submitted Item**"). In relation to each Submitted Item, as soon as reasonably possible, the tie Project Manager shall return one copy of the relevant Submitted Item to the Operator endorsed "no objection", "clarification required" or "objection" as appropriate.
- 1.3 If the tie Project Manager makes an objection to any Submitted Item he shall state the ground upon which such objection is based but, for the avoidance of doubt, the tie Project Manager shall be entitled to make comments on any Submitted Item on any grounds as he sees fit.
- 1.4 Without limitation to paragraph 1.3, the tie Project Manager may object to any proposed change to the Operating Method Statements (or any part of them) on the grounds that the performance of the Project Operations in accordance with the proposed revision or substitution would, in tie's opinion, be:
 - 1.4.1 materially inferior to the performance of the Project Operations in accordance with the Operating Method Statements prior to such proposed revision or substitution; or
 - 1.4.2 be materially less likely to achieve compliance with the requirements of the Operating Output Specification.

2. Further Information

The Operator shall submit any further or other information, data and documents that the tie Project Manager reasonably requires pursuant to paragraph 1.3 to act in accordance with this Schedule 9 (*Review Procedure*). If the Operator does not submit any such information, data and documents, the tie Project Manager shall be entitled to object to the Submitted Item:

- 2.1 on the basis of the information, data and documents which have been provided; or
- 2.2 on the grounds that insufficient information, data and documents have been provided to enable tie to act in accordance with this Schedule 9 (*Review Procedure*).

3. Effect of Review

- 3.1 Any Submitted Item which is returned by the tie Project Manager endorsed "no objection" shall be complied with and implemented by the Operator.
- 3.2 If the tie Project Manager returns the Submitted Item to the Operator endorsed "objection", the Operator shall comply with such Submitted Item after amendment in accordance with the objection.

4. Disclaimer

No review, objection, comment or silence by tie shall operate to (i) exclude or limit the Operator's obligations or liabilities under this Agreement (or tie's rights under this Agreement) or (ii) bind tie with any express or implied obligations, duties or liabilities with respect to the Submitted Item.

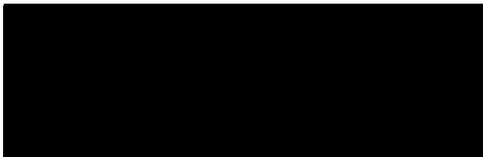
5. Documentation Management

- 5.1 The Operator shall issue four copies (in appropriate agreed format) of all Submitted Items to tie and compile and maintain a register of the date and contents of the submission of all Submitted Items.
- 5.2 The Operator shall compile and maintain a register of the date of receipt and content of all Submitted Items that are returned by the tie Project Manager.

6. Variations

- 6.1 No review, objection or comment or any failure to make objection or comment under this Schedule 9 (*Review Procedure*) shall constitute a tie Change.

- 6.2 If, having received comments from the **tie** Project Manager, the Operator considers that compliance with those comments would amount to a **tie** Change, the Operator shall, before complying with the comments, notify **tie** of the same and, if it is agreed by the Parties or determined pursuant to the Dispute Resolution Procedure that a Variation would arise if the comments were complied with, **tie** may, if it wishes, proceed with the matter in accordance with Clause 23 (*Performance and Financial Adjustments*) and Clause 24 (*tie Changes*) of the Operating Appendix.
- 6.3 Any failure by the Operator to notify **tie** that it considers compliance with any comments of the **tie** Project Manager would amount to a **tie** Change shall constitute an irrevocable acceptance by the Operator that any compliance with **tie**'s comments shall be without amendment to the Fixed Costs, the Target Costs for Project Phase C2, Target Operating Costs or Target Patronage and without any extension of time or other relief.



Director/Authorised Signatory
tie Limited



.....
Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

This is Schedule 10 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 10

Insurances

PART 1 - Required Insurances

1. **THIRD PARTY LIABILITY INSURANCE (INCLUDING MOTOR VEHICLE LIABILITY)**

Insured Parties: During Project Phases A and B, the Operator.

Coverage: During Project Phases A and B, the legal liability of the Operator for death, injury, illness, disease contracted by third party persons or loss of or damage to property arising out of or in connection with the Project Development Services in respect of each Phase.

Limit of Indemnity: Unlimited in respect of each occurrence and as to the number of occurrences in each 12 month period in respect of death or injury to persons on highway sections of the Project. For all other occurrences, a minimum of £5,000,000 any one occurrence during Project Phases A and B (unlimited as to number of occurrences in the Period of Insurance stated below) in respect of third liability and £50,000,000 any one occurrence and in the aggregate in any one 12 month period of insurance in respect of products liability.

Period of Insurance: From the Effective Date for twelve months and thereafter each further twelve month period until the end of Project Phase B.

Minimum Extensions: The insurance must include the following minimum extensions:

1. Worldwide jurisdiction.
2. Contractual liability.
3. Cross liabilities.
4. Costs and expenses in addition to limit of indemnity.
5. Interference, trespass, loss of amenities, nuisance and obstruction.
6. Liability in respect of any agreement with Network Rail with regard to operations on, over or near the existing rail network (terms of extension to be agreed with tie once the terms of any Network Rail Agreements are known and extension shall take effect if instructed as a tie Change)

7. Sudden and accidental pollution and contamination.
8. Contingent motor liability.
9. Business activities extended to include the provision and management of canteen, sports, social and welfare activities, sponsorships, medical, dental, nursing, fire, first-aid, ambulance and security services, work by an employee for any fellow employee, participation in exhibitions, ownership and maintenance of own premises or property.
10. Indemnity to principal
11. Health and Safety at Work Etc. Act 1974 – legal costs and expenses in defending a prosecution brought under sections 2-8 of the Act.
12. Consumer Protection Act 1987 – legal costs and expenses in defending a criminal prosecution brought under Part II of the Act.
13. Data Protection Act 1998 – compensation in respect of damage and distress under sections 22 and 23 of the Act and defence costs in relation to section 19 of the Act.
14. Conflict of Interest – where conflict between the Insured and an employee, separate representation to be arranged for each party.
15. Motor tool of trade risk.
16. Liability for damage to leasehold premises.
17. Waiver of subrogation rights against tie during Project Phases A and B.

Maximum Permitted Deductible: £25,000 each and every loss in respect of property damage claims
Nil excess for bodily injury claims.

2. EMPLOYERS LIABILITY INSURANCE

Insured Party: The Operator

Coverage: During Project Phases A, B, C and D, the legal liability of the Operator for death, injury, illness, disease contracted by employees of the Operator caused by or arising out of or in connection with the Project Development Services or the Project Operations in respect of each Phase.

Limit of Indemnity: Minimum limit of indemnity of £10,000,000 any one occurrence or series of occurrences arising from one original cause or event.

Period of Insurance: From the Effective Date for twelve months and thereafter each further twelve month period until the earlier of the Expiry Date or the Termination Date.

Extensions: The insurance must include the following minimum extensions:

1. Contractual liability.
2. Business activities extend to include the provision and management of canteen, sports, social and welfare activities, sponsorships, medical, dental, nursing, fire, first-aid, ambulance and security services, work by an employee for any fellow employee, participation in exhibitions, ownership and maintenance of own premises of property.
3. Indemnity to principal.
4. Health and Safety at Work Etc. Act 1974 – legal costs and expenses in defending a prosecution brought under sections 2-8 of the Act.
5. Consumer Protection Act 1987 – legal costs and expenses in defending a criminal prosecution brought under Part II of the Act.
6. Data Protection Act 1998 – compensation in respect of damage and distress under sections 22 and 23 of the Act and defence costs in relation to section 19 of the Act.
7. Conflict of Interest – where conflict between the Operator and an employee, separate representation to be arranged for each party.
8. Employees' business liability.
9. Unsatisfied court judgements.
10. Compensation for court attendance.
11. Contingent Liability arising out of the transfer of employees under TUPE.
12. Waiver of subrogation rights against tie
13. Definition of employee to include as a minimum persons under a contract of service or apprenticeship, labour only subcontractors, self-employed persons, labour masters or persons supplied by them, operators and drivers of hired in plant
14. Inclusion of directors, officers, partners and employees as Insured Parties

Maximum Permitted Deductible: Nil or such other deductible as may be agreed by tie

3. CONTRACTOR'S PLANT

Insured Party: The Operator

Coverage: "All risks " of loss or destruction of or damage to the Property Insured by any cause not excluded
Property Insured
Constructional plant, tools and equipment of any kind including site huts, temporary buildings and their contents the property of any Insured Party or for which they are responsible

Limit of Liability The value of the plant, tools and equipment

Period of Insurance: From the commencement of Project Phase C for 12 months and thereafter each further twelve month period until expiry or earlier date of termination of this Agreement.

Minimum Extensions The insurance must include the following minimum extensions:
Property in transit other than mechanically-propelled plant in transit under its own power
Recovery of immobilised plant
Negligent breakdown of hired-in plant
Continuing hire charges

Exclusions Any exclusion of breakdown or explosion of own plant must not apply to loss or damage to any other property

Maximum Permitted Deductible: GBP 25,000

4. COMPREHENSIVE MOTOR INSURANCE

Insured Party: The Operator and tie

Coverage: Comprehensive in respect of loss or damage to Own Vehicles.
Legal Liability for death, injury, illness or disease or loss of or damage to Third Party Property.

Limit of Liability Own Damage - Market Value/Cost of Repairs
Third Party: Bodily Injury - Unlimited.
Property Damage by Cars £20,000,000 any one occurrence
Property Damage by Commercial Vehicles
£5,000,000 any one occurrence
unlimited during the Period of Insurance

Period of Insurance: From the commencement of Project Phase C for 12 months and thereafter each further twelve month period until expiry or earlier date of termination of this Agreement.

Minimum Extensions The insurance must include the following minimum extensions:
Contingent motor liability
Passenger indemnity and negligence of passengers

Occasional business use by employees
 Unauthorised movement
 Indemnity to principals
 Unauthorised use by employees
 Road risk of plant
Maximum Permitted GBP 25,000 in respect of own damage
Deductible: GBP NIL in respect of third party liability

5. DIRECTORS' & OFFICERS' LIABILITY

Insured Party: The Operator (Insured Organisation)
 The Directors and Officers of The Operator (insured Persons)

Coverage: A – Directors' & Officers' Liability
 To pay on behalf of each Insured Person the loss to the extent they are not indemnified by the Insured Organisation
 B – Corporate Reimbursement
 To pay on behalf of the Insured Organisation the loss to the extent the Insured Organisation has indemnified the Insured Person

Limit of Liability GBP 10,000,000 any once occurrence and in the aggregate during any twelve month Period of Insurance.

Period of Insurance: From the Effective Date for twelve months and thereafter each further twelve month period until expiry or earlier date of termination of this Agreement.

Minimum Extensions The insurance must include the following minimum extensions:
 Defence costs in respect of pollution and contamination
 Outside directorships
 Provision for run-off cover and extended claim reporting period on expiry
 Bilateral discovery period

Exclusions No insured versus insured exclusion in respect of claims outside the United States of America
 Bodily injury and property damage – “for” language to be used

Maximum Permitted A - GBP NIL in respect of Directors' & Officers' liability
Deductible: B - GBP 25,000 in respect of Corporate Reimbursement

6. CRIME

Insured Party: The Operator and any subcontractor

Coverage: To pay financial loss suffered by the Insured Parties first discovered during the Period of Insurance and resulting from loss or theft of money, property or securities (owned by the Insured Parties or for which they are responsible) by any Employee or securities fraud, computer fraud or funds transfer fraud committed by any person.
 Cover is to include loss of money, property or securities committed by any person in respect of the following situations –

- robbery
- burglary
- money, property or securities in transit or whilst away from any premises or site of the Insured Parties

Limit of Liability TO BE AGREED

Period of Insurance: From the Effective Date for twelve months and thereafter each further twelve month period until expiry or earlier date of termination of this Agreement.

Minimum Extensions The insurance must include the following minimum extensions:

Investigation expenses

Claims mitigation costs

Defence costs

Computer clean-up costs

Electronic funds transfer

Provision for discovery period following expiry

PART 2 - Form of Brokers Letter of Undertaking

To: Transport Initiatives Edinburgh Ltd ("tie")

Dear Sirs

We confirm in our capacity as Insurance Brokers that the Required Insurances specified in Clause 27 (*Insurances*) and Schedule 10 (*Insurances*) of the Development Partnering and Operating Franchise Agreement (the "DPOF Agreement") dated ◆ between (◆) (the "Operator") and tie as defined therein are, as at the date hereof, in effect in respect of the risks set out in the attached cover notes.

We have arranged the Required Insurances on the basis of the information and instructions given by the Operator. We have not made any particular or special enquiries regarding the Required Insurances beyond those that we would normally make in the ordinary course of arranging the insurances on behalf of our insurance broking clients.

The confirmations set out in this letter are given by reference to our state of knowledge at the date hereof.

Pursuant to instructions received from the Operator and in consideration of the Operator approving, and tie confirming its approval of our appointment or continuing appointment as brokers to the Operator in connection with the Required Insurances covered by this letter, we hereby undertake in respect of the interests of the Operator and tie in the Required Insurances referred to in the attached cover notes:

1. to use reasonable endeavours to have endorsed on each and every policy evidencing the Required Insurances when the same is issued, endorsements substantially in the form set out in Clause 27 (*Insurances*) of the Agreement;
2. to ensure that all proceeds for the Required Insurances received by us from the insurers shall be applied in accordance with Clause 27.11 of the DPOF Agreement.
3. to advise tie :
 - 3.1 promptly after receiving notice of any insurer's cancellation or suspension of any of the Required Insurances or receiving notice of the intended cancellation or suspension of any of the Required Insurances;

- 3.2 promptly upon our receipt from the Operator of any notice of any changes proposed to be made to the Required Insurances which, if effected, would result in a material reduction in limits or coverage (including in respect of extensions of cover) or in an increase in deductibles, exclusions or exceptions;
- 3.3 of any default in the payment of any premium for any of the Required Insurances;
- 3.4 at least 20 days prior to the expiry of any of the Required Insurances if we have not received written renewal instructions from the Operator or if we receive written instructions to renew, to advise **tie** of the details thereof; and
- 3.5 on receipt of notice of any act or omission of the Operator or any Operator Party which will invalidate or render unenforceable in whole or in part, any of the Required Insurances;
4. no later than 7 days (in respect of certificates) and as soon as reasonably practicable in respect of policies and other documents, to supply you and/or your insurance advisors (or your or their authorised representative) copies of all placing slips, certificates, cover notes, renewal receipts and confirmations of renewal and payment of premiums and all policy documents in respect of the Required Insurances, or upon request, to make available to you the originals of any or all such documents held by us;
5. to disclose to the insurers any fact, change of circumstance or occurrence is material to the risks insured against under the Required Insurances;
6. to treat as confidential all information in relation to the Required Insurances supplied to us by the Operator or any Operator Party or **tie** and not to disclose, without the written consent of **tie**, such information to any third party other than the insurers under the Required Insurances, unless required to do so by law or any regulatory authority; and
7. to notify **tie** at least 30 days prior to our ceasing to act as brokers to the Operator, unless impracticable because of circumstances beyond our control, in which case we shall notify **tie** as soon as reasonably practicable upon becoming aware that we shall cease, or have ceased, so to act.

Where insurers wish any of the Required Insurances to be cancelled for reasons of non-payment of premium, we will request those insurers to give you a reasonable opportunity of paying such amounts outstanding before issuing notice of cancellation on behalf of such insurers.

PART 3 - OCIP

[PLEASE NOTE THESE TERMS ARE DRAFT INDICATION OF THE SCOPE OF COVER AND ANY ALTERATION IN THE SCOPE OF COVER INDICATED AND/OR COMPLETION OF MISSING INFORMATION/MATTERS STATED TO BE AGREED/CLARIFIED/UNDER REVIEW SHALL BE A TIE CHANGE PURSUANT TO CLAUSE 27]

CONSTRUCTION PHASE

CONSTRUCTION OCIP SUMMARY – 7th AUGUST 2007

INSURED: Sections 1 – CAR (Lot One) and 2 – TPL (Lot Three)

- (i) tie Limited as Principal
- (ii) The Main Contractors as declared under the MUDFA, Infraco and Tramco contracts (Tram Supply and Tram Maintenance)
- (iii) Trade Contractors, Co-contractors and/or Sub-Contractors of any tier and any other Contractors including Advance Works Contractors and the maintenance contractors
- (iv) Architects and/or Engineers and/or Suppliers and/or Consultants not forming part of (ii) or (iii) above as regards their on-site activities only
- (v) Local authorities and utility providers including private utility owners as required
- (vi) Transdev Edinburgh Tram Limited
- (vii) Transport Edinburgh Limited (TEL)
- (viii) Any other party having an insurable interest (and not mentioned above) to the extent that the Insured (i) is required by contract or agreement to provide insurance to such parties
- (ix) The Scottish Ministers/Scottish Executive, Transport Scotland and City of Edinburgh Council

Section 3 (Lot Two) - DSU

Insured (i) and (vii) above.

each for their respective rights and interests.

PERIOD: From: 23rd July 2007
including all testing, commissioning and trial running periods

To: 31st July 2010

plus the balance of the maintenance/defects liability period thereafter

All dates inclusive at Local Standard Time.

INTEREST:

All work including design, engineering, procurement, demolition, fabrication, construction, erection, installation, testing, commissioning (including trial running of trams) and defects maintenance in connection with the contract or work forming the Edinburgh Tram Network including all ancillary and associated works and activities related therewith of whatsoever nature.

Section 1 – Construction All Risks

All contract works whether permanent or temporary and all installations and preparatory and auxiliary and ancillary works and all other property or equipment including the plant, the materials, temporary buildings including those on loan, camps and contents, and all other goods, all facilities (including drawings, designs, specifications and plans to be provided and work to be done by the Contractor relating to the service, design, supply, erection, installation, testing, setting to work and commissioning of the Project together with all other property or goods the property of the Insured or for which they may be responsible for incorporation or use in connection with the Project Plant, equipment, temporary buildings, camps and contents owned, leased or hired by the contractors (insured sub (ii), (iii) and (iv) are excluded

See Conditions for cover in respect of drawings, designs, specifications and plans – covered under “plans and documents”

Section 2 – Third Party Liability

To indemnify the Insured against all sums (including claimants’ costs and expenses) arising out of:

- (a) death or bodily injury to or illness or disease or psychiatric damage suffered by any person, invasion of privacy, wrongful arrest, libel and slander
- (b) loss or damage to physical property;
- (c) obstruction, loss of amenities, nuisance, trespass, stoppage of traffic, infringement of any easement or right of air, light, water or way or any like cause

happening or consequent upon a cause occurring during the Period of Insurance and arising out of or in connection with the contract or work.

Section 3 – Delayed Start Up

To indemnify the Insured (i) and (vii) against loss of anticipated gross revenue/increased costs or working following an indemnifiable loss under Section 1

**SUMS
INSURED/LIMITS
OF INDEMNITY:**

Section 1 – Construction All Risks

Estimated Contract Value £341.9M for 1a Infraco and MUDFA and Tramco (split commercially sensitive during current procurements). Cover for MUDFA applies in respect 1a and 1b areas).

Section 2 – Third Party Liability

£100,000,000 any one occurrence
£100,000,000 any one occurrence and in the aggregate in respect of products liability
£100,000,000 any one occurrence and in the aggregate in respect of pollution or contamination
Unlimited liability for bodily injury as required under Road Traffic Acts

Section 3 – Delayed Start Up

To cover loss of revenue resulting from delay in commencement of passenger operations caused by insured damage to the Property Insured under Section 1
Maximum indemnity period 24 months

EXCESS:

Section 1 Construction All Risks

£20,000 each and every occurrence and/or series of occurrences increasing to £40,000 each and every occurrence in respect of storm, tempest, flood, earthquake, water damage, subsidence, collapse, landslip, frost and claims arising out of maintenance or testing and commissioning activities
£250,000 each and every occurrence in respect of LEG 3 (design) claims

Section 2 Third Party Liability

£10,000 each and every occurrence and/or series of occurrences in respect of property damage and bodily injury

Section 3 Delayed Start Up

60 days aggregate time excess

**TERRITORIAL
LIMITS:**

Anywhere in the European Union (including inland transits and transits by ro/ro ferries and off-site storage) but worldwide excluding the USA/Canada in respect of Section 2

CONDITIONS:**Section 1 Construction All Risks**

- Full (Guarantee) maintenance for first 12 months, followed by 12 months extended maintenance
- Defective design, materials and/or workmanship LEG 3
- Professional fees clause
- Debris removal clause
- 72 hour clause – storm, tempest, flood, earthquake, riot, civil commotion
- Principal supplied materials clause
- Automatic increase clause (25%)
- Expediting expenses
- Public, Local Authorities and European Union reinstatement clause
- Preventive measures clause/minimisation of loss
- Waiver of subrogation
- Munitions clause
- Terrorism to full value – via Pool Re
- Plans and documents including computer records
- Marine 50/50 clause
- Payments on account
- Temporary repairs
- Automatic reinstatement of sum insured at additional premium to be agreed but not exceeding pro-rata and nil for losses not exceeding £1,000,000
- Non-vitiating/non-invalidation and severability of interest clauses
- Off-site storage
- Transit by road, rail or sea (roll on/roll off ferries only) including during loading/unloading, transshipments and storage en route
- Property at specified suppliers' premises – damage by fire, lightning, explosion or aircraft only covered
- Undamaged foundations clause
- Testing and Commissioning of the Works
- Testing, commissioning and trial running of trams for passenger service
- Recovery of immobilised plant
- Negligent breakdown of hired-in plant
- Continuing hire charges
- Existing property and principal's property as required
- Buildings due for demolition

Section 2 Third Party Liability

- Contractual liability
- Claimants' and defence costs and expenses in addition to the Limit of Indemnity
- Cross liabilities clause
- Indemnity to Principals
- Unauthorised movement of vehicles
- Inclusion of directors, officers and employees as insured parties
- Waiver of subrogation
- Non-invalidation/non-vitiation clauses
- Testing and Commissioning of the Works
- Testing and trial running for passenger service
- Motor Contingent Liability – limited to Great Britain, Northern Ireland, the Channel Islands, the Isle of Man
- Defective Premises Act Clause.
- Data Protection Act Defence Costs.
- Compensation for Court Attendance
- Sudden and Accidental Pollution Clause.
- Health and Safety at Work
- Munitions of War Clause.
- Consumer Protection Act
- Food Safety Act

Liability in respect of any agreement with Network Rail with regard to operations on, over or near the existing rail network (terms of extension to be agreed with tie once the terms of any Network Rail Agreements are known (currently limit of £155 million) and extension shall take effect if instructed as a tie Change)

Section 3 Delayed Start Up

- premises of specified suppliers where materials/plant/equipment for incorporation into the works is in the process of manufacture or being stored - damage by fire, lightning, explosion or aircraft only covered
- prevention of access
- damage to the supply of water, gas, electricity or telecommunications systems to any site
- delay caused by damage to the Insured Property during transit by road, rail or sea(roll on/roll off ferries only) including during loading/unloading, transhipments and storage en route
- terrorism to full value – via Pool Re
- non-vitiation/non-invalidation and severability of interest clauses
- off-site storage
- waiver of subrogation rights between insured parties
- Including consequential losses arising from loss or damage to Constructional Plant and Equipment
- Professional Fees

**PRINCIPAL
EXCLUSIONS:**

Section 1 – Construction All Risks

- Consequential loss
- Wear and tear and corrosion but not consequent damage
- Inventory losses
- Claims deductibles
- Acts of fraud or theft committed by employees
- Building contractors and sub contractors plants, tools and equipment
- Liquidated damages
- War, invasion, acts of foreign enemies, hostilities, civil war, rebellion, revolution, insurrection or military or usurped power
- Nuclear risks
- Sonic bangs
- Design Exclusion LEG 3
- aircraft or marine vessels
- vehicles licensed for road use other than tool of trade risk
- money
- tyres by the application of brakes, punctures, cuts or bursts
- suspension of work in excess of three months
- normal upkeep or normal making good
- electronic data exclusion – cover limited to physical damage caused by fire, explosion, collision, derailment
- piling exclusions and restrictions
- pre-existing defects in respect of existing structures

Section 2 – Third Party Liability

- Employers' Liability
- Liability arising out of the use of, ownership or possession of any motor vehicle in circumstances where the Road Traffic Acts require compulsory insurance or security. The exclusion does not apply to trams whilst undergoing testing, commissioning and trial running
- Liability arising out of the use of, ownership or possession of any aircraft or waterborne craft
- Asbestos exclusion
- Liquidated damages
- Fines, penalties, punitive or exemplary damages
- War, invasion, acts of foreign enemies, hostilities (whether declared or not), civil war, rebellion, revolution, insurrection of military or usurped power.
- Nuclear risks
- Seepage, pollution or contamination unless caused by sudden, unintended and unexpected happening.
- Professional indemnity, but not excluding personal or bodily injury or damage to tangible property.
- Liability arising out of performance warranties
- Property belonging to the Insured or in their care, custody or control
- Repairing or making good faulty, defective or incorrect workmanship, design or specification, materials, goods or other property supplied or installed or erected
- Excluding use of explosives or extent of cover to be agreed
- Product recall, product guarantee
- Terrorism

**PRINCIPAL
EXCLUSIONS:**

Section 3 – Delay in Start Up

- Public authority delay
- Rectification of defects
- Non-availability of funds
- Modifications
- Costs incurred to reduce delay during Claims Deductible period
- suspension, lapse or cancellation of licence after commencement of operations

OPERATIONAL PHASE

INSURED:

Sections 1 (Lots Four and Five) and 2 (Lot Six)

- i. tie Limited
- ii. The INFRACO Maintainer and TRAMCO Maintainer
- iii. The Co-contractors and/or Sub-Contractors of any tier including the maintenance contractors
- iv. Transdev Edinburgh Tram Limited as operator
- v. Local authorities and utility providers as required
- vi. Transport Edinburgh Limited (TEL)
- vii. Any other party having an insurable interest (and not mentioned above) to the extent that the Insured (i) is required by contract or agreement to provide insurance to such parties
- viii. The Scottish Ministers/Scottish Executive, Transport Scotland and City of Edinburgh Council
- ix. Network Rail

each for their respective rights and interests.

PERIOD:

From a date to be agreed to follow expiry of Construction Phase

Extensions in Period automatically covered at additional premium to be agreed but not exceeding pro-rata

INTEREST:

The operation and maintenance of the ETN including all ancillary and associated works and activities related therewith of whatsoever nature.

Section 1 – Material Damage & Business Interruption

All risks of loss or destruction of or damage to the Insured Property by any cause not excluded including resulting Business Interruption

Section 2 – Third Party Liability

To indemnify the Insured against all sums (including claimants' costs and expenses) arising out of:

- (a) death or bodily injury to or illness or disease or psychiatric damage suffered by any person;
- (b) loss or damage to property;
- (c) obstruction, interference, loss of amenities, negligence, nuisance, trespass, stoppage of traffic, infringement of any easement or right of air, light, water or way or any like cause

happening or consequent upon a cause occurring during the Period of Insurance and arising out of or in connection with the Project

**SUMS
INSURED/LIMITS OF
INDEMNITY:**

Section 1 – Material Damage/Business Interruption

Material Damage

Reinstatement value of the Property Insured

Business Interruption

The basis of cover is under review and will be clarified during the negotiation process. Alternatives under consideration are potential lost revenue to operator or contractual payments for which the principal is responsible due to delay”

Increased costs of working plus additional increased costs of working

Maximum indemnity period - 12 months

Section 2 – Third Party Liability

£100,000,000 any one occurrence

£100,000,000 any one occurrence and in the aggregate in respect of products liability

£100,000,000 any one occurrence and in the aggregate in respect of pollution or contamination

Unlimited liability for bodily injury as required under the Road Traffic Acts

EXCESS:

Section 1 Material Damage & Business Interruption

Material Damage

£50,000 each and every occurrence and/or series of occurrences increasing to

£250,000 each and every occurrence in respect of overhead power cables and associated supporting structures

£500,000 each and every occurrence in respect of tram breakdown and track subsidence cover

Business Interruption

14 days or £50,000 each and every occurrence whichever is the greater

Section 2 Third Party Liability

£10,000 each and every occurrence and/or series of occurrences in respect of property damage

**TERRITORIAL
LIMITS:**

Anywhere in the United Kingdom (including inland transits and off-site storage) but worldwide in respect of Section 2

CONDITIONS:

Section 1 Material Damage/Business Interruption

- professional fees including surveyors', consulting engineers' and legal fees
- removal of debris
- temporary repairs and expediting expenses
- automatic reinstatement of sum insured

- local authority clause including European Union, railway inspectorate or Health and Safety Executive
- off-site storage
- property at supplier's premises
- waiver of subrogation between insured parties
- non-invalidation and non-vitiation
- severability of interest
- tram breakdown and track subsidence -- limit £2M in the aggregate during the Period of Insurance
- track subsidence
- driver/operator error
- 72 hour clause
- reinstatement basis of settlement
- suppliers extension
- utilities extension
- denial of access
- notifiable diseases, food and drink poisoning, defective sanitation
- property hired in
- temporary loan
- capital additions

- trace and access
- metered water and fire extinguishing media
- replacement locks
- machinery breakdown
- damage to landscaped area by emergency services
- clearance of drains
- temporary removal
- plans and documents
- minimisation of loss
- escalation
- buildings for demolition
- computer data
- reinstatement basis of settlement
- BI suppliers and utilities
- alternative accommodation

Section 2 Third Party Liability

- Consumer Protection Act or Health and Safety at Work Act
- Prosecution Defence Costs
- Food Safety Act
- Defective Premises Act
- Data Protection Act
- Motor Contingent Liability
- Movement of Obstructing Vehicles
- Compensation for Court Attendance
- Employees' and Visitors' Effects
- Indemnity to Principal

- Professional Visits Worldwide
- Leased and Rented Premises
- Servicing of Vehicles
- Libel and Slander

- waiver of subrogation between insured parties
- contractual liability clause

- non invalidation-non-vitiating clause
- severability of interests clause
- munitions of war
- Liability in respect of any agreement with Network Rail with regard to operations on, over or near the existing rail network (terms of extension to be agreed with tie once the terms of any Network Rail Agreements are known (currently limit of £155 million) and extension shall take effect if instructed as a tie Change)

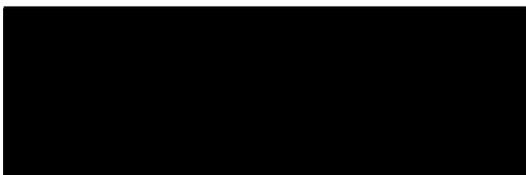
PRINCIPAL EXCLUSIONS:

Section 1 – Material Damage & Business Interruption

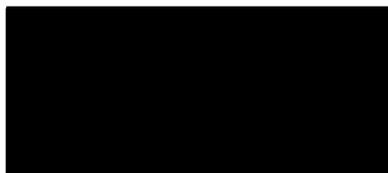
- Fines or penalties
- Motor vehicles (other than trams), water craft
- Wear and tear and corrosion but not resulting damage
- Inventory losses
- Deductible
- Change in water table, temperature
- Collapse or cracking of buildings
- Date recognition
- Fraud or theft by employees
- Normal bedding down of structures
- Machinery and computer breakdown
- Track subsidence, heave, sinkage or misalignment unless caused by fire, lightning, earthquake, storm, tempest, explosion and water damage
- Damage to excavations
- War, invasion, acts of foreign enemies, hostilities (whether declared or not), civil war, rebellion, revolution, insurrection of military or usurped power.
- Nuclear risks
- Seepage, pollution or contamination unless caused by defined perils.
- Sonic boom

Section 2 – Third Party Liability

- Employers' Liability
- Liability arising out of the use of, ownership or possession of any motor vehicle other than trams or plant as a tool of trade
- Liability arising out of the use of, ownership or possession of any aircraft or waterborne craft
- Asbestos exclusion
- Liquidated damages
- Fines, penalties, punitive or exemplary damages
- War, invasion, acts of foreign enemies, hostilities (whether declared or not), civil war, rebellion, revolution, insurrection of military or usurped power.
- Nuclear risks
- Seepage, pollution or contamination unless caused by sudden, unintended and unexpected happening.
- Professional indemnity, but not excluding personal or bodily injury or damage to tangible property.
- The cost of making good loss of or damage to property
- Medical malpractice



Director/Authorised Signatory
tie Limited



Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

This is Schedule 11 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 11

Schedule Not Used



Director/Authorised Signatory
tie Limited

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Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

This is Schedule 12 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 12

SCHEDULE NOT USED



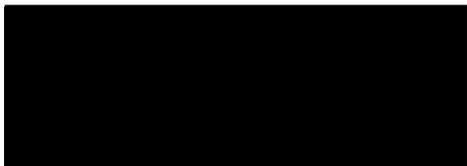
**Director/Authorised Signatory
tie Limited**

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**Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited**

This is Schedule 13 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 13

SCHEDULE NOT USED



**Director/Authorised Signatory
tie Limited**

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**Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited**

This is Schedule 14 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 14

Performance Bond

(1) ♦ [SURETY]

- in favour of -

(2) tie

PERFORMANCE BOND

PERFORMANCE BOND

BETWEEN

- (1) ◆ , a company incorporated in ◆ under company number [◆] whose registered office is at ◆ ("the Surety"); and
- (2) **TIE LIMITED**, a company incorporated in Scotland under number SC230949 and having its registered office at City Chambers, High Street, Edinburgh EH1 1YJ ("tie")

WHEREAS

- A. tie entered into a Development Partnering and Operating Franchise Agreement (hereinafter referred to as the "DPOF Agreement") dated 14 May 2004 with Transdev Edinburgh Tram Limited (the "Operator") (as amended by the Minute of Variation dated [◆] between tie and the Operator to give project development assistance and services for commissioning and operation of a light rapid transit system in Edinburgh known as the Edinburgh Tram Network.
- B. Clause 8 (*Operator's Performance Security*) of the DPOF Agreement obliges the Operator to deliver to tie an unconditional irrevocable Performance Bond on the conditions and in the form set out in Schedule 14 (*Performance Bond*) to the DPOF Agreement, issued by a surety acceptable to tie and callable subject only to written notification by tie.
- C. This Performance Bond is conditional on the issue of the Mobilisation Certificate by tie to the Operator under the terms of the DPOF Agreement.
- D. In consideration of your accepting our obligations set out below in discharge of the Operator's undertaking to provide a performance bond under Clause 8 (*Operator's Performance Security*) of the DPOF Agreement, we, [*Name and address of Surety to be inserted*] hereby irrevocably and unconditionally agree and undertake to pay to you a sum not exceeding TEN MILLION POUNDS (£10,000,000) (the "**Bonded Amount**") and accordingly covenant with you and agree as follows:
1. Upon our receipt of a demand or demands ("**Demand Notice**") from you certifying that you have issued a notice to the Operator stating that an Operator Default has occurred, and without being entitled or obliged to make any enquiry or proof or contestation or further conditions on you (or the Operator) and without the need for you to take any legal action against or to obtain the consent of the Operator and without any right of set-off, abatement or counterclaim, we

shall forthwith pay to you the amount or amounts specified in such Demand Notice(s) in immediately available funds by electronic transfer to the account nominated in the Demand Notice, not exceeding in aggregate the Bonded Amount; it being confirmed that you may make as many separate demands hereunder as you think fit. You shall not be obliged to exercise any other right or remedy you may have before making a demand under this Performance Bond.

2. A Demand Notice received from you in accordance with paragraph 1 above and 3 below shall be conclusive evidence of our liability to pay to you and of the amount of the sum or sums which we are liable to pay. Our obligation to make payment under this Performance Bond shall be a primary, independent and absolute obligation and we shall not be entitled to delay or withhold payment for any reason. Our obligation hereunder shall not be affected by any act, omission, matter or thing which, but for this provision, might operate to release or otherwise exonerate us from the obligations hereunder in whole or in part, including without limitation and whether or not known to us or to you:

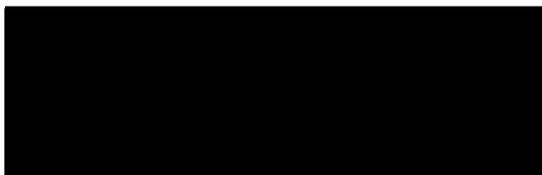
- 2.1 any time or waiver granted to you or to the Operator;
- 2.2 the taking, variation, compromise, renewal or release of or the refusal or neglect to perfect or to enforce any rights, remedies or securities against you or the Operator;
- 2.3 any legal limitation, disability or incapacity relating to you or the Operator;
- 2.4 any variation of or amendment to the DPOF Agreement (or related documentation) or the works or services to be performed thereunder or any other document or security so that references to the DPOF Agreement in this Performance Bond shall include each such variation and amendment;
- 2.5 any unenforceability, invalidity or frustration of any rights or obligations of you or the Operator under the DPOF Agreement or any other document or security; and
- 2.6 any other fact, circumstance, provision of statute or rule of law which might, were our liability to be secondary rather than primary, entitle us to be released or discharged in whole or in part from our undertaking.

3. We shall only be entitled to issue a Demand Notice to make a claim under this Performance Bond if it has:

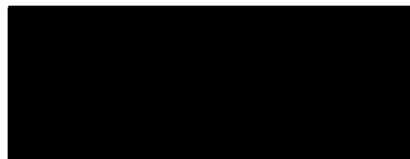
- 3.1 provided the Surety in good faith with a written statement (the "Prior Written Notice") which identifies the Operator's default; and
 - 3.2 gives the Operator fifteen Business Days' (following receipt by the Operator of a copy of the Prior Written Notice) to rectify its performance; and
 - 3.3 the Operator has failed to rectify its performance.
3. Until such time as **tie** has recovered all amounts due to it under or in connection with the DPOF Agreement, we shall not, without the prior written consent of **tie**, in respect of any payment made or liability under this Performance Bond, claim, rank or vote as a creditor in the liquidation of the Operator in competition with **tie**, or enforce any security over the assets of the Operator in respect of any such payment or liability in competition with **tie**, but this Clause 3 shall not limit or restrict the exercise or enforcement by us of our rights against any other person after payment in full of the Bonded Amount.
4. We shall hold in trust any sums recovered by us contrary to the provisions of Clause 3:
 - 4.1 to pay to **tie** in full the unrecovered balance of any damages or other sums due from the Operator to **tie** under or in connection with the DPOF Agreement, to the extent set out in Clause 3; and
 - 4.2 subject thereto, for our benefit.
5. **tie** shall be entitled to enforce the provisions of Clauses 3 and 4 only so far as required to keep itself or to put itself in the position it would occupy if we had no rights of recourse against the Operator or its assets in respect of any payment made or liability arising under this Performance Bond, but no further; and any consent required of **tie** under Clause 3 above shall not be refused or delayed unreasonably.
6. Our liability under this Performance Bond shall not be affected or reduced by the insolvency of the Operator or its liquidation, receivership or other like temporary or permanent status.
7. **tie** shall be at liberty to compromise, release, waive or neglect any security as they see fit, without impairment of their rights under this Performance Bond.
8. This Performance Bond shall cease to have effect 90 days after the earlier of the Expiry Date or the Termination Date of the DPOF Agreement, save in connection with any Demand Notice issued to us in writing prior to the expiry of the said period of 90 days.
9. **tie** shall be entitled to assign this Performance Bond without our consent.

10. Any notice to be served under this Performance Bond must be in writing and must be delivered by hand or by registered post or recorded delivery at [*enter branch and address*]. Service shall take effect, if given by hand, on the date of delivery. If given by post, it shall take effect two days after posting, excluding Saturdays, Sundays and statutory holidays.
11. This Performance Bond shall be governed by and construed in accordance with the Laws of Scotland and we hereby agree to submit to the exclusive jurisdiction of the Court of Session over any claim arising out of this Performance Bond.
12. A person who is not a party to this Performance Bond shall have no right to enforce any of the terms of this Performance Bond.
13. In this Performance Bond:
 - 13.1 the words and expressions have the same meanings as in the DPOF Agreement and we shall be deemed to have full knowledge of the terms and conditions of the DPOF Agreement;
 - 13.2 "person" includes any firm and any entity having legal capacity; and
 - 13.3 the definitions given in the recitals apply to the rest of this Performance Bond:

IN WITNESS WHEREOF



Director/Authorised Signatory
tie Limited



Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

This is Schedule 15 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 15

Panels for the Dispute Resolution Procedure

**ENGINEERING /
OPERATIONAL**

Alan Wilson

DERBYSHIRE

Peter Chapman

OXSHOTT
SURREY

Tony Canham

Thorpe St Andrew
NORWICH

Guy Cottam

BATH

FINANCIAL

Nigel Lowe

Nigel Lowe Consulting Limited
27 Old Gloucester Street
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WC1N 3XX

John Hunter

Hunter Consulting
Commercial Centre
Stirling Enterprise Park
STIRLING
FK7 7BF

Bryan Porter

GLASGOW

Eric Mouzer

Edgebaston
BIRMINGHAM

LEGAL

Gordon Reid, QC

FIFE

Robert Howie, QC

EDINBURGH

Gordon Coutts, QC

EDINBURGH

**Lord Dervaird (Prof. John
Murray QC)**

EDINBURGH

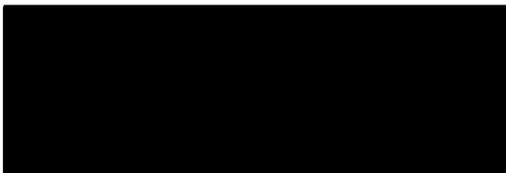
Director/Authorised Signatory
tie Limited

Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

This is Schedule 16 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 16

SCHEDULE NOT USED



Director/Authorised Signatory
tie Limited

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Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

This is Schedule 17 referred to in the foregoing Development Partnering and Operating Franchise Agreement between the Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 17

Setting of Fixed Costs

Part A - Setting of Category Three Fixed Costs during Project Phase C1 and setting of the salaries of drivers at reset

In setting the Category Three Fixed Costs in respect of drivers' salaries to an external market value and resetting drivers' salaries pursuant to Clause 21 (*Reset of the Fixed Costs, Target Operating Costs and the Target Patronage*) of the Operating Appendix. to an external market value, the salaries of the following staff will be pegged to that of the drivers' salary, in the same ratios as in the Operator Financial Model. For ease of reference these ratios are shown below:

Role	Salary Ratio
Duty Managers	141.2%
Operations Supervisor	105.9%
Drivers	100.0%
Customer Service	100.0%
Temporary Customer Service	95.0%
Operations Assistant	82.4%
Inspectors	82.4%

The total drivers' cost is obtained by multiplying the number of drivers by the individual driver's rate.

The salary figures in the Operator Financial Model are derived from a predicted salary plus:

- 10% for overtime and bonus, notionally 5% for each;
- 10.8% for national insurance; and
- 6% stakeholder Pension in respect of a non-contributory employee pension, assumes 100% take up of pension rights.

The Operator confirms that the number of drivers can be regarded as a fixed cost affected only by changes in service definition as defined in the paper "Tram Drivers 20Feb04".

The individual driver's rate as quoted in the Operator's bid will be set and reset using the process set out below.

Such a review is necessary to ensure that drivers' rates correctly reflect the contemporary labour market in Edinburgh so that sufficient staff are recruited for the start of passenger service.

The drivers' target salary will be set using the following process.. It will take place during Project Phase C1, and will be completed three and one half Reporting Periods before the start of Project Phase C2, when the first member of staff whose target salary will be set by this process starts work.

This process shall be conducted by tie and the Operator, taking into consideration the following elements:

1. the unemployment rate in Edinburgh
2. bus driver rates from local companies such as Lothian Bus and First Edinburgh.
3. Rates of similar jobs (e.g. delivery/distribution services) in Edinburgh

When considering the rates, this review will take into account the terms (hours, benefits, pension etc.) and working conditions attached to the staff positions.

This process shall then be repeated at each three yearly reset pursuant to Clause 21 (*Reset of the Fixed Costs, Target Operating Costs and the Target Patronage*) of the Operating Appendix. For reference purposes, the following data may be referred to during the process:

Lothian bus drivers' rate as from 28/3/04, £330.74 per week.

First rate, £7.50 per hour.

Unemployment, May 2003, an extract from

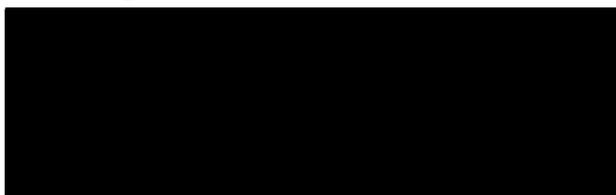
<http://www.parliament.uk/commons/lib/research/rp2003/rp03-055.pdf> on 29 March 2004:

Parliamentary Constituency	Party	Claimants			Rate		
		Male	Female	All	Male	Female	All
Edinburgh Central	LAB	1,117	339	1,456	4.1%	1.5%	3.0%
Edinburgh East & Musselburgh	LAB	953	251	1,204	4.3%	1.4%	3.0%
Edinburgh North & Leith	LAB	1,357	384	1,741	6.0%	2.1%	4.3%
Edinburgh Pentlands	LAB	880	290	1,170	3.8%	1.6%	2.9%
Edinburgh South	LAB	700	223	923	3.5%	1.3%	2.5%
Edinburgh West	LD	771	221	992	3.5%	1.3%	2.5%

At the end of Project Phase C2, a review as to the level of take up on pension rights will be undertaken. The assumed 100% take up level will be adjusted to the actual percentage take up level at the commencement of Project Phase D.

Part B Setting of Number of Drivers, Inspectors and Insurances

The costings for "Number of Drivers", "Number of Inspectors" and "Insurances" will be reviewed and finally set before the start of Project Phase C2 prior to Service Commencement of the first Phase to become operational. In respect of the "Number of Drivers" and the "Number of Inspectors", the setting of Costs will be based on actual rosters derived from the tram schedule.



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tie Limited



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TRANSDEV Edinburgh Tram Limited

This is Schedule 18 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 18

Base Case Assumptions

Contents:

1. Introduction
2. Cost Categorisation
3. General Assumptions
4. Operating Costs, Project Phases C2 and D
5. Staff, Project Phases A to D

1. Introduction

The Base Case Assumptions (BCAs) are predicated on the cost categorisation as outlined below. References to Line 1, Line 2 and the Network refer to the scope of the Project as at the Effective Date.

These BCAs assume that the System will be operated from one Depot.

2. Cost Categorisation

Cost Category	
1	Fixed at Effective Date
2	Fixed at end of Project Phase B (unit cost fixed at Effective Date)
3	Fixed before the end of Project Phase C1, as set out in Schedule 17 (<i>Setting of Fixed Costs</i>)
4	Fixed before the end of Project Phase C2, as set out in Schedule 17 (<i>Setting of Fixed Costs</i>)
5	Fixed at Effective Date and not reset
6	Target Operating Cost and/or Target Cost for Project Phase C2
7	tie "discretionary" items not fixed and not subject to pain/gain share, will be instructed as a tie Change if such items are required by tie.
8	During Project Phases A-C1, Non Core Staff Fixed Rates, called off basis at tie's discretion.
9	During Project Phases A-C1, Core Staff Fixed Rates.

3. General Assumptions

Item	Model reference	Comments	Scope Clarification	Cost Category	Base Case Assumptions
Driver Training					All training of drivers (and training of driver trainers) shall be assumed to be carried out within the UK.
Project Phase A	Other Inputs, row 28				In accordance with the Project Programme.
Project Phase B	Other Inputs, row 29				In accordance with the Project Programme.
Project Phase C1	Other Inputs, row 30				In accordance with the Project Programme.
Project Phase C2	Other Inputs, row 31	Some costs associated with setting up the Project Operations are within Project Phase C1 in the Operator Financial Model. This includes part of General Manager, Operations Manager, Safety and Standards Manager and Assistant			In accordance with the Project Programme
Project Phase D	Other Inputs, row 32				In accordance with the Project Programme, ends on 16/05/2019
Programme and date adjustments					Dates and durations in these Base Case Assumptions will be amended by written agreement with tie.

Item	Model reference	Comments	Scope Clarification	Cost Category	Base Case Assumptions
Provision of staff during Project Phases A, B, C1 and C2 (insofar as staff time is spent on development work)					<p>The Operator will make available and tie will pay for staff as shown in the Base Case Assumptions for each cost line where appropriate in accordance with the terms of this Agreement.</p> <p>tie will be invoiced for the number of half days worked by the staff concerned. This will be based on a pragmatic approach, with the time charged rounded to the nearest half day. The Operator Financial Model was developed on the basis on 7 hour days, but the Operator's Core Team will be working for similar durations to the rest of tie's team. This is because the Operator's Core Team must be an integral part of tie's team. It is expected that the average working day will be longer than 7 hours, and this average longer day would be charged as a whole day, not as a 7 hour day plus additional time.</p>
RPIX	Other Inputs, row 252				Currently assumed to be 2.50%
KPI regime	n/a				The staffing assumptions within this document and in the associated Operator Financial Model support the KPI regime as envisaged and discussed with tie.

Item	Model reference	Comments	Scope Clarification	Cost Category	Base Case Assumptions
Costs		<p>These have been built up from the following sources:</p> <p>1 Actual emerging costs on Sheffield Supertram, Manchester Metrolink and Nottingham Express Transit Systems,</p> <p>2 Operational costs on other tram systems operated by the Operator, and</p> <p>3 The specific environment in Edinburgh</p>			N/a
Staff rates	Tables 1 & 2, column Entitled "At cost Rate £/day"	These are shown within the Operator Financial Model on a daily rate basis for Project Phases A to C1 inclusive.			n/a
Project Return	Other Inputs, D65				<p>Project Phases A to C1 is 20%</p> <p>C2 and D 6.7%.</p>
Retention	Other Inputs, E50				10%
Office Accommodation	Other Inputs, row 100			N/A	During Project Phases A to C1, tie will provide office space. At the start of Project Phase C2, accommodation for all staff will be ready and available in the Depot.

Item	Model reference	Comments	Scope Clarification	Cost Category	Base Case Assumptions
Management Fees	other inputs, row 86			5	Project Phase A to C1, £10k/yr Project Phase C2, £80k/yr Project Phase D, £60k/yr
Performance Bond	other inputs, row 128			1	Project Phase C2 & D bond level set at £10.0 Million un-indexed , cost of the bond is 1% per annum of bonded amount
Employer Liability Insurance	other inputs, row 168			1	
Public Liability Insurance	other inputs, row 179			1	Excludes Public Liability for the System and its operation. In Project Phase D, no Public Liability Insurance premium is costed in Operator Financial Model, but deductible claims are included.

Item	Model reference	Comments	Scope Clarification	Cost Category	Base Case Assumptions
Public Liability Insurance - Costs of Claims and Deductibles	Semi calcs Row 103-104			6	<p>An allowance has been made for the cost of claims and deductibles based on the Required Insurances as set out in Schedule 10.</p> <p>Road Traffic Accidents</p> <p style="padding-left: 40px;">Average claim £2,500</p> <p style="padding-left: 40px;">Claims per month: Line 1, 3, Line 2, 2, Network, 4.</p> <p style="padding-left: 40px;">Claim success rate, 40%</p> <p>Personal Injuries:</p> <p style="padding-left: 40px;">Average claim £1,250</p> <p style="padding-left: 40px;">Claim rate per million passenger journeys, 1.5</p> <p style="padding-left: 40px;">Claim success rate, 40%</p> <p>The number of personal injury claims is calculated as</p> <p style="padding-left: 40px;">= passenger revenue / average fare * claim rate</p> <p>Note that the average fare has been assumed as Line 1 = £0.93, Line 2 = £1.20 and the Network is to be agreed</p>
Professional Indemnity Insurance	other inputs, row 174			1	
Bank Charges	other inputs, row 208			4	<p>A fixed price for banking services has been included.</p>

Item	Model reference	Comments	Scope Clarification	Cost Category	Base Case Assumptions
Tools and equipment					It is assumed that others will provide a full initial supply of such items as points bars and keys that will be needed by the Operator's operations staff to access and operate defective equipment.
Maintenance response					The Operator's bid is on the basis that a third party will provide a timely and effective maintenance response, so the Operator does not need any tools.
Tram related items					The Operator assumes that all tram related items that may be considered as consumables such as screen wash, lubricants, OTMR memory cards, fire extinguishers, tyres and pantograph carbons are provided as part of the Infrastructure Provider Maintenance at no cost to the Operator.
Purchase of capital items					tie/Infrastructure Provider purchase all capital items that are not specifically identified in these assumptions

4. Operating Costs, C2 and D

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Travel, Hotels, etc.	97		Includes corporate hospitality and sundry minor expenses for visits to the Edinburgh system by others. Senior managers' expenses are included in their rates.	1	
External Training & Welfare	98		Includes First Aid, "Train the Trainer" and other staff development training courses, procured externally. Also includes miscellaneous welfare expenditure.	1	
Cash collecting & counting	99		TEL to undertake.	4	
Office machinery rentals	100			1	Telephone and IT system provided by the Infrastructure Provider free of charge Lease of two photocopiers, fax, and other sundry office equipment.
Consumables & subscriptions	101			1	Stationery, postage, etc and necessary industry periodicals Includes the ongoing replacement of keys etc.

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Health, Safety & Environmental costs	102			1	, external audit fees and other registration fees.
Legal Advice	103	£5k/yr pro-rata increased for the revised number of staff.	Employment matters, advice on byelaw issues, Competition Act and general ongoing legal issues.	1	Excludes legal advice on revenue recovery.
Telephone expenses	104	<p>Actual emerging BT telephone costs at NET are about £3000 per month, plus £400 per month for 13 mobile telephones, say £3400 per month overall. These bills include the infrastructure maintenance function at NET, and are during a period of high activity leading up to opening. The steady state costs are likely to be less in the long term due to future competitive sourcing of telephony and less intense use of the telephone once the System is open.</p> <p>Translating this to the steady state operation of the Network in Edinburgh with a larger operation, but no infrastructure maintenance justifies the prices in the Operator Financial Model as being the same as for NTC now.</p> <p>Pro-rata increased for the revised number of staff.</p>		1	Includes provision of mobile telephones and call charges for senior and on call staff.

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Finance support	106			1	Includes external senior finance advice and audit fees. Includes payroll administration, outsourced
Uniforms	107			2	Cost per person is fixed at £250 per uniformed employee per year. A total of 14 staff are not uniformed for the Network.
Recruitment	109		Recruitment advertisements in local and/or national press and other recruitment activities such as open days etc.	1	
Medical examinations	110		Initial and ongoing employment medicals, plus costs of administering random drink/drug tests	1	
Ticket Stock	111		The actual number of tickets needed obviously varies with the number of passengers and the type of tickets used. TEL to provide ticket stock	1	Assumes paper and card tickets only. 26m in length/roll 70mm wide paper 10,000 rolls = £6750 with security single colour printing 10 cm average length per ticket. 1 roll gives 26000/100 = 260 tickets 10,000 rolls is 2,600,000 tickets £9k will provide 3.45 million tickets per year. Excludes smartcards and magnetic stripe tickets.
Substitute Buses	112			6	

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Passenger information (Timetables etc.)	113		TEL to provide.	7	<p>If required, will be instructed as a tie Change.</p> <p>Timetables at tramstops plus printed timetables issued at help points</p> <p>Pocket Timetables: 170,000 timetable leaflets at £12k for the batch, 2 batches per year= £24k for the Network.</p> <p>Tramstop information for the Network: One size A0 timetable poster plus 2 A3 inserts or equivalent per platform every 6 months. Assume 36 tramstops, 72 platforms, so 144 sets per year at £65 per poster is £9k per year. One other identical A1 poster every 3 months at each tramstop is 4*36=144 posters per year. At £250 for each print run, the annual cost is £1k. For the tramstops this is £10k per year.</p> <p>For tramstops and timetables, this is £34k per year overall.</p>
Advertising & Marketing Costs	114		TEL will undertake.	7	<p>If required, will be instructed as a tie Change.</p> <p>Covers costs of advertising and marketing the System.</p> <p>Also includes the costs of compensating customers as a result of customer complaints</p>

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Launch Costs	115		TEL will undertake.	7	If required, will be instructed as a tie Change. This is equivalent to a one off cost of £100k in C2 only
Market Research	116		TEL will undertake.	7	If required, will be instructed as a tie Change. Excludes revenue apportionment surveys
Training materials	117		Includes classroom consumable equipment, training videos where needed (e.g. driver's view of the route)	1	
Audit & Investors in People	118			1	Includes non-financial external audits and IIP award and ongoing fees
Performance Monitoring Surveys	119		TEL will undertake.	1	All official externally provided performance monitoring surveys are carried out by tie. Duty managers carry out internal audits of performance, and will "shadow" tie's surveys where appropriate. Excludes revenue apportionment surveys. Small amount included to enable some independent surveys to be carried by the Operator.
Road vehicle costs 1	126			1	One additional vehicle if two Depots. Vehicles are costed at £7.25kpa each.

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Maintenance IT system support	128			1	<p>Ongoing enhancements and changes to the office computer network.</p> <p>Office computer system, some 30 PCs plus software (Microsoft Office Professional or equivalent & Anti virus), cabling, internet access, configuration and printers is part of scope of the Infrastructure Provider.</p> <p>Maintenance and ongoing renewal of this is included in the Infrastructure Provider's scope.</p> <p>Provision of accounting, tram crew scheduling (see "One-off purchase of software") and maintenance management software is provided by the Operator.</p>
Other Power & Gas	130	Emerging gas bills at NET are about £4k for 3 months to 12 Dec 03. The following 3 months are likely to be more, say £6k due to colder weather. Annual costs are likely to be about £15k.		1	<p>Supply of gas to the Depot, assumed used to provide heating</p> <p>Excludes all electricity.</p>

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Water & Sewerage	131	Emerging costs are not available for NET as yet. Metrolink annual water costs were £10k in 1996. Adjusting for inflation, this is about £12k in 2003, also for 26 trams. This is the same as for the Network.		2	<p>Varies linearly with fleet size:</p> <p>Line 1, 14 trams</p> <p>Line 2, 12 trams</p> <p>Network, 26 trams</p> <p>Scaled according to fleet size.</p> <p>Charges associated with the Depot.</p> <p>Includes disposal of tram wash effluent.</p>
Tram cleaning	147		<p>Tram Cleaning:</p> <p>Network:</p> <p>Based on outsourcing. The price is for a Manager plus 2 team leaders plus 4 operatives. This gives 3 people on duty each night (plus the manager).</p> <p>Lines 1 and 2 reduced prorata by fleet size.</p>	2	<p>Varies linearly with fleet size:</p> <p>Line 1, 14 trams</p> <p>Line 2, 12 trams</p> <p>Network, 26 trams</p> <p>Scaled according to fleet size.</p> <p>This provides nightly, monthly and 6 monthly tram cleans, including nose end cleaning.</p> <p>Assumes that tram drivers drive trams through wash.</p>

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Tramstop and infrastructure cleaning	148			1	<p>Includes litter picking from trams.</p> <p>For Line 1: Team leader £15k plus 3 Cleaners at £10k each gives staff costs of £45k. Plus van £5k, plus materials £5k gives total of £55k</p> <p>This gives cover of one person on duty for most of the operational time.</p> <p>Line 2: As for line 1, but one less cleaner to reflect smaller workload</p> <p>Network: Team leader £15k plus 6 Cleaners at £10k each gives staff costs of £75k. Plus van £5k, plus materials £10k gives total of £90k Pro-rata for number of tram stops. This gives cover of one person on duty for most of the operational time</p> <p>Assumes that Tramstops are similar to NET in size, layout and equipment content</p>

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Provision of helpdesk	149		TEL to undertake.	7	<p>If required, will be instructed as a tie Change.</p> <p>Varies with the number of help desk locations provided.</p> <p>We assume that 5 will be provided for the network; costs will vary with the number of help desk locations provided, and the eventual prices quoted by Lothian Buses plc and First Scotland East Limited.</p>
Accidental Damage --> standard	150			6	<p>Varies linearly with fleet size:</p> <p>Line 1, 14 trams.</p> <p>Line 2, 12 trams.</p> <p>Network, 26 trams</p> <p>Pro-rata on fleet size.</p> <p>Assumes a System that is similar to STAG.</p>
Accidental Damage --> risk element	151			6	<p>Varies linearly with fleet size:</p> <p>Line 1, 14 trams.</p> <p>Line 2, 12 trams.</p> <p>Pro-rata on fleet size.</p> <p>Network, 26 trams.</p> <p>Assumes a System that is similar to STAG.</p>

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Vandal Damage standard →	153			6	Varies linearly with fleet size: Line 1, 14 trams. Line 2, 12 trams. Network, 26 trams. Pro-rata on fleet size. Assumes a System that is similar to STAG.
Vandal Damage risk element →	154			6	Varies linearly with fleet size:Line 1, 14 trams. Line 2, 12 trams. Network, 26 trams Pro-rata on fleet size. Assumes a System that is similar to STAG.
Graffiti Damage standard →	156			6	Varies linearly with fleet size: Line 1, 14 trams. Line 2, 12 trams. Network, 26 trams. Pro-rata on fleet size. Assumes a System that is similar to STAG.

Cost Item	Row number	Comments	scope clarification	Cost Category	Base Case Assumptions
Graffiti Damage --> risk element	157			6	Varies linearly with fleet size: Line 1, 14 trams. Line 2, 12 trams. Network, 26 trams Assumes a System that is similar to STAG.
One-off purchase of software	159	Equivalent to a one off cost of £10k	Tram scheduling and driver rostering package	1	Assumes tie have commissioned the System Operational Model during Project Phase B upon which the scheduling and rostering package will be based. See paragraphs 16.3.6, 16.5 and 16.6 of the Project Development Output Specification.
Miscellaneous costs	161			1	These are other costs not covered elsewhere, and sand is included. Sand is based on £30/Tonne at the local quarry, £200 per 20 Tonne delivery, giving delivered to site cost of £40/Tonne. Usage rate of 7 Tonne per tram per year. Fleet size of 26 trams This is $£40 * 7 * 26 = £7820/yr$ for the Network.

5. Staff, Project Phases A to D

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
Salaries									<p>The salary figures in the Operator Financial Model are derived from a predicted salary plus:</p> <p>10% for overtime and bonus, notionally 5% for each.</p> <p>10.8% for national insurance</p> <p>6% in respect of a non-contributory employee pension, assumes 100% take up of pension rights.</p> <p>A 10% contingency / expenses has already been included in relation to staff whose salaries are not subject to the mechanism as set out in Schedule 17 (<i>Setting of Fixed Costs</i>).</p>
	Project Director	17 May 2004	End of Oct 05	Core	(See BCA)	n/a		9	<p>Full time (billed to tie at 4 days per week) from 17 May 04 to 31 August 04,</p> <p>2 days per week September 04,</p> <p>2 days per month October 04 until end of October 05.</p>

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	General Manager	17 May 2004	End of Project Phase D	Core	(See BCA)	n/a		9 during Project Phases A to C1 1 during Project Phases C2 and D	2 days per week May 04, 2 days per week June, 2 days per week July, 3 days per week August, 4 days per week September 04 onwards to end of Project Phase C1
Jim Harries	Technical Engineer	17 May 2004	End of Project Phase C1	Core	(See BCA)	n/a		9	3.5 days/wk, then 4 days/wk from Nov 06
	Senior Commercial Manager	Start of July 2004	End Project Phase C1	Core	(See BCA)	n/a		9	approx 1 day/week July 4 to Dec 04, about 2 days/wk Jan 05 to Oct 05, about 2 days/month Nov 05 to end of Project Phase C1

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Secretary/ Assistant	17 May 2004	End of Project Phase D	Core	Yes	60		9 during Project Phases A to C1 1 during Project Phases C2 and D	
	Transportation Consultant	17 May 2004	End of Project Phase B	Non Core	(See BCA)	n/a	Patronage/revenue forecasting validation.	8	Project Phase A, 30 days Project Phase B, 20 days Project Phase C1, zero
	Network Rail Expert	see comments	End of Project Phase A	Non Core	(See BCA)	n/a		8	Project Phase A, 5 days per week for 26 weeks
Daniel Daman	Public Consultation Assistance	N/A	End of Project Phase A	Non Core	(See BCA)	n/a		8	40 days in Project Phase A only
Christian Buisson (Project Phase A only)	Transamo Director	N/A	End of Project Phase C1	Non Core	(See BCA)	n/a		8	5 days in Project Phase A. From Project Phase B onwards, named person TBC Project Phase B 4 days Project Phase C1 5 days/yr = 16.25 days

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Operations Manager	Nov 05	End of Project Phase D	Core	Yes	18		9 during Project Phases B to C1 1 during Project Phases C2 and D	227 days/yr
	Engineering Manager	Nov 05	End of Project Phase D	Core	Yes	31		9 during Project Phases B to C1 1 during Project Phases C2 and D	227 days/yr
	Safety & Standards Manager	Nov 06	End of Project Phase D	Core	Yes	34		9 during Project Phase C1 1 during Project Phases C2 and D	227 days/yr

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Legal Adviser	start of Project Phase A	End of Project Phase D	Non Core	(See BCA)	n/a		8	Continuing legal support for e.g. OFT submissions. Project Phase A, 7 days Project Phase B, 3 days Project Phase C1, 10 days For Project Phase C2, see "Operating Expenses, Project Phases C2 and D"
	Financial Modelling consultant	Start of Project Phase A	End of Project Phase C1	NonCore	(See BCA)	n/a	Further iterations of the Operator Financial Model will need to be undertaken.	8	Fee to be agreed with tie. Based on about 3 days per remodelling and 2 remodelling per year.
	Technical Support Engineer	Aug 04	End of April 06	Core	(See BCA)	n/a		9	4 days/wk until end Oct 05, then 2 days/week Support for Technical Engineer in detail design review, testing and commissioning programmes, including documentation and control.
	Test Engineers 1 and 2	Dec 07 and Aug 08	In Project Phase C2 as Operator Financial Model	Core	(See BCA)	21		9 during Project Phase C1 1 during Project Phase C2	Additionally, in Operator Financial Model, table 3A, 2 months of Test Engineer is included.
	Operations Assistant	3 months prior to Project Phase C2	End of Project Phase D	Core	Yes	27		3	

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Finance Manager	12 months prior to Project Phase C2	End of Project Phase D	Core	Yes	49		9 during Project Phases C1 1 during Project Phases C2 and D	
	Accounts Assistants 1 and 2	10 months prior to Project Phase C2	End of Project Phase D	Core	Yes	50		9 during Project Phase C1 1 during Project Phases C2 and D	
	Commercial Manager	Start of Project Phase C2	End of Project Phase D	Core	Yes	19		1	Deleted
	Duty Managers	Start of Project Phase C2	End of Project Phase D	Core	Yes	25		3	Provide 24/7 cover in the Control Centre, plus mobile incident response, security response (also provided by customer service staff), supervision and audit on the System. During pre-operations, provide driver and other operations training Assumes one Control Centre for the System, even if there is more than one Depot

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Operations Supervisors	Start of Project Phase C2	End of Project Phase D	Core	Yes	26		3	<p>Provide 24/7 cover in the Control Centre to support duty manager in customer information (PA, cctv, help point response, routine radio contact with trams and booking staff on and off duty.)</p> <p>During pre-operations, provide driver and other operations training</p> <p>Assumes there is only one control room for the System, even if there is more than one Depot.</p> <p>If there is a second Depot, then an additional 6 people are needed to provide supervision at the second Depot</p>
	Drivers	6 months before start of Project Phase D	End of Project Phase D	Core	Yes	29		3	<p>As set out in the paper "Tram Drivers 20Feb04". (See Parts D and E of this Schedule)</p> <p>The start date assumption is for financial modelling purposes. In practice, the employment of drivers will be progressive, and will be a function of the system delivery, commissioning and completion programme. This is still to be defined.</p> <p>The recruitment profile may support the Infrastructure Provider's need for tram drivers, but this will need to be reviewed once the degree of testing required is established and the detailed commissioning programme can be considered.</p>

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions												
									<p>Determination of tram drivers' salaries in the Operator Financial Model</p> <p>Lothian bus driver rate on 28 March 2004 was £330.74 per week, thus £17,246 pa.</p> <p>RPIX for March 2004 was 182.5, and March 2003 was 178.7</p> <p>Lothian bus driver rate adjusted by RPIX to 1 April 2003 prices is $£17,246 * 178.7 / 182.5 = £16,887$</p> <p>This gives the salary for drivers as</p> <table> <tr> <td>Base salary</td> <td></td> <td>£16887</td> </tr> <tr> <td>Bonus/overtime</td> <td>10%</td> <td>£1689</td> </tr> <tr> <td>NI + pension</td> <td>21%</td> <td>£3546</td> </tr> <tr> <td>Total annual cost</td> <td></td> <td>£22121</td> </tr> </table> <p>This cost is factored according to the ratios set out in Schedule 17 (<i>Setting of Fixed Costs</i>) to determine the costs for the other staff who are in Cost Category 3.</p>	Base salary		£16887	Bonus/overtime	10%	£1689	NI + pension	21%	£3546	Total annual cost		£22121
Base salary		£16887																			
Bonus/overtime	10%	£1689																			
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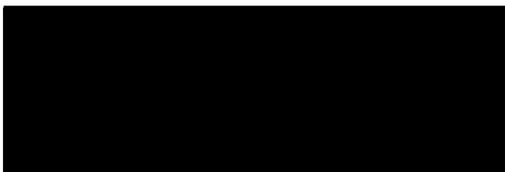
Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Assistant Engineering Manager	Project Phase C2	End of Project Phase D	Core	Yes	32 & 35		1	
	Infrastructure Engineer	Project Phase C2	End of Project Phase D	Core	Yes	33 & 37		1	Deleted
	Performance Analyst	Project Phase C2	End of Project Phase D	Core	Yes	41 & 42		1	Manages performance regime deductions primarily with the Infrastructure Provider, where the Operator expects that the allocation of responsibility for performance failures between the Operator and the Infrastructure Provider will require a full time resource.
	Storeman	Project Phase C2	End of Project Phase D	Core	Yes	43		1	
	HR Manager	Project Phase C2	End of Project Phase D	Core	Yes	45	To support the management team	1	
	Marketing Manager	3 months after start of Project Phase C2	End of Project Phase D	Core	Yes	54		1	Deleted
	Admin. Staff	3 months after start of Project Phase C2	End of Project Phase D	Core	Yes	61	General admin and office support for the whole	1	

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Customer Service	1 month prior to Project Phase D	End of Project Phase D	Core	Yes	72		3	Deleted and replaced with Inspectors
	Temporary Customer service	1 month prior to start of Project Phase D	6 months after start of Project Phase D	Core	Temporary fulltime	55		3	<p>Full details of the assumptions are set out in the document "Revenue Protection 23 Feb 04". (See Parts B and C of this Schedule).</p> <p>Cost varies directly with the number of staff and the duration, at tie's discretion.</p> <p>The salary will be 5% below the drivers' salary.</p> <p>20 temporary customer services staff for 6 months at start of Project Phase D, for the Network, or 10 for either Line. 1 month to train them at end of C2</p> <p>In addition to the full time customer services staff, additional staff will be deployed during the first 6 months after opening.</p> <p>The costs of this temporary resource are included in the Operator Financial Model for Project Phase C2, table 3A.</p>

Name	Role	Start Date	End Date	Core ?	Full Time	Row Number	scope clarification	Cost Category	Base Case Assumptions
	Temporary Customer service (continued)								Note that the costs associated with their employment in Project Phase D are shown in Project Phase C2. This is due to the difficulties in modeling a staff resource that changes during Project Phase D. The costs are correct, but the allocation between Project Phases and the timing is not.
	Security Staff (cash Collection only)	1 month before Project Phase D	End of Project Phase D	Core		73	To collect cash from ticket machines and bring it to the Depot for counting, then to deliver the cash to the bank.	4	TEL will undertake.
	Cashiers	1 months before Project Phase D	End of Project Phase D	Core		74		4	TEL will undertake.
	Debt Recovery Staff	3 months after start of Project Phase C2	End of Project Phase D	Core		62	These people support the customer service staff and operate the debt recovery process up to and including prosecutions	1	TEL will undertake.
	Inspector Supervisor	Start of Project Phase C2	End of Project Phase D	Core		75	To manage the Inspectors and minimise lost revenue.	1	

Part D Tram Drivers

Base Calculation	Nottingham	Edinburgh (P.1a)	Edinburgh (Net)
<u>Service Hours</u>			
Tram Hours / week	1176	2200	2950
Number of weeks / year affected	52	52	52
Tram Hours / year	61148.53	114400	153400
Rostering Efficiency (%)	80	82.5	85
Crew per tram	1	1	1
Tram Crew rostered hours required for Tram Hours	76436	138667	180471
Working Week (Hours)	39	39	39
Average Working Day (Hours)	7.8	7.8	7.8
Initial Training Duration (Days)	35	35	35
Average Employment (Years)	5	5	5
Initial Driver Training Days per year	7	7	7
Days expected Sick (days / year)	12	12	12
Refresher Training days per person per year	2	2	2
Days Annual Leave (days / year)	33	33	33 (25 + 8 days bank holiday, worked)
Rosterable Hours per tram crew (Hours / year)	1607	1607	1607
Night Drivers (depot)	-	2	2
Tram Crew Required	48	88	114



Director/Authorised Signatory
tram company Limited



Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

This is Schedule 19 referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

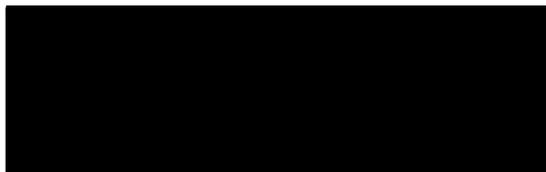
SCHEDULE 19

Additional Costing Assumptions

Non-staff costs will be assessed and treated in accordance with the Operator Financial Model.

Name	Role	Base Case Assumptions
	Project Director	50% additional time required for Line 3 et seq each.
	General Manager	System operates a fleet of no more than 50 Trams; thereafter job regrading and salary review required.
Jim Harries	Technical Engineer	System operates a fleet of no more than 50 Trams; thereafter additional time and/or additional technical support required.
	Senior Commercial Manager	System operates a fleet of no more than 50 Trams; thereafter additional time and/or additional technical support required.
	Secretary/ Assistant	System operates a fleet of no more than 50 Trams, at which point the cost of the role will need to be reviewed
	Operations Manager	System operates a fleet of no more than 50 Trams, at which point the cost of the role will need to be reviewed
	Engineering Manager	The Infrastructure Provider will undertake this role.
	Safety & Standards Manager	System operates a fleet of no more than 50 Trams, at which point the cost of the role will need to be reviewed
	Legal Adviser	To be called off at tie's discretion. If Fleet size increases to more than 35 Trams, then costs increase linearly with fleet size above this point
	Financial Modelling consultant	Line 3 will require a complete re-run of model.
	Technical Support Engineer	A further Line will increase the input/cost by 50%.
	Operations Assistant	Fleet size not more than 35 Trams. At this point two people will be needed in this role up to 100 Trams
	Finance Manager	Fleet size not more than 50 Trams. Salary will then need to be reviewed
	Accounts Assistants 1 and 2	Fleet size not more than 35 Trams. At this point one additional person is needed for every 20 Trams in the fleet
	Commercial Manager	TEL will undertake this role.
	Duty Managers	These will operate a system of up to 50 Trams. More may be needed for an even larger fleet. Assumes one Control Centre for the System, even if there is more than one Depot

Name	Role	Base Case Assumptions
	Operations Supervisors	Any Network Expansion will require up to an additional 5 people. These will operate a System of up to 50 Trams. More may be needed for an even larger fleet. Assumes there is only one Control Centre for the System, even if there is more than one Depot. If there is a second Depot, then an additional 6 people are needed to provide supervision at the second Depot
	Drivers	As calculated from the Hatus rostering.
	Vehicle Engineer	Will require an additional assistant and a salary increase of 10% if there are more than 35 Trams in the fleet.
	Infrastructure Engineer	Will require an additional assistant and a salary increase of 10% if the System is more than 10% longer than the Network.
	Performance Regime Manager	Fixed up to a fleet total of 50; thereafter, a clerical assistant will be needed.
	Storeman	Infrastructure Provider responsibility.
	Performance Manager	Fixed up to a fleet total of 50; thereafter, a clerical assistant will be needed.
	Clerk	Fixed up to a fleet total of 35, after which a further clerk will be required
	Marketing Manager	TEL to undertake.
	Admin. Staff	Additional post required for Line 3.
	Customer Service	Based on an Inspector for every tram in service.
	Temporary Customer service	TEL to undertake
	Security Staff (cash Collection only)	TEL to undertake
	Cashiers	TEL to undertake.
	Debt Recovery Staff	TEL to undertake.
	Revenue Protection Manager	Fixed up to fleet total of 50; thereafter regrading of job and/or additional assistance required.



Director/Authorised Signatory
tie Limited



Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

This is the Operating Appendix referred to in the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

APPENDIX 1

**OPERATING APPENDIX
RELATING TO THE EDINBURGH
TRAM NETWORK**

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PART I - PRELIMINARY MATTERS

1. DEFINITIONS AND INTERPRETATION

Terms and expressions defined in Schedule 1 (*Definitions and Interpretation*) of the Agreement will have the same meanings in this Appendix.

2. CONDITIONS PRECEDENT

2.1 The obligations of the Parties under this Appendix shall be conditional upon the occurrence of the Operating Effective Date, save for the provisions listed in Clauses 2.1.1 to 2.1.3 below which shall have effect as from the Effective Date:

2.1.1 the provisions of this part I (*Preliminary Matters*);

2.1.2 Clause 23 (*Performance and Financial Adjustments*), Clause 24 (*tie Changes*) Clause 25 (*Operator Changes*) and Clause 28 (*Transition on Termination or Expiry*) of this Appendix; and

2.1.3 Clause 8 (*Special Events*) of this Appendix, if applicable, pursuant to Clause 9 (*Special Events*) of the Agreement.

2.2 **tie** may by notice in writing to the Operator (without the consent of the Operator) waive satisfaction of some or all of the Operator Conditions Precedent.

2.3 On the date that each of the Operator Conditions Precedent (with the exception of any Operator Conditions Precedent that have been expressly waived by **tie** in writing) have in **tie's** opinion been satisfied, **tie** shall notify the Operator of the same.

2.4 The Operator shall use its reasonable endeavours to satisfy or procure the satisfaction of the Operator Conditions Precedent prior to the date scheduled for the Operating Effective Date in the Project Programme.

2.5 Following notification by **tie** pursuant to Clause 2.3 of this Appendix, the Operator shall notify a date (being as soon as reasonably possible) when it intends to commence providing the Transport Services on the relevant Phase, such date to be subject to the approval of **tie**, such approval not to be unreasonably withheld or delayed.

3. SATISFACTION OF REQUIREMENTS FOR SERVICE COMMENCEMENT

- 3.1 The Operator shall give the tie Project Manager not less than 20 Business Days' notice of the date upon which the Operator considers that Service Commencement in respect of a Phase (or part of a Phase) can be achieved so that the tests to be undertaken in accordance with the tie Completion Requirements may be carried out.
- 3.2 The tie Project Manager shall be entitled to inspect the System in operation on the date or dates reasonably specified by the Operator in accordance with this Clause 3 (*Satisfaction of Requirements for Service Commencement*), and to attend any of the tests to be carried out. The Operator shall procure that such of the Project Operations Staff and Project Development Staff as tie may reasonably request shall accompany the tie Project Manager on any such inspection.
- 3.3 The tie Project Manager shall, within 7 Business Days of any inspection made pursuant to Clause 3.2 above, notify the Operator of any outstanding matters (including the repetition of any of the tests which are required to be carried out and passed in accordance with the tie Completion Requirements) which must be attended to before Service Commencement can occur in respect of the relevant Phase (or part of such Phase) in accordance with this Appendix. The Operator shall attend to all such matters and shall, if necessary, give tie further notices in accordance with Clause 3.1 above (but dealing only with matters raised in tie's notification under this Clause 3.3) so that the procedures in Clauses 3.1 and 3.2 above and this Clause 3.3 are repeated as often as may be necessary to ensure that all outstanding matters in relation to the tie Completion Requirements are attended to.
- 3.4 tie shall, when it is satisfied that Service Commencement can occur in accordance with this Appendix, issue a Certificate of Service Commencement to that effect stating the date upon which Service Commencement can occur. To the extent that Service Commencement is to be in relation to part of a Phase, the Certificate of Service Commencement shall also specify details of the relevant part of such Phase.
- 3.5 Where the Certificate of Service Commencement is issued in relation to part of a Phase:
- 3.5.1 the provisions of this Appendix relating to Project Phase D (including Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*)) shall apply to that part of the Phase in respect of which the Certificate of Service Commencement has been issued; and

- 3.5.2 the provisions of the Agreement relating to Project Phase C2 shall continue to apply to the remaining part of such Phase.
- 3.6 Where it has been agreed between the Parties that Service Commencement and Full Service Commencement shall occur at the same time, the Certificate of Service Commencement shall be deemed to be also a Certificate of Full Service Commencement.
- 3.7 **tie** may issue the Certificate of Service Commencement, notwithstanding that there are Operator Snagging Matters. Where there are Operator Snagging Matters, **tie** shall, within 7 Business Days of the date of issue of the Certificate of Service Commencement, issue a Snagging Notice which shall specify the Operator Snagging Matters.
- 3.8 Following the issue of a Snagging Notice and in consultation with the **tie** Project Manager and in such manner as to cause as little disruption to the provision of the Transport Services by the Operator and to the use and enjoyment of the System and Transport Services by the public (and as little general inconvenience) as reasonably practicable, the Operator shall rectify or shall procure rectification of each Operator Snagging Matter within such time as is reasonably practicable after the service of the Snagging Notice.
- 3.9 The issue of the Certificate of Service Commencement shall in no way affect the obligations of the Operator under the Agreement.
- 3.10 For the avoidance of doubt, the issue of any Certificate of Service Commencement pursuant to Clause 3.4 above shall, save as may be expressly agreed otherwise (both Parties acting reasonably) be conditional upon **tie** being satisfied that all Necessary Consents in relation to the Project Operations for the relevant Phase have been obtained, are in full force and effect and are unconditional.
- 3.11 In the event that the Operator is dissatisfied with the decision of **tie**, the provisions of Clause 43 (*Dispute Resolution Procedure*) of the Agreement shall apply and pending resolution of the matter in accordance with Schedule 7 (*Dispute Resolution Procedure*) of the Agreement, the provisions of Clause 18 (*Payment during Project Phase C2*) of the Agreement shall continue to apply.
- 3.12 From the Service Commencement Date of the first Phase to become operational until the earlier of the Expiry Date or termination of this Agreement, **tie** shall provide all

electrical power to the System. The Operator shall assist **tie** in the procurement of contracts for the provision of such electrical power. Such contracts should offer value for money to **tie** and the Operator shall continue to assist **tie**, as required, to ensure that such contracts continue to offer value for money to **tie**.

3.13 Electrical Power Incentivisation Mechanism

3.13.1 For the first 13 Reporting Periods after Full Service Commencement, the Operator and **tie** shall monitor electricity usage across the System and electricity supply tariffs in order to agree an electricity usage forecast for the subsequent 13 Reporting Periods (the "**Electricity Usage Forecast**") and the seasonality profile. At the beginning of each subsequent 13 Reporting Periods a revised Electricity Usage Forecast using the agreed seasonality profile shall be agreed by the Operator and **tie**.

3.13.2 Any savings or additional costs arising above or below the difference between actual electricity usage and the Electricity Usage Forecast shall be shared equally between the Operator and **tie**, and a payment to/from the Operator shall be calculated using the average price per KWH over the 13 Reporting Periods.

3.13.3 In the event that the number of tram kilometres run to achieve the Timetable are permanently changed or Network Expansion occurs, then the incentivisation regime will be determined for the part year prior to such change or Network Expansion (as appropriate). A new Electricity Usage Forecast shall be agreed between the Operator and **tie** after 6 Reporting Periods of experience with the new Timetable using the immediately preceding agreed seasonality profile.

3.13.4 **tie** shall disclose information on the electricity consumption of the Edinburgh Tram Network (including seasonality rates) on an open book basis and in good faith.

4. SATISFACTION OF REQUIREMENTS FOR FULL SERVICE COMMENCEMENT

4.1 To the extent that the Parties have agreed that there will be a time interval between the Service Commencement Date and the Full Service Commencement Date in respect of a Phase, the following provisions of this Clause 4 (*Satisfaction of Requirements for Full Service Commencement*) will apply. Without limitation, such an interval may

occur where **tie** issues a Certificate of Service Commencement pursuant to Clause 3.4 above in relation to only part of a Phase.

- 4.2 The Operator shall give the **tie** Project Manager not less than 20 Business Days' notice of the date upon which the Operator considers that Full Service Commencement in respect of a Phase can be achieved so that the tests to be undertaken in accordance with the relevant **tie** Completion Requirements may be carried out.
- 4.3 The **tie** Project Manager shall be entitled to inspect the System in operation on the date or dates reasonably specified by the Operator in accordance with this Clause 4 (*Satisfaction of Requirements for Full Service Commencement*), and to attend any of the tests to be carried out. The Operator shall procure that such of the Project Operations Staff and Project Development Staff as **tie** may reasonably request shall accompany the **tie** Project Manager on any such inspection.
- 4.4 The **tie** Project Manager shall, within 7 Business Days of any inspection made pursuant to Clause 4.3 above, notify the Operator of any outstanding matters (including the repetition of any of the tests which are required to be carried out and passed in accordance with the relevant **tie** Completion Requirements) which must be attended to before Full Service Commencement can be considered to have occurred in respect of the relevant Phase in accordance with this Appendix. The Operator shall attend to all such matters and shall, if necessary, give **tie** further notices in accordance with Clause 4.2 above (but dealing only with matters raised in **tie's** notification under this Clause 4.4) so that the procedures in Clauses 4.2 and 4.3 above and this Clause 4.4 are repeated as often as may be necessary to ensure that all outstanding matters in relation to the **tie** Completion Requirements are attended to.
- 4.5 **tie** shall, when it is satisfied that Full Service Commencement can occur in accordance with this Appendix, issue a Certificate of Full Service Commencement to that effect stating the date upon which Full Service Commencement can occur.

PART II: PROJECT OPERATIONS

5. THE TRANSPORT SERVICES

- 5.1 Throughout the Service Period in respect of each Phase, the Operator shall provide the Transport Services (and all other Project Operations):
 - 5.1.1 in accordance with the Agreement;

- 5.1.2 in accordance with the Operating Method Statements;
 - 5.1.3 in accordance with the Operating Output Specification;
 - 5.1.4 in accordance with all applicable Law and Necessary Consents (and so as not to prejudice the renewal of any such Necessary Consents);
 - 5.1.5 in compliance with the Environmental Statement.
- 5.2 To the extent that the Parties have agreed that there will be a time interval between the Service Commencement Date and the Full Service Commencement Date in respect of any Phase, the Parties acknowledge that the Operating Output Specification shall specify a reduced level of requirement in respect of that period, as compared with the period following the Full Service Commencement Date.
- 5.3 To avoid doubt, the obligations in Clauses 5.1.1, 5.1.2, 5.1.3, 5.1.4 and 5.1.5 above are independent obligations. For example:
- 5.3.1 the fact that the Operator has provided the Transport Services in accordance with the Operating Method Statements shall not be a defence to an allegation that the Operator has not satisfied the Operating Output Specification; and
 - 5.3.2 the fact that the Operator has provided the Transport Services in accordance with the Operating Output Specification shall not be a defence to an allegation that the Operator has not satisfied the Operating Method Statements.
- 5.4 Without prejudice to Clauses 5.1 and 5.3 above, if it should be found that the Operating Method Statements do not fulfil the Operating Output Specification, the Operator shall amend the Operating Method Statements. Such amendment shall be made in accordance with Schedule 9 (*Review Procedure*) of the Agreement and shall ensure that the Operating Method Statements shall satisfy the Operating Output Specification.
- 5.5 The Operator may at any time submit to the tie Project Manager in accordance with Schedule 9 (*Review Procedure*) of the Agreement proposals for amendments to or substitution of the Operating Method Statements or any part of them. If tie makes no comment on such proposed amendment or substitution (on the grounds set out in Schedule 9 (*Review Procedure*) of the Agreement), then the Operating Method Statements as so amended or substituted shall be the Operating Method Statements for

the purposes of this Appendix, subject to any further amendment or substitution to which there has been no comment in accordance with Schedule 9 (*Review Procedure*) of the Agreement.

5.6 The Operator shall not be entitled to implement or procure the implementation of any amendment to the Operating Method Statements unless it is entitled to proceed with such implementation pursuant to Schedule 9 (*Review Procedure*) of the Agreement.

5.7 An amendment to or substitution for the Operating Method Statements pursuant to Clauses 5.4 or 5.5 above shall not be a tie Change and shall not entitle the Operator to:

5.7.1 any adjustment to the Target Operating Costs, Fixed Costs, Target Patronage or Profit Element; or

5.7.2 any relief from the performance of its obligations under the Agreement.

6. TRANSPORT SERVICES TIMETABLE

6.1 In accordance with the terms of the Project Development Output Specification, the Timetable shall be agreed between the Operator and the tie Project Manager not less than 60 Business Days (unless otherwise agreed in writing by tie) prior to the Planned Service Commencement Date in respect of a Phase.

6.2 Subject to Clause 8 (*Special Events*) of this Appendix, the Operator shall not be entitled to alter the Timetable unless:

6.2.1 any such alteration complies with the Operating Output Specification; and

6.2.2 the Operator provides a copy of the proposed alterations to the tie Project Manager for tie's approval at least 56 days (unless otherwise agreed in writing by tie) before the proposed alteration is to take effect.

6.3 The Operator shall not implement any Timetable for the provision of Transport Services on the System or alteration of any such Timetable without the prior written consent of the tie Project Manager.

7. PUBLICATION OF INFORMATION RELATING TO THE SYSTEM

The Operator shall comply with the requirements of the Public Liaison and Media Plan, including in relation to:

- 7.1 the display of information at Tramstops; and
- 7.2 the availability of paper copies of the Timetable.

8. SPECIAL EVENTS

8.1 Where at any time during the Term:

8.1.1 a Special Event is scheduled to take place which in the opinion of tie will, or may, affect the Project Operations, tie shall give notice in writing to the Operator of such Special Event;

8.1.2 an event is scheduled to take place which the Operator considers requires an amendment to the Project Operations (including, the Timetable), the Operator shall give notice in writing to tie of such event together with details of its proposed amendments to the Project Operations in accordance with Clause 8.2 or Clause 8.11 (as appropriate). To the extent that tie agrees that such event should give rise to an amendment to the Project Operations, such event shall be a Special Event for the purposes of this Clause 8 (*Special Events*).

8.2 Any Special Event Notice given by either Party pursuant to Clause 8.1 above shall:

8.2.1 be given as far in advance as is reasonably practicable, but in any event at least one month prior to the date of commencement of the relevant Special Event unless such event is scheduled at shorter notice or is rescheduled or unscheduled;

8.2.2 set out the following details (whichever are relevant) in relation to Special Event:

8.2.2.1 the date(s), time(s) and duration of the event;

8.2.2.2 the route(s) of the event;

8.2.2.3 those parts of the System likely to be affected by the event and the likely effects;

8.2.2.4 any modifications or restrictions which the Party serving the Special Event Notice considers should be placed upon the Project Operations

(including an amendment to the Timetable) and the relevant time periods for such restrictions; and

8.2.2.5 any requirement for an increase in the provision of the Transport Services before, during and/or after the period of Special Event;

8.3 The Operator shall, within two weeks after (i) the date of the Special Event Notice (if served by **tie**); or (ii) the date on which **tie** agrees that the event specified in a Special Event Notice served by the Operator is a Special Event, forward to **tie** a plan ("**Special Event Plan**") in respect of the relevant Special Event which plan shall include the Operator's reasoned and detailed proposals in relation to:

8.3.1 any modifications to or restrictions to be placed upon the Project Operations (including the Timetable):

(a) in the period immediately prior to the commencement of the Special Event; and/or

(b) during the period of the Special Event; and/or

(c) in the period immediately following the end of the Special Event;

8.3.2 any required increase in the Project Operations (including the Timetable) during the periods listed in Clause 8.3.1 above;

8.3.3 any third party interests which may be adversely affected by the Special Event Plan and the involvement of the Emergency Services; and

8.3.4 the estimated costs arising out of the Special Event (the "**Special Event Estimate**")

8.4 Following receipt by **tie** of the Special Event Plan, the Parties (acting reasonably) shall:

8.4.1 liaise fully and frequently with each other in order to agree any relevant arrangements in respect of the Special Event (including any amendments to the Timetable). Following such liaison, **tie** shall have the final authority to determine any modifications or restrictions in respect of the Project Operations (including the Timetable) as a result of the Special Event Plan; and

- 8.4.2 the Parties shall discuss and agree the Special Event Estimate. If the Special Event Estimate is expected to exceed £10,000 (Indexed) and it is practicable for the Operator to do so, **tie** may require the Operator to seek and evaluate competitive tenders. The Operator shall, as soon as reasonably practicable, and, in any event not more than 14 days after seeking any competitive tenders, update the Special Event Estimate accordingly.
- 8.5 The Operator, following consultation with **tie**, will undertake appropriate action to ensure public safety in respect of any Special Events which affect Project Operations. The Operator Project Manager will attend any Special Event planning meetings, comprising also members of organisations and representatives from the Emergency Services involved in planning for Special Events.
- 8.6 The Operator shall use all reasonable endeavours to:
- 8.6.1 mitigate any increase or maximise any saving in the Operating Costs likely to be incurred as a result of a Special Event; and
- 8.6.2 mitigate any reduction or maximise any increase to the Operating Revenues likely to be received as a result of a Special Event.
- 8.7 On no more than ten occasions in any calendar year during the Service Period, **tie** may give notice in writing to the Operator ("**tie Full Service Notice**") requiring the Operator to provide a full peak period service ("**Full Service**") for a Full Service Day over all or part of the System.
- 8.8 Any notice given by **tie** pursuant to Clause 8.7 above shall:
- 8.8.1 be given at least three months prior to the date of the relevant Full Service Day or less if practicable and agreed by the Parties;
- 8.8.2 set out the following details in relation to the relevant Full Service Day:
- 8.8.2.1 the date and the reason for the request;
- 8.8.2.2 whether **tie** requires Full Service over all or part of the System and (where relevant) the relevant parts of the System; and
- 8.8.2.3 any other modifications or restrictions which **tie** consider should be placed upon the Full Service for the duration of the Full Service Day.

- 8.9 **tie** may serve a **tie** Full Service Notice upon the Operator in respect of any Special Event, but subject always to the limitation in Clause 8.7 above concerning the number of occasions in any calendar year during the Service Period upon which **tie** may serve such notice.
- 8.10 In respect of any day in respect of which (i) **tie** and the Operator have agreed to amend the Timetable for the period before, during and/or after a Special Event, or (ii) **tie** has served a **tie** Full Service Notice upon the Operator the Operator shall publicise details of the relevant change to the Timetable in accordance with the Public Liaison and Media Plan.
- 8.11 Where at any time during the Services Period it is agreed by **tie** that the procedure for agreeing a Special Event set out in Clauses 8.2, 8.3 and 8.4 cannot be followed in accordance with the said Clauses, the Operator shall recommend to **tie** what steps need to be taken to facilitate such Special Event (including as far as reasonably practicable, the preparation of a Special Event Plan). The Operator shall also give a Special Event Estimate.
- 8.12 **tie** shall pay the actual costs of any agreed Special Event to the Operator in accordance with Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) to the Operating Appendix.

9. FARE SETTING, PARTICIPATION IN INTEGRATED TICKETING SCHEME AND DEVELOPMENT OF THE SERVICE INTEGRATION PLAN

- 9.1 The Initial Fares (including details of fares zones) shall be as developed during Project Phases A, B and C1. All increases in Fares during the Service Period shall be in accordance with the Fares structure developed during Project Phases A, B and C1 and the prevailing TEL Fares Policy.
- 9.2 The Operator shall comply with the TEL Fares Policy in relation to the Fares for the Transport Services. Any amendments to the TEL Fares Policy requiring a change to the Fares shall be a **tie** Change in accordance with Clause 24 (*tie Changes*) of this Appendix.
- 9.3 **tie** shall establish a consultation process whereby the Operator shall be given reasonable opportunity, in advance of any amendments being made to the TEL Fares Policy, to comment upon any proposed amendments to the TEL Fares Policy and meet with **tie** and other key decision makers (if **tie** is able to arrange such meeting) to discuss any proposed amendments to the TEL Fares Policy.

- 9.4 The Operator shall comply with the Service Integration Plan in relation to an integrated ticketing scheme for the System.
- 9.5 The Operator shall be given reasonable opportunity, in advance of any amendments being made to the Service Integration Plan during Project Phase D, to comment upon any proposed amendments to the Service Integration Plan. *tie* shall meet with the Operator to discuss the development of the Service Integration Plan. *tie* shall use reasonable endeavours to procure that other key decision makers also meet with the Operator to discuss the development of the Service Integration Plan.
- 9.6 Any development or amendment to the Service Integration Plan requiring a change to the Project Operations shall be a *tie* Change in accordance with Clause 24 (*tie Changes*) of this Appendix.
- 9.7 The Operator shall in respect of the Transport Services only undertake the responsibilities of *tie* which are required under the Concessionary Travel Scheme (or any subsequent scheme) in respect of the Transport Services only in accordance with all terms and conditions which apply to such Scheme from time to time as practicably. The Parties acknowledge that the Target Patronage shall take account of any material adverse impact on the level of Patronage as a result of the Edinburgh Tram Network's participation in the Concessionary Travel Scheme, except to the extent that such material adverse impact is already mitigated under the terms and conditions of the Concessionary Travel Scheme.
- 9.8 The Operator shall ensure that persons entitled to travel at concessionary fares or at no cost under the Concessionary Travel Scheme are able to do so without inconvenience on the System at all times.
- 9.9 The Operator shall subject to Clause 9.11 of this Appendix and Clause 12.19 of the Agreement be responsible for the availability (and acceptable form and content) of any ticket type usage information necessary to permit calculation of reimbursement under the Concessionary Travel Scheme).
- 9.10 Any dispute between the Parties arising from or in connection with the Concessionary Travel Scheme shall be referred to the Dispute Resolution Procedure pursuant to Clause 43 (*Dispute Resolution Procedure*) of the Agreement, notwithstanding any provision to the contrary contained in the terms and conditions of the Concessionary Travel Scheme.

9.11 To the extent that the Operator provides any equipment and software (the "**Operator Equipment and Software**"), the Operator shall ensure that:

9.11.1 the Operator Equipment and Software are or will be Euro Compliant before the introduction of the single European currency in the United Kingdom and Project Operations will not be affected by the introduction of the single European currency in the United Kingdom;

9.11.2 the Operator's own internal systems and procedures are or will be Euro Compliant before the introduction of the single European currency in the United Kingdom and the continuity of supply of the Project Operations will not be affected by the introduction of the single European currency in the United Kingdom; and

9.11.3 the Operator Equipment and Software shall at all times throughout the Term be compliant with all Law applicable in relation to the Euro in the United Kingdom, including the rules on conversion, triangulation and rounding set out in EU Regulation Number 1103/97 and any subsequent or similar regulations or Laws.

9.12 For the purposes of Clause 9.11 above "**Euro Compliant**" means that (i) the introduction of the Euro within the United Kingdom or any part thereof shall not affect the performance or functionality of any relevant items nor cause such items to malfunction, end abruptly, provide invalid results or adversely affect business, and (ii) all currency reliant and currency related functions (including all calculations concerning financial data) of any relevant items to enable the introduction and operation of the Euro, and (iii) in particular (but without limitation) each and every relevant item shall, to the extent it performs or relies upon currency related functions (including all calculations concerning financial data):

9.12.1 be able to perform all such functions in both the national currency of the United Kingdom and in Euros;

9.12.2 during any transition phase applicable to the United Kingdom, be able to deal with the dual denominations of the Euro and national currency of the United Kingdom;

- 9.12.3 recognise, accept, display and print all the Euro currency symbols and alphanumeric codes which may be adopted by any government and other European Union body in relation to the Euro;
- 9.12.4 incorporate protocols for dealing with rounding and currency conversion;
- 9.12.5 recognise data expressed in, and express any output data in, the national currency of the United Kingdom and the Euro; and
- 9.12.6 permit the input of data in Euros and display an outcome in Euros where such data, supporting tie's normal business practices, operates in Euros and/or the national currency in the UK.

10. SYSTEM BYELAWS AND REGULATIONS UNDER THE PUBLIC PASSENGER VEHICLES ACT 1981

10.1 tie shall:

- 10.1.1 if it considers necessary for the regulation of conduct of passengers or lost property in respect of the System, give effect to such regulations made (or having effect as if made) under section 25 or 60(1)(k) of the Public Passenger Vehicles Act 1981 as it considers appropriate as if Trams were public service vehicles used in the provision of Local Services; and
- 10.1.2 subject to the confirmation of the Scottish Ministers (if required), if tie considers it necessary for the regulation of the use, or operation of, or travel on, the System or the maintenance of order on the System or on facilities provided in connection with the System, request CEC to make byelaws regulating such matters.

10.2 The Operator shall be responsible for the enforcement of all regulations and byelaws referred to in Clause 10.1 above including the prosecution of offences thereunder.

10.3 tie shall consult with the Operator when considering the matters referred to in Clause 10.1 above.

10.4 The Operator shall propose draft regulations and draft byelaws to tie as the Operator considers are necessary for the regulation of the use, or operation of, or travel on, the System or the maintenance of order on the System or on facilities provided in connection with the System,

11. OPERATION AND MAINTENANCE PROCEDURES

- 11.1 The Operator shall be responsible for Operator Maintenance and in relation to such maintenance, the Operator shall comply with the Operator Maintenance Plan.
- 11.2 The Infrastructure Provider shall be responsible for all Infrastructure Provider Maintenance. The Operator and tie agree to work in mutual cooperation to ensure that the Infrastructure Provider performs such maintenance in accordance with the terms of the relevant IDA with a view to ensuring that the System as a whole and each part of it are continuously available.
- 11.3 tie and the Operator may agree from time to time the extent to which the exercise of tie's contractual rights under the IDA are delegated to the Operator.
- 11.4 The Operator shall work together with the Infrastructure Provider, both through the exercise of contractual rights delegated to the Operator pursuant to Clause 11.3 above and generally, with the intention that the Transport Services be delivered in accordance with the Operating Output Specification without interruption for maintenance purposes. Without limitation:
- 11.4.1 the Operator shall promptly notify the relevant Infrastructure Provider of any requirement for Infrastructure Provider Maintenance of which the Operator becomes aware; and
- 11.4.2 the Operator shall co-operate with the Infrastructure Provider in relation to the planning of Infrastructure Provider Maintenance .
- 11.5 If, at any time, it appears to the Operator likely that any planned maintenance to be carried out by the Operator or by any Infrastructure Provider will necessitate interruption to or restriction of the Transport Services on the System, the Operator shall:
- 11.5.1 notify tie not less than four weeks prior to such planned interruption to or restriction of the Transport Services if practicable, having regard to the Operator becoming aware of the same, and take all reasonable steps to notify passengers as soon as reasonably practicable in advance of the carrying out of such planned maintenance, of the nature of such work and the likely disruption to the Transport Services; and

11.5.2 take all steps which are reasonably practicable to minimise the adverse consequences of such work to passengers, such steps to include an alternative means of transportation being in service where the Transport Services will not be provided in accordance with the Operating Output Specification for a continuous period of 1 hour or more.

11.6 In the event of any unplanned maintenance or repair works to be carried out by the Operator or any Infrastructure Provider as a result of a system failure, breakdown or an emergency, the Operator shall:

11.6.1 notify **tie** as soon as possible of the nature of such work and the likely disruption to the Transport Services;

11.6.2 take all reasonable steps to notify passengers as soon as reasonably practicable of the nature of such work and the likely disruption to the Transport Services, and where possible such notification shall be in advance of the carrying out of such work; and

11.6.3 take all steps which are reasonably practicable to minimise the adverse consequences of such work to passengers. Where the Operator considers that such work will result in the Transport Services not being provided in accordance with the Operating Output Specification for a continuous period of 2 hours or more, such steps shall include an alternative means of transportation being in service as soon as reasonably practicable. For the purposes of this Clause 11.6.3, the Parties acknowledge that it will generally be reasonably practicable for the Operator to arrange for an alternative means of transportation to be in service within 90 minutes of becoming aware of the requirement for it.

12. SERVICE PERFORMANCE AND QUALITY MONITORING

12.1 The Operator shall comply with the provisions of the KPI Regime and the Performance Monitoring Regime and shall send such representatives as **tie** may reasonably require to a monthly performance meeting convened on notice by **tie** and such other meetings as **tie** may reasonably require from time to time to discuss the performance by the Operator of the Project Operations in accordance with the Agreement.

- 12.2 **tie** shall procure that throughout the Service Period a helpdesk ("**Helpdesk**") accessible to the public and third parties in person at a central Edinburgh location and by use of a freephone or local call rate number, e-mail address and postal address (such number, e-mail address and postal address to be published by the Operator at each Tramstop and on each Tram) is provided. The Helpdesk shall accurately record all communications and calls made to it. **tie** shall procure that throughout the Service Period the Helpdesk or other appropriate facility is responsible for dealing with enquiries from the public with regard to lost property. The Operator shall deliver to the Helpdesk at a central Edinburgh location notified by **tie** such lost property from the Edinburgh Tram Network within 24 hours of discovery, tagged with where, when it was found and an estimated approximate item value.

Service Quality Report

- 12.3 The Operator shall submit a Service Quality Report to **tie** no later than three Business Days following the end of each Reporting Period. Such report shall contain the KPI Monitoring Report referred to at paragraph 8 of Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) to this Appendix and, in a form to be agreed with the **tie** Project Manager, data showing consolidated Actual Tram Patronage (boarders) and Operating Costs. For the avoidance of doubt, **tie** shall not be obliged to process any invoice submitted by the Operator during Phase D in the absence of the Service Quality Report pertaining to the relevant Reporting Period. The Operator shall (subject to Clause 9.11 of this Operating Appendix and Clause 12.19 of the Agreement) be responsible for ensuring that the data contained in the Service Quality Report is generated automatically and, to the extent practicable, electronically.
- 12.4 In addition to the Service Quality Reports to be submitted by the Operator pursuant to Clause 12.3 above, the Operator shall prepare and submit to **tie** an Annual Service Report on or about 31 March in each year during the Service Period in accordance with Clause 16.5 of this Appendix.

PART III: GENERAL OBLIGATIONS

13. GENERAL STANDARDS

- 13.1 The Operator shall (each as a distinct and separate obligation):

- 13.1.1 perform the Transport Services and the Project Operations:

- 13.1.1.1 in accordance with the requirements of Clause 5 (*The Transport Services*) of this Appendix
- 13.1.1.2 in accordance with Good Industry Practice from time to time with regard to the activity concerned;
- 13.1.1.3 in such manner so as not wilfully to detract from the image and reputation of tie and/or CEC;
- 13.1.1.4 in a manner that shall ensure that the safety of persons working on, using, or in contact with the System shall not be compromised;
- 13.1.2 to the extent applicable to the Transport Services and the Project Operations, in accordance with the Code of Construction Practice and the Code of Maintenance Practice; and
 - 13.1.2.1 in accordance with the Environmental Statement, and the mitigation measures contained in it; and
 - 13.1.2.2 in accordance with the Scottish Private Bill(s) and all ancillary regulations once enacted;
- 13.1.3 implement, in accordance with paragraph 6 of Schedule 4 (*Operating Output Specification*) to the Operating Appendix, all component plans which constitute the Operating Method Statement as developed under paragraph 26 of the Project Development Output Specification;
- 13.1.4 enforce a comprehensive no smoking, no alcohol and no abuse of drugs or other substances policy for the System;
- 13.1.5 implement a process of continuous improvement to facilitate the continuous operation of the System during the Term;
- 13.1.6 procure that records of tickets sales and usage of ticket types on the Edinburgh Tram Network (including tickets granted under concessionary arrangements) are collated subject to Clause 9.11 of this Operating Appendix and Clause 12.19 of the Agreement and retained and made available to the tie Project Manager on request;

13.1.7 procure that regular liaison meetings are held during the Service Period to enable all aspects of Project Operations to be discussed in accordance with Clause 6 (*Management of the Project*) of the Agreement; and

13.1.8 ensure that its senior managers and those of the Operator Parties receive disability equality training.

13.2 The Operator shall throughout the conduct of the Project Operations have full regard for the safety of all persons on the System Land (whether lawfully or not) in accordance with Good Industry Practice, to avoid risk to such persons.

14. QUALITY ASSURANCE

14.1 The Operator shall procure that all aspects of the Project Operations are carried out in accordance with the quality management systems set out in the Quality Management Plan.

14.2 The Operator shall appoint (or shall procure the appointment of) a Quality Manager with effect from the Operating Effective Date (if not already appointed prior to such date), who shall not be directly involved in the day-to-day performance of the Project Operations. The identity of the Quality Manager (and any replacement) shall be subject to the approval of the tie Project Manager (such approval not to be unreasonably withheld or delayed). Without limitation, the Operator shall ensure that the terms and conditions of employment of the Quality Manager shall require him to comply with the requirements of Clause 7.5 of the Agreement.

14.3 The tie Project Manager may, at his discretion, carry out audits of the Operator's quality system (including the Quality Management Plan and any quality manuals and procedures) at approximate intervals of 12 months during the Service Period and may carry out other periodic monitoring, spot checks and auditing of the Operator's quality management systems and the other quality systems referred to in this Clause 14 (*Quality Assurance*). The Operator shall procure that the tie Project Manager shall have a like right in respect of each Operator Party. The Operator shall co-operate and shall procure that any Operator Party co-operates with the tie Project Manager including providing him with all access, assistance, information and documentation which he reasonably requires in connection with his rights under this Clause 14 (*Quality Assurance*).

14.4 If, following any monitoring, spot check or audit undertaken pursuant to Clause 14.3 above, it is discovered that the Operator has failed, and/or that the Operator (on the balance of probabilities) will fail, to comply with the Agreement, **tie** may (without prejudice to any other right or remedy available to it) by notice to the Operator:

14.4.1 increase the level of its monitoring of the Operator until such time as the Operator shall have demonstrated to the satisfaction of **tie** that it is capable of performing and will perform all its obligations under the Agreement, in which case the Operator shall compensate **tie** for any reasonable additional costs incurred by **tie** as a result of such increased monitoring; and/or

14.4.2 require the Operator to undertake such steps as **tie**, acting reasonably, considers necessary to ensure compliance with the Agreement provided that:

- i) such a requirement shall not result in any amendment to the Target Operating Costs or the Fixed Costs; and
- ii) if the Operator does not agree that such steps are necessary for such purposes, it may refer the matter for determination under the Dispute Resolution Procedure and shall not be obliged to take such steps until the matter has been so determined.

15. ADVERTISING

There shall be no Operator advertising permitted on or in any of the Trams and/or the Tramstops or at any other location on the System save that recognition of the corporate identity of the Operator shall be permitted (a) in appropriate tram specific publications issued by **tie** or others; (b) on paper letterhead; and (c) within the interior of the Trams, subject to the Operator proposing such Operator recognition under (a), (b) or (c) to **tie**, and **tie** agreeing to any such proposals (such agreement to be at **tie**'s absolute discretion).

16. BEST VALUE AND PROJECT PHASE D BENCHMARKING

16.1 The Operator shall, throughout the Term and to the extent consistent with its obligations under the Agreement, make arrangements to secure continuous improvement in the way in which Project Operations are conducted having regard to the Project Vision and, a combination of economy, efficiency and effectiveness.

16.2 The Operator agrees to undertake (or refrain from undertaking) such actions as **tie** shall reasonably request:

- 16.2.1 supporting and assisting **tie** (in compliance with Clause 49 (*Information and Audit Access*) of the Agreement) in preparing best value performance plans and conducting best value reviews in relation to Project Operations;
 - 16.2.2 complying with requests for information, data or other assistance made by **tie** in pursuance of its best value assessment; and
 - 16.2.3 complying with all requests by **tie** to procure the attendance of specific officers or employees of the Operator or Operator Parties at any **tie** meetings at which Project Operations are to be discussed (but not, otherwise in exceptional circumstances, more than three times in any one year).
- 16.3 The Parties acknowledge that **tie** may prepare best value performance plans and conduct a best value review in conjunction with the reset of the Target Operating Costs, Fixed Costs (excluding the Category Five Fixed Costs) and Target Patronage pursuant to Clause 21 (*Reset of the Fixed Costs, Target Operating Costs and the Target Patronage*) of this Appendix.
- 16.4 **tie** may undertake an annual or other frequency customer satisfaction survey ("**tie** Customer Satisfaction Survey") in order to:
- 16.4.1 assess satisfaction among the public and passengers with Project Operations and, in particular, with the quality, efficiency and effectiveness of the Transport Services;
 - 16.4.2 complement preparation of the Annual Service Report; and
 - 16.4.3 monitor compliance by the Operator with its obligations including its management of systems availability and maintenance;

and the Operator shall provide reasonable assistance to enable **tie** to undertake the **tie** Customer Satisfaction Survey and **tie** shall provide the results of each such survey to the Operator in so far as each such survey is relevant to the performance of the Project Operations by the Operator.

- 16.5 The tie Customer Satisfaction Survey shall be carried out by means of passenger questionnaire. tie shall allow the Operator a reasonable prior opportunity, in respect of the development of each questionnaire, to comment upon each such questionnaire. tie shall meet with the Operator to discuss such comments and tie shall take due account of these comments provided that such comments are reasonable
- 16.6 Without prejudice to any other provision in the Agreement (and no later than two Reporting Periods prior to the end of any year in which reset will take place in accordance with Clause 21 (*Reset of the Fixed Costs, Target Operating Costs and the Target Patronage*) of this Appendix and in other years within one Reporting Period of the year end) the Operator shall, at its own cost, provide a written report (the "**Annual Service Report**") which shall review the quality and performance of the Transport Services and the performance of all Project Operations measured during the relevant period and show the key issues to be addressed going forward, including customer feedback, operational issues and Transport Services improvement proposals. The customer feedback shall include the results of any tie Customer Satisfaction Survey carried out pursuant to Clause 16.4 above. The Operator shall upon written request promptly provide supporting information to verify and audit the information and other material contained in the Annual Service Report.
- 16.7 tie may make comments on and/or objections and specify omissions in the supporting information or the Annual Service Report and in such case shall provide the Operator with written comments and/or objections within 30 Business Days of receipt. In the absence of such tie comments or objections, the supporting information (or the Annual Service Report) shall be deemed to have been accepted by tie.
- 16.8 The Operator shall, within 30 Business Days of receipt of tie comments and/or objections, make revisions having regard to such comments and/or objections and resubmit the information and report to tie. If the information and reports cannot be agreed by the Parties then the matter will be determined in accordance with the Dispute Resolution Procedure.
- 16.9 If, in tie's reasonable opinion, the provision and performance of Project Operations or delivery of the Transport Services (or any part of them) could be more effective, efficient and economic having regard to the Annual Service Report and the tie Customer Satisfaction Survey, then tie may serve a tie Notice of Change pursuant to Clause 24 (*tie Changes*) of this Appendix stating the desired nature and timing of the

changes to the provision or performance of Project Operations or delivery of the Transport Services (or the relevant part thereof).

- 16.10 The Operator shall, in conjunction with **tie**, develop Best Value Improvement Plans setting out mutually agreed tasks between the Operator and **tie** to improve the delivery of the Transport Services and demonstrate continuous improvement in the Transport Services and the achievement of the Project Vision and wider Project objectives within the Integrated Transport Initiative for Edinburgh and South East Scotland.
- 16.11 The preparation of Best Value Improvement Plans will take into account the conclusions from the Annual Service Report and any **tie** Customer Satisfaction Surveys that have been undertaken and reported to the Operator.

PART VI: FINANCIAL MATTERS

17. COLLECTION OF FARE REVENUE

- 17.1 Without prejudice to the general applicability of Clause 55 (*No Partnership or Agency*) of the Agreement, the Operator is authorised by **tie** to enter into contracts of carriage with passengers using the Transport Services as agent for **tie**. The terms and conditions of such contracts of carriage shall be as determined by the Operator and **tie** during Project Phase A and Project Phase B, and as amended from time to time in accordance with the terms of the Agreement. The Operator shall issue tickets and collect fares as agent for **tie** in accordance with the terms of the Agreement, and shall pass all Patronage Revenue collected or received to **tie** in accordance with Clause 18 (*Payment of Operating Revenue to tie*) of this Appendix. For the avoidance of doubt, the Operator shall have no rights in the Patronage Revenue collected.
- 17.2 In operating the Transport Services, the Operator shall, and shall ensure that all Operator Parties shall, comply with the Operating Method Statements in relation to the issue of tickets and the collection of Fares, including:
- 17.2.1 charging all passengers the correct Fares for their journey and issuing such passengers with the corresponding ticket; and
- 17.2.2 checking that all tickets and other passes held by passengers are valid for the journey being taken.

- 17.3 The Operator shall allow the tie Inspectors to board any Trams providing the Transport Services at any time for the purpose of:
- 17.3.1 checking that the Operator and all Operator Parties are complying with the terms of the Agreement;
 - 17.3.2 monitoring the Operator's performance for the purpose of the KPI Regime and the Performance Monitoring Regime;
 - 17.3.3 carrying out any tie Customer Satisfaction Survey; and
 - 17.3.4 checking the Operator's records in relation to passenger numbers and fares collected or received by the Operator.
- 17.4 The Operator shall ensure that all Operator Parties comply with any reasonable instructions given to them by the tie Inspectors in accordance with the terms of the Agreement, provided that any such instruction by the tie Inspectors shall in no circumstances result in liability for tie or excuse the Operator from performance of its obligations pursuant to the Agreement.

18. PAYMENT OF OPERATING REVENUE TO TIE

- 18.1 The Operator shall pay to tie all Operating Revenues collected or received by the Operator and shall report daily to tie on the Operating Revenues for the previous Business Day or days in the case of an Edinburgh Holiday or a Sunday.
- 18.2 All Operating Revenues collected by the Operator shall be paid into such bank account as may be nominated by tie from time to time, such payments to be made each Business Day. In the event the Operator is unable to pay Operating Revenues into the nominated bank account, the Operator shall ensure that the collected funds are safeguarded properly pending their delivery to the nominated bank (including adequate insurance against loss or theft) and are remitted to the bank account the next following Business Day.
- 18.3 Within 2 Business Days of the end of each Reporting Period, the Operator shall prepare and deliver to the tie Project Manager a statement setting out full details of the amounts paid by the Operator to tie pursuant to Clause 18.1 above during such Reporting Period.

19. PAYMENTS TO THE OPERATOR

- 19.1 Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) of this Appendix shall apply in respect of any Phase with effect from the Service Commencement Date for such Phase.
- 19.2 The Operator's only entitlement to payment from tie in respect of the performance of the Project Operations shall be as expressly provided in this Appendix and Clause 12 (*Interface with the Infrastructure Provider*) of the Agreement.

20. ADJUSTMENT OF FIXED COSTS, TARGET OPERATING COSTS AND TARGET PATRONAGE

- 20.1 The circumstances under which the Target Operating Costs, Fixed Costs (excluding the Category Five Fixed Costs) and Target Patronage may be adjusted during Project Phases C and D shall be limited to:

- 20.1.1 Qualifying Change in Law and Permanent Roads Change; or
- 20.1.2 Long Term Roads Change (in respect of Target Operating Costs and/or Fixed Costs); or
- 20.1.3 tie Change or Operator Change; or
- 20.1.4 the reset of the Target Operating Costs, Fixed Costs and the Target Patronage pursuant to Clause 21 (*Reset of the Fixed Costs Target Operating Costs and the Target Patronage*) of this Appendix; or
- 20.1.5 the circumstances described in Clause 12.3

in each case where there is or will be a material effect on the Operator's ability to achieve the Target Operating Costs or Target Patronage and/or a material effect on the Operator's ability to continue to perform its obligations in terms of this Agreement in respect of the Fixed Costs and to the extent any adverse effect cannot be addressed by reasonable mitigation measures. The foregoing is without prejudice to the provisions of Clauses 10.4, 10.5, 10.8 and 10.9 of the Agreement.

- 20.2 tie shall establish a Joint Revenue Committee to:
 - 20.2.1 set Target Patronage during Project Phase B and adjust the Target Patronage in the circumstances set out in Clause 20.1 of this Operating Appendix where

- agreed or determined in accordance with the appropriate provisions of this Agreement;
- 20.2.2 assess, revise (where appropriate) and agree forward estimates for the patronage which could be attracted from the operation of each Phase and the operation of the Edinburgh Tram Network; and
- 20.2.3 review proposals for the maximisation of revenue from the operation of the System.
- 20.3 **tie** shall procure that the Joint Revenue Committee shall meet:
- 20.3.1 during Project Phase B in advance of the setting of Target Patronage;
- 20.3.2 in advance of each reset to be carried out in accordance with Clause 21 (*Reset of the Fixed Costs, Target Operating Costs and the Target Patronage*);
- 20.3.3 in advance of each review of TEL Fares Policy; and
- 20.3.4 from time to time at **tie's** request.
- 20.4 **tie** and the Operator may agree that an additional patronage consultant should be appointed to join the Joint Revenue Committee. **tie** shall appoint such patronage consultant and the Operator shall assist in the procurement, evaluation and appointment of such patronage consultant. The terms of the engagement of the patronage consultant will be determined by **tie**.
- 20.5 Both **tie** and the Operator agree that the briefing to the members of the Joint Revenue Committee shall be in such terms so as to require the Joint Revenue Committee to arrive at an agreed estimate of patronage.
- 20.6 Both **tie** and the Operator agree that they shall not raise any Dispute with regard to agreed estimates of patronage prepared by the Joint Revenue Committee in accordance with this Clause 20 (*Adjustment of Fixed Costs, Target Operating Costs and Target Patronage*), to the Dispute Resolution Procedure.
- 20.7 The Joint Revenue Committee shall be required in terms of the briefing given under Clause 20.5 above, to prepare a profile of Target Patronage for each Year during Project Phase D. Such profile shall refer to how revenues may vary seasonally and in accordance with fluctuations in service levels including bank holidays.

21. RESET OF THE FIXED COSTS, TARGET OPERATING COSTS AND THE TARGET PATRONAGE

- 21.1 Either Party may notify the other no later than six Reporting Periods prior to a Reset Decision Date of their intention to request operation of this Clause 21 (*Reset of the Fixed Costs, Target Operating Costs and the Target Patronage*) and shall provide to the other Party a detailed submission in support of that request within 30 days of such notification.
- 21.2 No later than three Reporting Periods prior to the third anniversary of the Service Commencement Date of the first Phase (and each following third anniversary, in each case a "Reset Decision Date") in respect of which the Operator provided the Transport Services, ~~tie~~ and the Operator shall review:
- 21.2.1 the Operating Costs incurred by the Operator in the previous 3 years, and compare such costs to the Target Operating Costs and the Fixed Costs;
 - 21.2.2 the Actual Tram Patronage (boarders) generated by the System in the previous 3 years, and compare such patronage to the Target Patronage;
 - 21.2.3 the performance of the Operator under all aspects of the Performance Monitoring Regime and the Operator's Project Return;
 - 21.2.4 the contents of the most recent Annual Service Report;
 - 21.2.5 the results of any ~~tie~~ Customer Satisfaction Surveys undertaken; and
 - 21.2.6 any Best Value Improvement Plans produced pursuant to Clause 16.10 of this Appendix
- 21.3 Following such review which shall expressly take into account the Project Return, the Base Case Assumptions, Part A of Schedule 17 (*Setting of Fixed Costs*) in respect of drivers' salaries and benefits and other related salaries and benefits, and the positions stated in the Financial Proposals, the Operator Financial Model and the Project Development and Operating Costs, the Parties may agree to revise the Payment Mechanism, the Fixed Costs (except for the Category Five Fixed Costs), the Target Operating Costs and /or the Target Patronage (including, if relevant, the applicable pain/gain sharing structure and/or the KPI Regime). Where the Parties agree to revise this Appendix by resetting any of the matters listed in this Clause 21.3 (or otherwise) all other rights and obligations under the Agreement shall remain unchanged.

21.4 If the Parties are unable to agree revisions to the Payment Mechanism, Fixed Costs (excluding the Category Five Fixed Costs) , Target Operating Costs and /or Target Patronage and/or KPI Regime prior to the anniversary referred to in Clause 21.2 above (or 21.5 below as the case may be), either Party may refer the Dispute to the Dispute Resolution Procedure provided always that tie shall be entitled to serve notice to terminate pursuant to Clause 38 (*Voluntary Termination by tie*) of the Agreement.

21.5 The Operator and tie shall carry out further reviews in accordance with Clauses 21.1 to 21.4 above no later than three Reporting Periods prior to the following Reset Decision Dates:

21.5.1 the sixth anniversary;

21.5.2 the ninth anniversary;

21.5.3 the twelfth anniversary

of the Service Commencement Date of the first Phase in respect of which the Operator provided the Transport Services.

22. RELIEF EVENTS

22.1 If and to the extent that a Relief Event:

22.1.1 is the direct cause of a delay in achievement of Service Commencement or Full Service Commencement in respect of any Phase; and/or

22.1.2 materially and adversely affects the ability of the Operator to perform any of its obligations under the Agreement;

then the Operator shall be entitled to apply for an extension of time and/or relief from any rights of tie arising under Clause 35 of the Agreement (*Termination on Operator Default*).

22.2 To obtain such extension or relief, the Operator must:

22.2.1 as soon as practicable, and in any event within 14 days after it became aware that the Relief Event has caused or is likely to cause delay or adversely affect the ability of the Operator to perform its other obligations, give to tie a notice of its claim for relief, including full details of the nature of the Relief Event, the date of occurrence and its likely duration;

22.2.2 within 7 days of receipt by **tie** of the notice referred to in Clause 22.2.1 above, give full details of the relief and/or extension claimed; and

22.2.3 demonstrate to the reasonable satisfaction of **tie** that:

22.2.3.1 the Operator and the Operator Parties could not have avoided the occurrence or consequences of the relevant Relief Event by steps which they might reasonably be expected to have taken, without incurring substantial expenditure;

22.2.3.2 the Relief Event directly caused the delay and/or the need for relief;

22.2.3.3 the time lost and/or relief needed could not reasonably be expected to be mitigated or recovered by the Operator acting in accordance with Good Industry Practice, without incurring substantial expenditure; and

22.2.3.4 the Operator is using best endeavours to perform its obligations under the Agreement.

22.3 In the event that the Operator has complied with its obligations under Clause 22.2 above and **tie** is reasonably satisfied as to the matters specified in Clause 22.2.3 above, then:

22.3.1 the Planned Service Commencement Date shall be postponed by such time as shall be reasonable for such a Relief Event, taking into account the likely effect of delay; and

22.3.2 **tie** shall not be entitled to exercise rights to terminate the Agreement under Clause 35 (*Termination on Operator Default*) of the Agreement or Clause 34 (*Persistent Breach*) of the Agreement as a result of failure by the Operator to comply with its obligations to the extent that compliance is prevented by the Relief Event.

22.4 Nothing in Clause 22.3 above shall affect any entitlement to award Performance Points to the Operator for the purposes of operation of the KPI Regime (excluding the issue of a Major KPI Breach Notice) during the period in which the Relief Event is subsisting.

- 22.5 In the event that information required by Clause 22.2 above is provided after the dates referred to in that Clause, then the Operator shall not be entitled to any relief.
- 22.6 The Operator shall notify tie if at any time it receives or becomes aware of any further information relating to the Relief Event, giving details of that information to the extent that such information is new or renders information previously submitted materially inaccurate or misleading.
- 22.7 If the Parties cannot agree the extent of the relief required, or tie disagrees that a Relief Event has occurred or that the Operator is entitled to any extension of time and/or relief, either Party may refer the matter for determination in accordance with the Dispute Resolution Procedure.

PART VII: VARIATIONS AND CHANGES IN LAW

23. PERFORMANCE AND FINANCIAL ADJUSTMENTS

23.1 Where the Operator may be entitled to an adjustment as a result of a Relevant Event to (i) the Operating Output Specification, (ii) the Target Costs for Project Phase C2, (iii) the Target Operating Costs, (iv) the Fixed Costs (excluding the Category Five Fixed Costs), and/or (v) the Target Patronage, the provisions of this Clause 23.1 shall apply:

23.1.1 The Operator shall demonstrate the actual and/or projected impact of the Relevant Event and propose any amendments to the Operating Output Specification designed to mitigate and/or eliminate that impact. Any necessary amendments as a result of or consequence of the Relevant Event to the Operating Output Specification, the Base Case Assumptions, the Target Costs for Project Phase C2, the Target Operating Costs, the Fixed Costs (excluding the Category Five Fixed Costs) and/or the Target Patronage (as appropriate) shall be agreed, or in the absence of agreement determined, on the reference of either Party, pursuant to the Dispute Resolution Procedure so that:

- (i) the projected performance of the Operator against the Operating Output Specification (as measured by the KPI Regime) is No Better and No Worse than the average performance of the Operator against the Operating Output Specification (as measured or to be measured by the KPI Regime) in the 13 Reporting Periods immediately preceding the first Reporting Period in which the Relevant Event has effect ignoring for these purposes any failure to meet the requirements of the Operating Output Specification arising by virtue of that Relevant Event;
- (ii) in determining any amendments to the Operating Output Specification, due regard shall be had to the positions set out in the Financial Proposals, the Operator Financial Model, the Project Development and Operating Costs, and in particular the Base Case Assumptions.

- 23.2 Where a Permanent Roads Change occurs which is beneficial to the Operator, **tie** shall be entitled to require an adjustment to the Operating Output Specification, the Target Costs for Project Phase C2, the Target Operating Costs, the Fixed Costs (excluding the Category Five Fixed Costs) and/or the Target Patronage, as the case may be, in accordance with this Clause 23 (*Performance and Financial Adjustments*) to reflect the beneficial effects of such Permanent Roads Change .
- 23.3 The Profit Element shall be set at the DPOFA Variation Date and shall be Indexed throughout the Term of this Agreement, and shall not be otherwise adjusted except in the following circumstances:
- 23.3.1 in the case of a **tie** Change which involves Network Expansion or a material alteration in the scope of Project Operations such that it is reasonable to project (using the provisions of Clauses 24.3 to 24.5) a change in excess of 25% in either annual Operating Costs or annual Actual Tram Patronage (boarders) provided always that such reduction shall not reduce the Profit Element payable to the Operator in accordance with this Agreement to a level below the Minimum Profit Element;
- 23.3.2 in the case of a **tie** Change, which relates to a truncation of Phase 1a (6 and 12 trams per hours), Phase 1a (8 and 16 trams per hour) and/or Phase 1a plus Phase 1b (8 and 16 trams per hour) from what was anticipated at the DPOFA Variation Date to form part of the Edinburgh Tram Network but which does not amount to a change in excess of 25% in either annual Operating Costs or annual Actual Tram Patronage (boarders), the Profit Element shall be reduced on a pro-rated basis to reflect the proportionate reduction in Target Operating Costs, Target Costs for Project Phase C2 and/or Fixed Costs (excluding the Category Five Fixed Costs) provided always that such reduction shall not reduce the Profit Element payable to the Operator in accordance with this Agreement to a level below the Minimum Profit Element;
- 23.3.3 in the case of a **tie** Change to any of the Required Insurances, the Profit Element shall be adjusted by applying the Project Return for the relevant Project Phase to the relevant Target Operating Costs, the relevant Target Costs for Project Phase C2 and/or the relevant Fixed Costs relative to the required Insurances subject to the **tie** Change to calculate the profit element applicable to the relevant Required Insurance and then using such calculation

to make the appropriate increase or decrease to the Profit Element provided always that

23.3.3.1 if there is any increase to the Profit Element, the Operator shall be paid whichever is the greater of the Minimum Profit Element or the Profit Element (as adjusted in accordance with Clause 23.3.3); and

23.3.3.2 any decrease shall not reduce the Profit Element payable to the Operator in accordance with this Agreement to a level below the Minimum Profit Element.

23.3.4 in the case of a tie Change where tie takes out and maintains any of the Required Insurances itself or agrees to pay the actual costs of any of the Required Insurances to the Operator rather than make payment to the Operator on a fixed or target basis, then no Profit Element shall be payable by tie to the Operator in respect of any such Required Insurances and if any Profit Element is paid to the Operator by tie in relation to any such Required Insurances, then the relevant part of the Profit Element shall be adjusted accordingly by applying the Project Return for the relevant Project Phase to the relevant Target Operating Costs, the relevant Target Costs for Project Phase C2 and/or the relevant Fixed Costs to calculate the profit element applicable to the relevant Required Insurance and then using such calculation to make the appropriate increase or decrease to the Profit Element provided always that

23.3.4.1 if there is any increase to the Profit Element, the Operator shall be paid whichever is the greater of the Minimum Profit Element or the Profit Element (as adjusted in accordance with Clause 23.3.4); and

23.3.4.2 any decrease shall not reduce the Profit Element payable to the Operator in accordance with this Agreement to a level below the Minimum Profit Element

23.3.5 in the case of a tie Change in accordance with paragraph 16.6 of Schedule 2 (*Project Development Output Specification*), a sum of 6.7% of the actual costs of such tie Change shall be added to the Profit Element provided always that the Operator shall be paid whichever is the greater of the

Minimum Profit Element or the Profit Element (as adjusted in accordance with this Clause 23.3.5); .

24. tie CHANGES

24.1 Unless expressly stated in this Agreement or as may otherwise be agreed by the Parties, tie Changes shall be dealt with in accordance with this Clause 24 (*tie Changes*). If tie requires a tie Change, it must serve a tie Notice of Change on the Operator. If a deemed tie Change or in this Agreement, a matter is stated to be treated as a tie Change, then tie shall issue a tie Notice of Change.

24.2 A tie Notice of Change shall:

24.2.1 set out the proposed tie Change required in sufficient detail to enable the Operator to calculate and provide the Estimate in accordance with Clause 24.3 below;

24.2.2 require the Operator to provide tie within 21 days of receipt of the tie Notice of Change with an Estimate; and

24.2.3 set out whether tie wishes to pay for any proposed tie Change on the basis of target costs, fixed costs or actual costs.

24.3 As soon as is reasonably practicable, and in any event within 21 days after having received a tie Notice of Change, the Operator shall deliver to tie the Estimate. The Estimate shall include the opinion of the Operator (acting reasonably) on:

24.3.1 whether relief from compliance with any of its obligations is required (including the obligations of the Operator to achieve Service Commencement by the Planned Service Commencement Date and to meet the requirements of the Operating Output Specification or the Project Development Output Specification), during or as a result of the implementation of the proposed tie Change;

24.3.2 any impact on the performance of the Project Operations and/or the Project Development Services;

24.3.3 any amendment (including an amendment to the Target Costs for Project Phase C2, the Target Operating Costs, the Fixed Costs (excluding the Category Five Fixed Costs) and/or the Target Patronage) required to the

Agreement as a result of the implementation of the proposed **tie** Change, calculated in accordance with Clause 23 (*Performance and Financial Adjustments*) of this Appendix and the Base Case Assumptions (if appropriate);

24.3.4 any Necessary Consents which are required as a result of the implementation of the proposed **tie** Change;

24.3.5 the proposed method of certification of any aspects of the Project Operations or the Project Development Services required by the proposed **tie** Change; and

24.3.6 the estimated actual costs of the proposed **tie** Change.

24.4 The Operator shall include in the Estimate evidence demonstrating that:

24.4.1 the Operator has used all reasonable endeavours to minimise, and procure that the Operator Parties minimise (including by the use of competitive quotes) any increase in costs and to maximise, and procure that the Operator Parties maximise, any reduction of costs;

24.4.2 the Operator has, to the extent reasonably practicable, sought competitive quotes from persons other than the Operator Parties in pursuance of its obligation under Clause 24.4.1 above;

24.4.3 the proposed **tie** Change will be implemented in the most cost-effective manner, including showing that when such expenditure is incurred, Changes in Law that are foreseeable at that time have been taken into account by the Operator; and

24.4.4 any expenditure that has been avoided, which was anticipated to be incurred and any likely increase in Actual Tram Patronage Boarders as a result of the proposed **tie** Change, has been taken into account in the proposed amendments to the Target Operating Costs, Target Costs for Project Phase C2, the Fixed Costs and/or Target Patronage included in the Estimate.

24.5 If the Operator does not intend to use its own resources to implement any proposed **tie** Change, it shall:

24.5.1 demonstrate that it is appropriate to subcontract the implementation of such **tie** Change; and

24.5.2 comply with Good Industry Practice with the objective of ensuring that it obtains best value for money (taking into account all relevant circumstances including, in particular, the requirement that the Operator should be left in No Better and No Worse position as a result of the implementation of the proposed **tie** Change) when procuring any work, services, supplies, materials or equipment required in relation to the proposed **tie** Change .

24.6 As soon as reasonably practicable after **tie** receives the Estimate, the Parties shall discuss and agree the issues set out in the Estimate. From such discussions **tie** may modify the **tie** Notice of Change, and (if the estimated increase in the Target Costs for Project Phase C2, the Target Operating Costs and/or Fixed Costs (excluding the Category Five Fixed Costs) in respect of the proposed **tie** Change is expected to exceed £10,000 (Indexed) and it is practicable for the Operator to do so) **tie** may require the Operator to seek and evaluate competitive tenders. In each case the Operator shall, as soon as practicable, and in any event not more than 14 days after receipt of such modification, notify **tie** of any consequential changes to the Estimate.

24.7 If the Parties cannot agree on the contents of the Estimate, then either Party may refer the Estimate for determination in accordance with the Dispute Resolution Procedure provided that the Operator shall not be obliged to implement any proposed **tie** Change where:

24.7.1 **tie** does not have the legal power or capacity to require the implementation of such proposed **tie** Change; or

24.7.2 implementation of such proposed **tie** Change would:

24.7.2.1 be contrary to Law;

24.7.2.2 not be technically feasible;

24.7.2.3 result in the risk of liability for Property Loss and/or Personal Loss in respect of any part of the System being Uninsurable;

24.7.2.4 cause any existing Necessary Consent (which is not reasonably likely, on the balance of probabilities, to be capable of modification) to be revoked;

- 24.7.2.5 require a new Necessary Consent or an amendment to a Necessary Consent which having used best endeavours to obtain in accordance with Clause 24.10 below, the Operator is unable to obtain within a time frame appropriate (in the reasonable opinion of **tie**) to the implementation of the proposed **tie** Change; or
- 24.7.2.6 substantially and materially affect the Operator's ability to perform the Project Operations or the Project Development Services such that it substantially and materially increases the probability of (a) a substantial non-compliance by the Operator with the Operating Output Specification or the Project Development Output Specification; or (b) termination of the Agreement as a result of Operator Default.
- 24.8 As soon as reasonably practicable after the contents of the Estimate have been agreed or determined pursuant to the Dispute Resolution Procedure **tie** shall:
- 24.8.1 confirm in writing the Estimate (as modified); or
- 24.8.2 subject to Clause 24.11, withdraw the **tie** Notice of Change.
- 24.9 Subject to Clause 24.11, if **tie** do not confirm in writing the Estimate (with or without modification) within 30 days of the contents of the Estimate having been agreed or determined pursuant to 24.7, then the **tie** Notice of Change shall be deemed to have been withdrawn.
- 24.10 If it shall be necessary to obtain or amend any Necessary Consent in respect of a proposed **tie** Change, then the Operator shall use best endeavours to obtain such Necessary Consent or amendment.

"Compliance Critical Risk" means

- (a) in the context of Clause 28 (Uninsurable Risks), a risk or matter the Operator is obliged to insure against pursuant to Part 1 of Schedule 10 (*Insurances*) and which the failure of the Operator to carry any of the Required Insurances would prevent the Operator from lawfully performing the Project Development Services or the Project Operations in whole or in substantial part in the manner required by this Agreement;
- or

(b) in the context of Clause 24 (tie Changes), a risk or matter which would (i) prevent the Operator from lawfully performing the Project Development Services or the Project Operations in whole or in substantial part in the manner required by this Agreement and/or (ii) cause the Operator to breach the terms of this Agreement;

(c) in the context of tie Changes, with reference to Clause 27.25, if the OCIP Insurance or OCIP insurance requirements do change as a matter of fact and/or tie do not renew, extend or maintain in force the OCIP Insurances in accordance with clause 27. For the purposes of the definition of "Compliance Critical Risk", business interruption insurance shall be excluded from the definition of "OCIP Insurances".

24.11 Subject to Clause 27 (*Qualifying Change in Law*), if the tie Notice of Change relates to a Compliance Critical Risk, then:

24.11.1 the Operator shall notify tie; and

24.11.2 if both Parties agree or it is determined in accordance with the Dispute Resolution Procedure (on the referral of either Party) that the risk or matter is a Compliance Critical Risk which is not caused by the actions or omissions of the Operator or an Operator Party;

then the Parties shall meet to discuss the means by which the risk or matter should be managed, mitigated or controlled.

24.12 At the meeting referred in Clause 24.11, either Party may propose:

24.12.1 any necessary change in the Project Development Services or Project Operations;

24.12.2 whether any amendments are required to the terms of the Agreement including any required adjustment to the Capped Fees, Fixed Costs (excluding the Category Five Fixed Costs), Target Costs for Project Phase C2, Target Operating Costs or Target Patronage; and

24.12.3 whether relief from compliance with any obligations affected by the Compliance Critical Risk is required and/or relief for the KPI Regime

24.13 If the requirements of Clause 24.12 are satisfied but the Parties cannot agree as to how to manage, mitigate or control the risk or matter or direct consequences thereof then,

for the period during which the relevant Compliance Critical Risk (or consequences thereof) subsists:

24.13.1 to the extent that the Operator is prevented or otherwise hindered from performing the Project Development Services or the Project Operations in the manner required by this Agreement and/or the costs or risk of so doing or seeking to do so are reasonably and demonstrably increased:

24.13.1.1 the Operator shall be relieved from such performance and shall not be liable to tie for failure so to perform provided it continues to perform the remainder of the Project Development Services or the Project Operations as best as it is reasonably able to without incurring additional costs for which it would not otherwise be reimbursed or to avoid additional risks for which the Operator would otherwise be liable for; and

24.13.1.2 during Project Phase C2 and Project Phase D, the Target Costs for Project Phase C2 or Target Operating Costs or the Fixed Costs as the case may be shall be adjusted by an equitable amount as agreed by the Parties acting reasonably and in good faith which reflects the reasonable and demonstrable impact of the matter in question (including net cost savings made as a result of restricted Project Development Services or restricted Project Operations) and Target Patronage shall be adjusted to reflect the impact (including of restricted Project Operations on Patronage Revenue). If the Operator determines not to reduce its operating establishment or cost base to reflect restricted Project Operations after the expiry of a reasonable period but to maintain this at the level necessary for normal Project Operations, tie shall not be obliged to pay the marginal Fixed Costs or Operating Costs relating to such establishment or cost base but (a) any required increase in operating establishment or cost base to reflect removal or adjustment of restricted Project Operations thereafter shall require a tie Change; (b) the Project Operations and

provisions of this Agreement shall be adjusted to reflect such restricted position.

24.14 **tie** shall have the option to be exercised by notice in writing at any time in the period during which such Compliance Critical Risk subsists (provided that **tie** shall, if such period continues for more than 180 days, be deemed to have exercised such option on the 181st day) to terminate this Agreement forthwith provided always that the Parties agree that before such option is exercised or is deemed to have been exercised, the Parties (both acting reasonably and in good faith) shall have attempted to resolve the consequences of the Compliance Critical Risk by reference to the Dispute Resolution Procedure (excluding reference to court) and/or by considering whether an alternative **tie** Change could be proposed by **tie**.

25. OPERATOR CHANGES

25.1 The Operator shall have the right to propose changes and, in this regard, shall keep the Project Operations under review with a view to identifying ways in which the performance of the Project Operations can be improved, having regard to the Project Vision, a combination of economy, efficiency and effectiveness and the needs of passengers using the System. If the Operator wishes to introduce a change in the Project Operations or is required to do so by a third party (other than by an Infrastructure Provider as a consequence of a change to the Infrastructure and Equipment Output Specification to which Clause 24.1 above shall apply) it must serve an Operator Notice of Change on **tie**.

25.2 The Operator Notice of Change must:

25.2.1 set out the proposed change in the Project Operations in sufficient detail to enable **tie** to evaluate it in full;

25.2.2 specify the Operator's reasons for proposing the change;

25.2.3 request **tie** to consult with the Operator with a view to deciding whether to agree to the change and, if so, what consequential changes **tie** require as a result;

25.2.4 indicate the time period proposed for implementation of the change;

25.2.5 indicate any implications of the change;

- 25.2.6 indicate, in particular, whether a variation to the Target Costs for Project Phase C2, the Target Operating Costs, the Fixed Costs (excluding the Category Five Fixed Costs) and/or the Target Patronage is proposed (and, if so, give a detailed cost estimate of such proposed variation); and
- 25.2.7 indicate if there are any dates by which a decision by **tie** is critical.
- 25.3 **tie** shall evaluate the Operator's proposed change in good faith, taking into account all relevant issues, including whether:
- 25.3.1 a change in the Target Costs for Project Phase C2, Target Operating Costs, and/or the Target Patronage, or to the Operator's ability to achieve them and/or a change in the Fixed Costs (excluding the Category Five Fixed Costs) or the Operator's ability to continue to perform its obligations in terms of this Agreement in respect of these Fixed Costs (excluding the Category Five Fixed Costs) and to the extent any adverse effect cannot be addressed by reasonable mitigation measures will occur;
- 25.3.2 the proposed change would affect the quality of the Project Operations or the likelihood of successful delivery of the Project Operations;
- 25.3.3 the change will interfere with the relationship of **tie** with third parties;
- 25.3.4 the proposed change materially affects the risks or costs to which **tie** are exposed; or
- 25.3.5 the proposed change affects the Base Case Assumptions and the positions set out in the Financial Proposals, the Operator Financial Model and the Project Development and Operating Costs..
- 25.4 As soon as reasonably practicable after receiving the Operator Notice of Change, the Parties shall meet and discuss the matter referred to in it. During their discussions, **tie** may propose modifications or accept or object to the Operator Notice of Change.
- 25.5 If **tie** give written notice of no objection to the Operator Notice of Change, (with or without modification), the relevant Operator Change shall be implemented by the Operator within the period specified in the Operator Notice of Change.
- 25.6 If **tie** object to the Operator Notice of Change, they shall not be obliged to give their reasons for such a rejection.

- 25.7 Unless **tie's** acceptance specifically agrees to a change in the Target Costs for Project Phase C2, Target Operating Costs, the Fixed Costs and/or the Target Patronage, there shall be no change to such targets or fixed costs as a result of a change in the Project Operations proposed by the Operator.
- 25.8 **tie** shall be free to object pursuant to Schedule 9 (*Review Procedure*) of the Agreement to any Operator Change to the Project Operations proposed by the Operator, except if required in order to conform to a Change in Law. The costs of introducing a change in Project Operations resulting from a Qualifying Change in Law shall be dealt with in accordance with Clause 27 (*Qualifying Change in Law*) of this Appendix.
- 25.9 Subject to Clause 25.8, if the Operator Notice of Change is pursuant to Clause 12.11.4 and involves a Compliance Critical Risk, then the provisions of Clause 24.11 shall apply to such Operator Notice of Change as if it was a **tie** Notice of Change.

26. ROADS CHANGES

- 26.1 A Permanent Roads Change shall be treated as a **tie** Change for the purposes of the Agreement and the Parties shall use all reasonable endeavours to agree:
- 26.1.1 adjustments to the Target Costs for Project Phase C2, the Target Operating Costs, the Fixed Costs (excluding the Category Five Fixed Costs) and/or the Target Patronage (where appropriate);
- 26.1.2 amendments to the Operating Output Specification (including the Timetable);
and
- 26.1.3 a permanent and commensurate recalibration of the KPI Regime.
- in accordance with Clause 23 (*Performance and Financial Adjustments*) of this Appendix
- 26.2 As soon as reasonably practicable after the issues referred to in Clause 26.1 above have been agreed between the Parties or determined pursuant to the Dispute Resolution Procedure, **tie** shall give a **tie** Notice of Change and the provisions of Clause 24 (*tie Changes*) of this Appendix shall apply except that the Operator shall be obliged to implement the change in all circumstances except to the extent that such change falls within any of Clause 24.7.2.1, 24.7.2.2, 24.7.2.3 and 24.7.2.4 of this Appendix.

26.3 A Long-Term Roads Change shall not be treated as a tie Change. However, in respect of the period of a Long-Term Roads Change, the Parties shall use all reasonable endeavours to agree:

26.3.1 adjustments to the Target Costs for Project Phase C2, the Target Operating Costs and/or the Fixed Costs (where appropriate excluding the Category Five Fixed Costs) but not the Target Patronages;

26.3.2 amendments to the Operating Output Specification (including the Timetable) and/or Agreement; and

26.3.3 a commensurate recalibration of the KPI Regime.

26.4 A Temporary Roads Change shall not be treated as a tie Change. However, in respect of the period of the Temporary Roads Change:

26.4.1 the Parties shall use all reasonable endeavours to agree a revised Timetable taking account of the impact of the Temporary Roads Change; and

26.4.2 the Operator's performance for the purposes of the KPI Regime relating to Punctuality including first and last trams shall be measured by reference to such revised Timetable for the duration of the Temporary Roads Change.

26.5 Subject to Clause 9.11 of this Appendix and Clause 12.19 of the Agreement, in respect of any information which is held electronically, the Operator shall maintain and make available to tie for inspection at all reasonable times, detailed daily records of Actual Tram Patronage (boarders) for the System subject to receipt of information and such other records and documents as may reasonably be required to evidence the Operator's entitlements under this Clause 26 (*Roads Changes*).

26.6 When adjustment to the Operating Output Specification is required in accordance with the provisions of this Clause 26 (*Roads Changes*), it shall be carried out in accordance with Clause 23 (*Performance and Financial Adjustments*) of this Appendix.

27. QUALIFYING CHANGE IN LAW

27.1 If a Qualifying Change in Law occurs or is to occur, then either Party may write to the other to express an opinion on its likely effects, giving details of its opinion of:

27.1.1 any necessary change in the Project Operations;

27.1.2 whether any changes are required to the terms of the Agreement to deal with the Qualifying Change in Law, including any required amendment to the KPI Regime, the Target Costs for Project Phase C2, the Target Operating Costs, the Fixed Costs (excluding the Category Five Fixed Costs) and/or the Target Patronage calculated in accordance with Clause 23 (*Performance and Financial Adjustments*) of this Appendix; and

27.1.3 whether relief from compliance with obligations is required, as a result of the Qualifying Change in Law;

in each case giving in full detail the procedure for implementing the Qualifying Change in Law.

27.2 As soon as reasonably practicable after receipt of any notice from either Party under Clause 27.1 above, the Parties shall discuss and agree the issues referred to in Clause 27.1 above and any ways in which the Operator can mitigate the effect of the Qualifying Change of Law and the Operator shall:

27.2.1 provide evidence to tie that the Operator has used and will continue to use all reasonable endeavours (including where appropriate and practicable the use of competitive quotes) to oblige Operator Parties to minimise any increase in costs and maximise any reduction in costs;

27.2.2 demonstrate that the relevant changes will be implemented in the most cost-effective manner, including showing that when expenditure will be incurred or has been incurred, foreseeable Changes in Law at that time will be taken into account by the Operator;

27.2.3 give evidence as to how the Qualifying Change in Law has affected Actual Tram Patronage (boarders); and

27.2.4 demonstrate that any expenditure that has been avoided, which was anticipated in terms of the Target Operating Costs, the Target Costs for Project Phase C2 and/or the Fixed Costs (excluding the Category Five Fixed Costs) to be incurred (whether to replace or maintain assets affected by the Qualifying Change in Law or otherwise), has been taken into account in the amount of the change to the Target Operating Costs, the Target Costs for Project Phase C2 and/or the Fixed Costs (excluding the Category Five Fixed Costs) which in its opinion is required under Clause 27.1.2 above.

27.3 As soon as reasonably practicable after the issues referred to in Clause 27.1 above have been agreed between the Parties or determined pursuant to the Dispute Resolution Procedure, **tie** shall give a **tie** Notice of Change and the provisions of Clause 24 (*tie Changes*) of this Appendix shall apply except that:

27.3.1 the Operator shall be obliged to implement the change in all circumstances except to the extent that such change both:

27.3.1.1 falls within any of Clauses 24.7.2.1, 24.7.2.2, 24.7.2.3 and 24.7.2.4 of this Appendix; and

27.3.1.2 is not necessary to implement the Qualifying Change in Law; and

27.3.2 **tie** shall confirm the Estimate pursuant to Clause 24.8.1 above once it has been agreed or determined pursuant to the Dispute Resolution Procedure.

PART VIII: TERMINATION AND EXPIRY

28. TRANSITION ON TERMINATION OR EXPIRY

28.1 12 months before the Expiry Date and, again as updated, on the Expiry Date, or upon termination, the Operator shall provide to **tie** the following information and assistance ("**Handback Package**"), which shall be current in all respects:

28.1.1 a list of managers involved in managing the Tram Business or any material element of the Project Operations showing name, work telephone number, role and responsibilities;

28.1.2 a list of all contracts, agreements, permits, licences, Necessary Consents or other documents which are material to the operation of the Tram Business or which have a value in excess of £5,000 showing (as appropriate) the contract account number, name, address and telephone number of counter parties, contract price, value, term, and notice period for termination or expiry date;

28.1.3 a list of all computer systems and software used for the maintenance of the business together with a description of the systems and master passwords where applicable, as well as a commitment to give any reasonable practical instruction or basic training for competent use of the computer systems and software;

28.1.4 the names and addresses of all insurers providing the Required Insurances along with the applicable policy numbers and other references;

28.1.5 a letter, in a form reasonably satisfactory to **tie**, authorising **tie** and its agents to request and to receive from the relevant insurers details of all claims paid or outstanding under the Required Insurances;

28.1.6 full particulars of all employees engaged in the provision of the Project Operations including:

28.1.6.1 employee, name and the date on which continuity of employment began;

28.1.6.2 the terms and conditions of employment of each such person;

28.1.6.3 all payments, benefits or changes to terms and conditions of employment promised to any such person;

28.1.6.4 any agreements or arrangements with any trade union or association of trade unions or organisation or body of employees including elected representatives which represent any such employees;

28.1.6.5 particulars of any strikes or industrial action taken by such employees; and

28.1.6.6 details of any pension or death in service scheme in which such employees participate, the benefits provided by such schemes, the rate of employer and employee contributions and other terms applicable to such schemes.

28.2 **tie** shall not disclose the terms of the Handback Package to any third party, other than:

28.2.1 to the extent in the public domain, or as required by the law or in the course of conducting, prosecuting or defending any adjudication, arbitration, court or tribunal proceedings; or

28.2.2 for the purpose of seeking offers from third parties for the provision of any of the Project Development Services, Project Operations or like services following the termination or expiry of this Agreement; or

- 28.2.3 to a Successor Operator or its appointed subcontractors for the purpose of ensuring or assisting with continuity of the Project Operations following termination or expiry of this Agreement.
- 28.3 The Operator shall maintain and manage the business of providing the Project Operations with the intent that **tie** or any Successor Operator would be able to take over that business and secure continuity of the Project Operations on a going concern basis at any time following a Termination Notice.
- 28.4 Accordingly, following the service of a Termination Notice or in the twelve month period preceding any anticipated termination or expiry of this Agreement, the Operator shall (and shall procure that the Operator Parties shall):
- 28.4.1 take all reasonable steps and co-operate fully with **tie** and any Successor Operator so that continuation of the Project Operations after such termination or expiry is achieved with the minimum of disruption and so as to prevent or mitigate inconvenience or any risk to health or safety of the employees of **tie** and members of the public;
- 28.4.2 liaise with **tie** and any Successor Operator and provide reasonable assistance and advice concerning the Project Operations and their transfer to **tie** or to such Successor Operator;
- 28.4.3 allow **tie** and any Successor Operator access (at reasonable times and on reasonable notice) to each part of the System;
- 28.4.4 provide to **tie** and to any Successor Operator such information concerning the System and the Project Operations which is reasonably required for the efficient transfer of responsibility for performance of the Project Operations;
- 28.4.5 allow, or procure that the Operator Party shall allow, **tie** and any Successor Operator such access to any employees engaged by the Operator or such Operator Party in the provision of the Project Operations or the Project Development Services as **tie** or such Successor Operator shall reasonably require for the purpose of informing and consulting with such employees over the terms and conditions on which their employment will be transferred (to the extent this is the case) to **tie** or any Successor Operator or sub-contractor engaged by the Successor Operator; and

28.4.6 on request, make the Handback Package available to **tie** or any Successor Operator without charge or restriction.

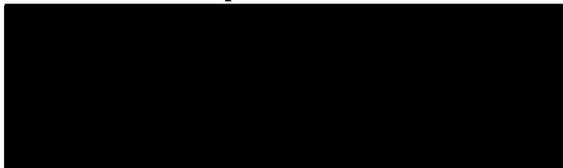
28.5 The Operator shall use best endeavours to facilitate the transfer of responsibility for the Project Operations to a Successor Operator or to **tie**, as the case may be, and the Operator shall take no action at any time which is calculated or intended to prejudice or frustrate or make more difficult such transfer. In particular, but without limitation to the generality of the foregoing, the Operator shall, during the final 12 months of the Term (where this expires by effluxion of time) or during the period following service of a Termination Notice, and whilst the same remains outstanding, not without the prior written consent of **tie** (which shall not be unreasonably withheld or delayed), make any material changes in the Transport Services on the System, which would not otherwise reasonably be made by the Operator in the ordinary course of its business of operating the System and acting in accordance with Good Industry Practice

28.6 The Operator acknowledges that all the Assets have been funded by **tie**. Accordingly the Operator:

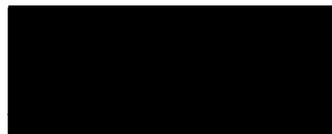
28.6.1 shall handover the Assets to **tie** or, if so directed, a Successor Operator, such handover to be in a timely and orderly fashion so as to preserve the technical and commercial integrity and goodwill and value of the System and to enable an efficient handover of Project Operations; and

28.6.2 shall not be entitled to any payment or benefit in respect of the handover and any relinquishment of licence to use the Assets or perform Project Operations.

28.7 **tie** may request to purchase any assets owned by the Operator which have been used in the performance of the Project Operations or used in relation to the System. If the Parties agree a fair market value for any such assets, **tie** shall pay the agreed sum to the Operator and the Operator shall deliver such assets to **tie** as soon as reasonably practicable.



Director/Authorised Signatory
tie Limited



.....
Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

This is Schedule 1 referred to in the Operating Appendix annexed to the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 1

Conditions Precedent

1. Completion by the Operator of all requirements included within Project Phase B and Project Phase C in respect of the Phase which is intended to be the first Phase on which the Transport Services are to be provided, other than in respect of Project Development Services included within Project Phase C2 which the Operator shall be required to provide in order to fulfil the requirements of Clause 2.5 and Clause 3 or Clause 4 of the Operating Appendix, shall be a condition precedent to the Operating Effective Date.

2. In addition, delivery by the Operator to tie in form and substance satisfactory to tie (acting reasonably) of the documents listed in paragraph 2.1 and the other matters listed in this paragraph 2 shall be condition precedent to the Operating Effective Date. Where listed as a duly certified copy, the document shall be certified by the company secretary of the Operator as being a true copy, in full force and effect at a date no later than the Operating Effective Date:
 - 2.1 a copy, duly certified, of minutes of a meeting of the board of directors of the Operator evidencing a resolution of the board of directors approving any amendments to this Operating Appendix and the Operating Output Specification since the DPOFA Variation Date of the Agreement; and

 - 2.2 evidence :
 - 2.2.1 that the Required Insurances are in full force and effect and that the relevant policies comply with the requirements of the Agreement; and

 - 2.2.2 of the current credit ratings of the Insurers and that these ratings are not below a credit rating to A- by Standard & Poors; and

 - 2.2.3 the revenue collection and safekeeping procedures which comply with the requirements of the Agreement are in place.



Director/Authorised Signatory
tie Limited



Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

This is Schedule 2 referred to in the Operating Appendix annexed to the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

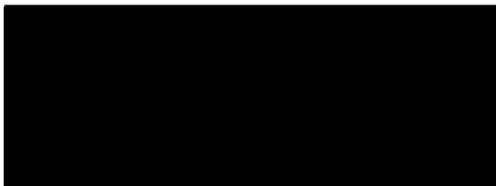
SCHEDULE 2

tie Completion Requirements

[These requirements are to be developed between the Parties prior to the end of Project Phase C1. . Different tie Completion Requirements will be required depending on whether:

- *there is to be a gap between Service Commencement and Full Service Commencement; or*
- *Full Service Commencement is to occur on the day on which the Phase is first opened to fare paying passengers]*

Any changes to tie's Completion Requirements during Project Phase C2 shall be proposed as a tie Change or an Operator Change as appropriate.



Director/Authorised Signatory
tie Limited



Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

This is Schedule 3 referred to in the Operating Appendix annexed to the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 3

Project Phase D Payment Mechanism and KPI Regime

Payment during Project Phase D

1. The Operator shall be entitled to submit applications for payment to tie during Project Phase D within five days of the end of each Reporting Period and following submission to tie of the Service Quality Report pursuant to Clause 12 (*Service Performance and Quality Monitoring*) of this Appendix. Applications for payment shall be for the Profiled Target Operating Costs for the Reporting Period just ended, the Profiled Fixed Costs for the Reporting Period just ended, the actual costs of any agreed Special Event, any other actual costs provided for under this Agreement or agreed in accordance with this Agreement and the Profiled Profit Element for the Reporting Period just ended. The Operator shall also submit a detailed breakdown with each application for payment showing the Operating Costs for the relevant Reporting Period.
2. Each application for payment submitted by the Operator pursuant to paragraph 1 of this Schedule shall take into account performance deductions calculated by the Operator in accordance with the KPI Regime set out at paragraphs 7 to 17 below.
3. tie shall procure that the tie Project Manager shall, subject to any clarifications as are in tie's opinion (acting properly and reasonably) necessary, and subject to paragraph 2 above and Clause 10.11 of the Agreement, certify by notice in writing to the Operator that part of the Target Operating Costs, Fixed Costs, the actual costs of any agreed Special Event, any other actual costs provided for under this Agreement or agreed in accordance with this Agreement and Profit Element claimed in the relevant application for payment which is approved by tie and give reasons why any part of the Target Operating Costs, the Fixed Costs, the actual costs of any agreed Special Event, any other actual costs provided for under this Agreement or agreed in accordance with this Agreement and Profit Element, and deductions calculated by the Operator in accordance with the KPI Regime have not been so approved and certified no later than 10 days after the date on which such application for payment is received by tie.
4. Within 5 Business Days of receiving a notice from tie pursuant to paragraph 3 of this Schedule certifying part or all of the Target Operating Costs, the Fixed Costs, the actual costs of any agreed Special Event, any other actual costs provided for under this Agreement or

agreed in accordance with this Agreement and Profit Element claimed in the relevant application for payment, and the deductions in accordance with the KPI Regime, the Operator shall issue an invoice to **tie** for the certified Target Operating Costs, Fixed Costs, the actual costs of any agreed Special Event, any other actual costs provided for under this Agreement or agreed in accordance with this Agreement and Profit Element. Invoices shall be in the form agreed between the Parties.

5. **tie** shall pay any invoice submitted in accordance with paragraph 4 of this Schedule within 30 days of receipt of the relevant invoice.
6. The Operator may refer any Dispute about the Target Operating Costs, Fixed Costs, the actual costs of any agreed Special Event, any other actual costs provided for under this Agreement or agreed in accordance with this Agreement or Profit Element, and/or deductions in accordance with the KPI Regime which have not been certified and/or deductions certified, to the Dispute Resolution Procedure. If it is determined pursuant to the Dispute Resolution Procedure that the whole or any part of any disputed amount should be paid by **tie** to the Operator, then payment shall be made by **tie** to the Operator within 30 days of the receipt by **tie** of an invoice in respect of the determined amount from the Operator.
7. Notwithstanding any other provision of the Agreement or this Appendix, during Project Phase D, **tie** shall not be required to reimburse the Operator for the travel of any person to or from Edinburgh and/or within the United Kingdom, or for the accommodation or subsistence of any person within the United Kingdom and/or elsewhere but the Operator shall be entitled to reimbursement from **tie** in relation to travel costs outwith the United Kingdom.

Operation of the KPI Regime

8. The Operator shall continually monitor performance and service quality against the Key Performance Indicators shown in Table 1 to this Schedule.
9. The performance and service quality monitoring undertaken by the Operator shall be in accordance with requirements set out at and developed in accordance with paragraphs 24 and 25 of Schedule 2 (*Project Development Output Specification*) of the Agreement and shall be produced in the form of a composite KPI Monitoring Report included in the Service Quality Report submitted to **tie** for each Reporting Period no later than three Business Days following the end of the Reporting Period and in advance of submission of the Operator's application for payment for that Reporting Period. In the event that such Service Quality Report is not provided in a timely fashion in a previously agreed format or is unsatisfactory in a material respect in **tie's** opinion (acting properly and reasonably), **tie** shall not be obliged to review any

application for payment relying upon such report until the defects in it are corrected to tie's satisfaction and tie has had a reasonable opportunity to review the resubmitted report.

10. tie shall conduct the periodic inspections and surveys stipulated under paragraphs 24 and 25 of Schedule 2 (*Project Development Output Specification*) of the Agreement in relation to Operator Maintenance, revenue protection and customer satisfaction, as well as spot checks on other selected Performance Indicators and report on these matters on a regular basis to the Operator.
11. The Operator shall be responsible for assessing the KPI Monitoring Report and the results of the inspections and surveys under paragraph 9 above and shall allocate Performance Points against meeting the performance standards set by the Agreement, in accordance with this Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*). The Operator shall then calculate the applicable percentage deduction for the Reporting Period for application to the KPI Regime Profit Element and show this in the relevant application for payment.
12. The KPI Regime Profit Element shall be apportioned into seven financial components set individually against each KPI in accordance with the relevant weighting. The amount attributable to each KPI is shown in Column 5 of Table 1 to this Schedule.
13. Any deductions imposed in respect of underperformance shall be cumulative. For Example: performance below 85% will attract a cumulative 100% deduction on any KPI. Underperformance will attract the full percentage deduction, irrespective of where such Underperformance sits within the applicable range shown in Table 1 to this Schedule.
14. In the event that the Operator incurs aggregated deductions in respect of underperformance ("Underperformance Threshold") which equal or exceed thirty percent (30%) of the KPI Regime Profit Element during any Reporting Period, tie shall be entitled to issue a notice ("**Major KPI Breach Notice**") requesting the Operator to deliver a plan ("KPI Rectification Plan") setting out detailed measures to remedy the matters specified by tie in such notice. If, in tie's opinion, the KPI Rectification Plan is:
 - 14.1 inadequate; or
 - 14.2 no material improvement in performance is achieved by the Operator during the next Reporting Period (whether or not the KPI Rectification Plan was satisfactory to tie) and aggregated net deductions remain equal to or above the Underperformance Threshold;

the Operator shall be obliged to apply a multiplier of 1.25 to the aggregated value of net deductions for that Reporting Period (which calculation shall be shown in the relevant invoice) and tie shall issue a KPI Warning Notice.

15. If, for the next Reporting Period following issue by tie of a KPI Warning Notice, underperformance deductions remain at or above the Underperformance Threshold or no acceptable KPI Rectification Plan has been submitted, the Operator shall be obliged to apply a multiplier of 1.5 to the aggregated value of deductions for that Reporting Period (which calculation shall be shown in the relevant invoice). tie shall be entitled to issue a second KPI Warning Notice, requiring material improvement and production and delivery of a KPI Rectification Plan.
16. In the event that for a fourth and consecutive Reporting Period, underperformance deductions remain at or above the Underperformance Threshold or no acceptable KPI Rectification Plan has been submitted, the Operator shall be obliged to apply a multiplier of 2 to the aggregated value of deductions for that Reporting Period (which calculation shall be shown in the relevant invoice), until such time as performance improves. Underperformance deductions above the Underperformance Threshold without improvement for six consecutive Reporting Periods shall constitute an Operator Default.
17. In the event that underperformance by the Operator results in a second Major KPI Breach Notice within 12 months of the first such notice, this shall constitute an Operator Default.
18. The Parties acknowledge that all deductions under the KPI Regime will be a genuine pre estimate of loss incurred by the System and by tie as a result of the operational underperformance and that no legal challenge or review may be made to their application on the basis that the deductions (either initial or pursuant to paragraphs 7 to 16 above are unenforceable or unreasonable penalties or do not represent properly calculable heads of damages.)
19. **Pain-Gain Share Mechanism**
 - 19.1 The parties have agreed to apply a mechanic to share proportionately in patronage growth and cost generated by the Edinburgh Tram Network operations on the following basis:
 - 19.1.1 The mechanic shall be applied by tie to the aggregate Actual Tram Patronage (boarders) and the aggregate Operating Costs in respect of which Target

Operating Costs have been allocated at the end of each Pain/Gain Share Period.

19.1.2 The calculation shall be carried out by **tie** using the applications for payment and data submitted by the Operator with regard to Operating Costs and Actual Tram Patronage (boarders) over the immediately preceding Pain/Gain Share Period and verified by **tie** audit on the basis of Clause 49 (*Information and Audit Access*) of the Agreement.

19.1.3 The calculation exercise shall be completed by **tie** no later than 60 days following the end of the each Pain/Gain Share Period.

19.1.4 The calculation shall compare the aggregate Actual Tram Patronage (boarders) over the relevant Pain/Gain Share Period to the Profiled Target Patronage and the aggregate Operating Costs in respect of which Target Operating Costs have been allocated in the relevant Pain/Gain Share Period to the Profiled Target Operating Costs.

19.2 In the event that **tie** determines, acting reasonably, through calculation that the aggregate Actual Tram Patronage (boarders) over the relevant period:

19.2.1 have exceeded Profiled Target Patronage (boarders), the Parties shall be entitled to a share in that surplus as follows:

19.2.1.1 **tie** share: ninety eight and one half per cent (98.5%)

19.2.1.2 Operator share: one and one half per cent (1.5%)

19.2.2 did not achieve Profiled Target Patronage (boarders), the Parties shall contribute to the deficit as follows:

19.2.2.1 **tie** contribution : ninety eight and one half per cent (98.5%)

19.2.2.2 Operator contribution: one and one half per cent (1.5%)

19.3 In the event that **tie**, acting reasonably, determines that Operating Costs in respect of which Target Operating Costs have been allocated over the relevant period:

19.3.1 have exceeded Profiled Target Operating Costs the parties shall contribute to the deficit as follows:

19.3.1.1 tie contribution: twenty per cent (20%)

19.3.1.2 Operator contribution: eighty per cent (80%)

19.3.2 have achieved savings against Profiled Target Operating Costs, the parties shall be entitled to a share in the savings as follows:

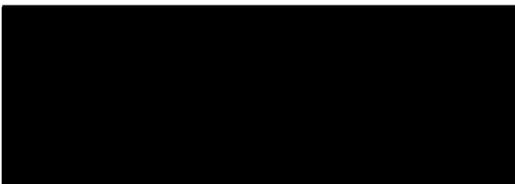
19.3.2.1 tie share: fifty per cent (50%)

19.3.2.2 Operator share: fifty per cent (50%)

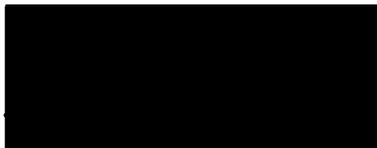
19.4 The Pain Gain share mechanic shall operate in relation to Operating Costs (except for Fixed Costs and any actual costs which are to be paid or agreed to be paid in accordance with this Agreement) and Actual Tram Patronage (boarders) and separately from the KPI Regime.

20. The calculations set out in paragraph 18 above shall be reconciled by tie to produce an aggregate net result. In the event that the result is positive number in the Operator's favour, tie shall notify the Operator, give details of the relevant calculations and reconciliation and state the net pain/gain share balance. The Operator shall then submit an invoice substantially in the form of Schedule 6 (*Form of Invoice for Project Phase D*) to this Appendix to tie and tie shall make payment within 30 days of receipt of the invoice. If the result is a negative number representing an amount owed to tie, tie shall submit an invoice to the Operator and be entitled to receive reimbursement from the Operator within 30 days of the Operator's receipt of the invoice or by operation of set off from the Operator's monthly invoices until such time such amount is extinguished. Any amount outstanding to the credit of tie shall be treated as debt due and payable to tie by the Operator. For the avoidance of doubt, set off by tie shall in all cases be in addition to any performance deductions being applied pursuant to the KPI Regime.
21. Not used
22. In the event of expiry of the Term or an early termination, tie shall be expressly entitled to carry out the calculation under paragraph 18 above on a pro rated basis and the provisions of paragraphs 18, 19 and 20 above shall continue to apply, save that any amount due and payable to tie shall be paid by the Operator to tie within 30 days of written demand by tie.
23. The Operator may refer any Dispute concerning any determination, calculation or reconciliation by tie in accordance with paragraphs 18, 19 and/or 21, to the Dispute Resolution Procedure. If it is determined pursuant to the Dispute Resolution Procedure that the whole or any part of any disputed amount should be paid to the Operator or to tie (as

appropriate), then payment shall be made by the appropriate party to the other within 30 days of the receipt of an invoice in respect of the determined amount. Any costs incurred by the Operator in auditing any determination, calculation or reconciliation which is the subject of a Dispute under this paragraph 22 shall be at the Operator's own cost unless the tie calculation or reconciliation is wrong in which case it shall be paid by tie to the Operator.



Director/Authorised Signatory
tie Limited



Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited

This is Schedule 4 referred to in the Operating Appendix annexed to the foregoing Development Partnering and Operating Franchise Agreement between tie Limited and TRANSDEV Edinburgh Tram Limited dated 19 and 20 December 2007

SCHEDULE 4

Operating Output Specification

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1. OVERALL SYSTEM REQUIREMENTS

1.1 The System shall be an electrically powered light rail system using Trams to carry passengers and may include all or any of the following Lines and/or Phases (or any parts thereof):

1.1.1 Phase 1a;

1.1.2 Phase 1b;

1.1.3 Line 1;

1.1.4 Line 2;

1.1.5 Line 3; and

1.1.6 Network Expansions

1.2 The System's overall requirements of the System are that it shall achieve and sustain the Project Vision and be:

1.2.1 Safe and secure;

1.2.2 Reliable;

1.2.3 Attractive;

1.2.4 Delivered within the Affordability Limits;

1.2.5 Affordable for passengers;

1.2.6 Efficient;

1.2.7 Environmentally acceptable;

1.2.8 Sustainable;

1.2.9 Easy for passengers to use;

1.2.10 Accessible to all including mobility impaired passengers;

1.2.11 Able to provide a minimum level of service specified by the Operating Output Specification;

- 1.2.12 Able to support the local transport strategy, policies, planning and system aspirational objectives of the City of Edinburgh Council and TEL;
 - 1.2.13 Integrated with other transport modes;
 - 1.2.14 Capable of Network Expansions; and
 - 1.2.15 Able to project a TEL bus and tram network wide high quality brand image.
- 1.3 **tie** requires that operation of the System shall reflect a high standard of presentation and public image to match the City of Edinburgh's status as a World Heritage Site and that the System shall be operated efficiently with minimum disturbance to the public and minimum delay to passengers.
- 1.4 All aspects of the operation of the System shall take account of the need to react safely and quickly to emergencies.
- 1.5 The System shall incorporate such staffing, surveillance and alarm equipment as is appropriate to ensure the safety of the public, especially lone and mobility impaired travellers.
- 1.6 **tie** requires that the System shall be capable of responding to Network Expansion and resultant increased ridership without adverse impact on quality.
- 1.7 The System shall be constructed, maintained and operated at all times in accordance with Good Industry Practice, the Necessary Consents and the Law.

2. PROJECT OPERATIONAL OBJECTIVES

The objectives of **tie** and the Operator during the Service Period shall be to ensure that:

- 2.1 the System complies with the requirements set out in paragraph 1 above;
- 2.2 the System is operated in accordance with the terms of this Agreement, including this Operating Output Specification, the Operating Method Statement, the Environmental Statement and the Design Manual, as amended from time to time in accordance with the Agreement;
- 2.3 the System is operated in accordance with Law and Good Industry Practice; and
- 2.4 the operation of the System is integrated with existing transport operators in Edinburgh, in accordance with the Service Integration Plan.

- 2.5 The primary objectives of tie, the tie Advisers and the Operator during the Service Period in respect of any Phase shall be to:
- 2.5.1 procure the performance of the Project Operations in accordance with this Operating Output Specification and the Operating Method Statements;
 - 2.5.2 manage the provision of Infrastructure Provider Maintenance of the System;
 - 2.5.3 develop and procure any Network Expansion and to encourage growth in patronage; and
 - 2.5.4 sustain the highest level of system performance at all times.
- 2.6 The detail of this Operating Output Specification shall be developed by the Operator, tie and the tie Advisers pursuant to the terms of the Project Development Output Specification and the Agreement.
- 2.7 The following paragraphs set out tie's intentions as at the DPOFA Variation Date in relation to the requirements of the Operating Output Specification.

3. OPERATIONAL REQUIREMENTS

Introduction

- 3.1 Part of the Project Development Objectives is to optimise route service patterns and frequencies. It is therefore not possible to define the precise requirements for the Transport Services at the DPOFA Variation Date .
- 3.2 The development of the Operating Output Specification in relation to the Transport Services will take into account and develop the Development Assumptions made during Project Phases A and B to accommodate the possible phased introduction of the Transport Services on the System.
- 3.3 The following paragraphs outline the expected operational parameters.

4. TRANSPORT SERVICE REQUIREMENTS

4.1 Days of Operation

The Transport Services shall be provided by the Operator on the Edinburgh Tram Network on 364 days of the year. On Edinburgh Holidays, the Operator shall provide Transport Services at least as frequent as it would normally provide on a Sunday.

4.2 Journey times

4.2.1 During Project Phases A, B and C, the Operator shall develop and agree with tie and the tie Advisers the maximum journey times between locations on the Phases and/or Edinburgh Tram Network which shall not be exceeded by Trams in either direction.

4.2.2 The Operator shall also agree the planned journey times, layover times, allowances for dwell times and allowances for recovery times in planning the Timetable. When necessary, the Timetable shall be reviewed (in accordance with Clause 6 (*Transport Services Timetable*) of the Operating Appendix and, if so agreed with tie, adjusted and in such circumstances, the Operator shall provide a copy thereof and each successive update thereof to tie.

4.3 Service Levels and Patterns

4.3.1 Pursuant to paragraph 9 of the Project Development Output Specification, with effect from the Service Commencement Date in respect of each Phase or part thereof, the Operator shall provide the minimum number of tram services per hour specified in the agreed operating pattern.

4.3.2 The Operator shall ensure that the intervals in the Timetable between tram services from each Tramstop for the same destination shall be equal within any time bands established for differing tram frequencies unless otherwise agreed in writing by tie and in accordance with Schedule 3 (*Project Phase D Payment Mechanism and KPI Regime*) to the Operating Appendix..

4.3.3 The Operator shall ensure that tram services call at all Tramstops when operating in public service, except at the beginning and end of each Tram's duty cycle when short workings may be operated unless otherwise agreed in writing by tie.

4.3.4 If at any time during the Service Period (under normal operating conditions excluding Special Events) the level of the Transport Services set out above is insufficient to accommodate the actual passenger demand and appropriate operating passenger densities, the Operator and tie will meet to discuss whether and how to jointly procure sufficient additional capacity to ensure that passenger demand can be accommodated at such appropriate operating passenger densities.

4.3.5 Transport Services to be provided during Special Events shall be subject to periodic agreement between the and the Operator, taking into account anticipated patronage and route availability and dealt with under Clause 8 (*Special Events*) of the Operating Appendix.

4.4 Operating Hours

4.4.1 Unless otherwise agreed by the during Project Phases A, B or C, of this Agreement, with effect from the Service Commencement Date in respect of each Phase, the Operator shall ensure that the departure of:

- The first tram service for each route specified in Table 1 below shall be no later than the times specified in that table; and that
- The last tram service for each route specified in Table 1 below shall be no earlier than the time specified in the table.

Table 1 : First and Last Scheduled Departure Times

6 & 6 Tram per Hour Scenario

Networking / Phasing	Service Frequency commencing at:	Monday - Friday (trams per hour)					
		First tram 06:00	06:45	07:00	07:20	23:15	23:59
1a	Airport to Ocean Terminal	0	6	6	6	6a	0
1a	<u>Ocean Terminal to Airport</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>0</u>
1a	<u>Haymarket to Newhaven</u>	<u>0</u>	<u>0</u>	<u>6</u>	<u>6</u>	<u>0</u>	<u>0</u>
1a	<u>Newhaven to Haymarket</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>6</u>	<u>0</u>	<u>0</u>
1b	Airport to Ocean Terminal	0	6			6a	0
1b	<u>Ocean Terminal to Airport</u>	<u>6</u>	<u>6</u>			<u>6</u>	<u>0</u>
1b	<u>Granton to Newhaven</u>	<u>0</u>	<u>6</u>			<u>6b</u>	<u>0</u>
1b	<u>Newhaven to Granton</u>	<u>6</u>	<u>6</u>			<u>6c</u>	<u>0</u>

Networking / Service Frequency
Phasing commencing at:

Saturday (trams per hour)					
Phase	07:00	07:45	08:30	09:15	23:00

73a	Airport to Ocean Terminal	0	6	6	6	6a	0
73b	Ocean Terminal to Airport	6	6	6	6	6	0
73c	Blythburgh to Newhaven	0	0	6	6	6	0
73d	Newhaven to Blythburgh	0	0	6	6	6	0

73e	Airport to Ocean Terminal	0	6			6a	0
73f	Ocean Terminal to Airport	6	6			6	0
73g	Granton to Newhaven	0	6			6b	0
73h	Newhaven to Granton	6	6			6c	0

Networking / Service Frequency
Phasing commencing at:

Sunday (trams per hour)					
Phase	07:00	07:45	08:30	09:15	23:00

74a	Airport to Ocean Terminal	0	6	6	6	6a	0
74b	Ocean Terminal to Airport	6	6	6	6	6	0
74c	Blythburgh to Newhaven	0	0	6	6	6	0
74d	Newhaven to Blythburgh	0	0	6	6	6	0

74e	Airport to Ocean Terminal	0	6			6a	0
74f	Ocean Terminal to Airport	6	6			6	0
74g	Granton to Newhaven	0	6			6b	0
74h	Newhaven to Granton	6	6			6c	0

Notes:

- a) from approx 23:15 trams run from Airport - City Centre only
- b) from approx 23:15 trams run from Granton - City Centre only

c) from approx 23:15 Granton trams run from Newhaven - Haymarket continuing in service on TL2 to Gyle
 Note: The numbers in individual cells give the service frequency starting from the time at the top of the relevant column.

Table 1: First and last tram services and frequencies for 6 & 6 tram per hour scenario

8 & 8 Tram per Hour Scenario

Networking (Phasing) and Service Frequency commencing at:		Monday - Friday (trams per hour)									
		06:00	06:45	07:00	07:20	07:45	09:45	15:45	19:00	19:20	19:45

1a	Airport to Ocean Terminal	0	8	8	8				8	8		8a
1a	Ocean Terminal to Airport	8	8	8	8				8	8		8
1a	Haymarket to Newhaven	0		8	8				8	8		
1a	Newhaven to Haymarket	0		0	8				8	8d		

1b	Airport to Ocean Terminal	0	8	8		8			8		8	8a
1b	Ocean Terminal to Airport	8	8	8		8			8		8	8
1b	Granton to Haymarket	0	4	4		8	8	8	8		4	4 b
1b	Haymarket to Granton	4	4	8		8	8	8	8		4	4c

Networking (Phasing) and Service Frequency commencing at:

		Monday - Friday (trams per hour)									
		06:00	06:45	07:00	07:20	07:45	09:45	15:45	19:00	19:20	19:45

1a	Airport to Ocean Terminal	0		8	8				8	8		8a
1a	Ocean Terminal to Airport	8		8	8				8	8		8
1a	Haymarket to Newhaven	0		8	8				8	8		

1a	<u>Newhaven to Haymarket</u>	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	360	375	390	405	420	435	450	465	480	495	510	525	540	555	570	585	600	615	630	645	660	675	690	705	720	735	750	765	780	795	810	825	840	855	870	885	900	915	930	945	960	975	990	1005	1020	1035	1050	1065	1080	1095	1110	1125	1140	1155	1170	1185	1200	1215	1230	1245	1260	1275	1290	1305	1320	1335	1350	1365	1380	1395	1410	1425	1440	1455	1470	1485	1500	1515	1530	1545	1560	1575	1590	1605	1620	1635	1650	1665	1680	1695	1710	1725	1740	1755	1770	1785	1800	1815	1830	1845	1860	1875	1890	1905	1920	1935	1950	1965	1980	1995	2010	2025	2040	2055	2070	2085	2100	2115	2130	2145	2160	2175	2190	2205	2220	2235	2250	2265	2280	2295	2310	2325	2340	2355	2370	2385	2400	2415	2430	2445	2460	2475	2490	2505	2520	2535	2550	2565	2580	2595	2610	2625	2640	2655	2670	2685	2700	2715	2730	2745	2760	2775	2790	2805	2820	2835	2850	2865	2880	2895	2910	2925	2940	2955	2970	2985	3000	3015	3030	3045	3060	3075	3090	3105	3120	3135	3150	3165	3180	3195	3210	3225	3240	3255	3270	3285	3300	3315	3330	3345	3360	3375	3390	3405	3420	3435	3450	3465	3480	3495	3510	3525	3540	3555	3570	3585	3600	3615	3630	3645	3660	3675	3690	3705	3720	3735	3750	3765	3780	3795	3810	3825	3840	3855	3870	3885	3900	3915	3930	3945	3960	3975	3990	4005	4020	4035	4050	4065	4080	4095	4110	4125	4140	4155	4170	4185	4200	4215	4230	4245	4260	4275	4290	4305	4320	4335	4350	4365	4380	4395	4410	4425	4440	4455	4470	4485	4500	4515	4530	4545	4560	4575	4590	4605	4620	4635	4650	4665	4680	4695	4710	4725	4740	4755	4770	4785	4800	4815	4830	4845	4860	4875	4890	4905	4920	4935	4950	4965	4980	4995	5010	5025	5040	5055	5070	5085	5100	5115	5130	5145	5160	5175	5190	5205	5220	5235	5250	5265	5280	5295	5310	5325	5340	5355	5370	5385	5400	5415	5430	5445	5460	5475	5490	5505	5520	5535	5550	5565	5580	5595	5610	5625	5640	5655	5670	5685	5700	5715	5730	5745	5760	5775	5790	5805	5820	5835	5850	5865	5880	5895	5910	5925	5940	5955	5970	5985	6000	6015	6030	6045	6060	6075	6090	6105	6120	6135	6150	6165	6180	6195	6210	6225	6240	6255	6270	6285	6300	6315	6330	6345	6360	6375	6390	6405	6420	6435	6450	6465	6480	6495	6510	6525	6540	6555	6570	6585	6600	6615	6630	6645	6660	6675	6690	6705	6720	6735	6750	6765	6780	6795	6810	6825	6840	6855	6870	6885	6900	6915	6930	6945	6960	6975	6990	7005	7020	7035	7050	7065	7080	7095	7110	7125	7140	7155	7170	7185	7200	7215	7230	7245	7260	7275	7290	7305	7320	7335	7350	7365	7380	7395	7410	7425	7440	7455	7470	7485	7500	7515	7530	7545	7560	7575	7590	7605	7620	7635	7650	7665	7680	7695	7710	7725	7740	7755	7770	7785	7800	7815	7830	7845	7860	7875	7890	7905	7920	7935	7950	7965	7980	7995	8010	8025	8040	8055	8070	8085	8100	8115	8130	8145	8160	8175	8190	8205	8220	8235	8250	8265	8280	8295	8310	8325	8340	8355	8370	8385	8400	8415	8430	8445	8460	8475	8490	8505	8520	8535	8550	8565	8580	8595	8610	8625	8640	8655	8670	8685	8700	8715	8730	8745	8760	8775	8790	8805	8820	8835	8850	8865	8880	8895	8910	8925	8940	8955	8970	8985	9000	9015	9030	9045	9060	9075	9090	9105	9120	9135	9150	9165	9180	9195	9210	9225	9240	9255	9270	9285	9300	9315	9330	9345	9360	9375	9390	9405	9420	9435	9450	9465	9480	9495	9510	9525	9540	9555	9570	9585	9600	9615	9630	9645	9660	9675	9690	9705	9720	9735	9750	9765	9780	9795	9810	9825	9840	9855	9870	9885	9900	9915	9930	9945	9960	9975	9990	10005
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1b	<u>Airport to Ocean Terminal</u>	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	360	375	390	405	420	435	450	465	480	495	510	525	540	555	570	585	600	615	630	645	660	675	690	705	720	735	750	765	780	795	810	825	840	855	870	885	900	915	930	945	960	975	990	1005
1b	<u>Ocean Terminal to Airport</u>	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	360	375	390	405	420	435	450	465	480	495	510	525	540	555	570	585	600	615	630	645	660	675	690	705	720	735	750	765	780	795	810	825	840	855	870	885	900	915	930	945	960	975	990	1005
1b	<u>Granton to Haymarket</u>	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	360	375	390	405	420	435	450	465	480	495	510	525	540	555	570	585	600	615	630	645	660	675	690	705	720	735	750	765	780	795	810	825	840	855	870	885	900	915	930	945	960	975	990	1005
1b	<u>Haymarket to Granton</u>	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	360	375	390	405	420	435	450	465	480	495	510	525	540	555	570	585	600	615	630	645	660	675	690	705	720	735	750	765	780	795	810	825	840	855	870	885	900	915	930	945	960	975	990	1005

Networking (Phasing) and Service Frequency commencing at:

Sunday (18:00 - 21:00)									
1b	1b	1b	1b	1b	1b	1b	1b	1b	1b
18:00	18:00	18:15	18:30	18:45	19:00	19:15	19:30	19:45	20:00

1a	<u>Airport to Ocean Terminal</u>	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	360	375	390	405	420	435	450	465	480	495	510	525	540	555	570	585	600	615	630	645	660	675	690	705	720	735	750	765	780	795	810	825	840	855	870	885	900	915	930	945	960	975	990	1005
1a	<u>Ocean Terminal to Airport</u>	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	360	375	390	405	420	435	450	465	480	495	510	525	540	555	570	585	600	615	630	645	660	675	690	705	720	735	750	765	780	795	810	825	840	855	870	885	900	915	930	945	960	975	990	1005
1a	<u>Haymarket to Newhaven</u>	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	360	375	390	405	420	435	450	465	480	495	510	525	540	555	570	585	600	615	630	645	660	675	690	705	720	735	750	765	780	795	810	825	840	855	870	885	900	915	930	945	960	975	990	1005
1a	<u>Newhaven to Haymarket</u>	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	360	375	390	405	420	435	450	465	480	495	510	525	540	555	570	585	600	615	630	645	660	675	690	705	720	735	750	765	780	795	810	825	840	855	870	885	900	915	930	945	960	975	990	1005

1b	<u>Airport to Ocean Terminal</u>	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	25
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Table 2: First and last tram services and frequencies for 8 & 8 tram per hour scenario

4.5 Availability, Reliability, Punctuality and Regularity of the Transport Services

The Operator shall monitor those Performance Indicators related to Transport Services delivery for each Phase by methods to be agreed with tie and shall report to tie on those Performance Indicators in the Service Quality Report rendered pursuant to Clause 12 (*Service Performance and Quality Monitoring*) of the Operating Appendix. Any remedial action necessary to achieve requisite performance levels, or where appropriate any adjustment of the performance levels, shall be subject to agreement of tie as set out in the KPI Regime.

5. SERVICE INTEGRATION

- 5.1 The Operator shall support the refinement and adjustment of the Service Integration Plan in conjunction with tie, TEL, other public transport operators and in conformity with CEC's local transport strategy.
- 5.2 The Operator shall implement the Service Integration Plan in so far as it directly relates to Transport Services to achieve timetable coordination measures (as appropriate and as far as reasonably practicable) and in accordance with the Operator's other obligations.
- 5.3 The Operator shall on each Tram show information received from tie and/or TEL related to connecting public transport timetables.
- 5.4 Subject to Clause 12.19 of the Agreement, publicity, particularly Timetable and fares information, shall be presented in a common format provided by tie. Timetable information shall be provided to Traveline Scotland or any successor notified by tie with adequate notice being given of any proposed service alterations

6. OPERATING METHOD STATEMENT

- 6.1 The Operator shall implement and maintain up-to-date all component plans which constitute the Operating Method Statements and as developed under paragraph 26 of the Project Development Output Specification. Changes proposed by the Operator to any of the these plans shall be agreed with and approved by tie prior to implementation.

7. STAFF

7.1 At all times during the Service Period, the Operator shall ensure that:

7.1.1 there shall be a sufficient number of staff (including the Key Personnel and all relevant grades of supervisory staff) engaged in the provision of the Project Operations with the level of skill and experience appropriate to the tasks to which such staff are allocated and the standards which are required to be achieved pursuant to this Agreement. To avoid doubt, this obligation shall include ensuring that there are sufficient staff to cover periods of holiday, sickness and other absences and anticipated and actual peaks in demand for the Service;

7.1.2 all staff receive adequate training for their roles in accordance with the Recruitment and Training Plan to ensure the proper performance of this Agreement and compliance with all health and safety rules, procedures and requirements. Such training must be supplemented by continuing development;

7.1.3 The Operator shall, within 60 days of Operating Effective Date, present to tie for approval a programme of actions necessary to obtain an appropriate 'business excellence' certification such as 'Investors In People' and shall implement that programme accordingly.

7.1.4 The Operator shall have in place and implement appropriate equal opportunities and equality policies and comply with Law regarding employment.

7.2 The Operator shall procure that the tie Project Manager shall upon reasonable notice have access to all material details in respect of all employees of the Operator and any Operator Party engaged in the performance of the Project Operations including numbers and categories of staff employed to perform the Project Operations and including in respect of each such employee:

7.2.1 details of qualifications;

7.2.2 details of training undertaken by the employee;

7.2.3 disciplinary record; and

7.2.4 criminal record (excluding convictions considered to be spent under the Rehabilitation of Offenders Act 1974).

7.3 The Operator shall (and shall procure that any Operator Party shall) inform local employment and training organisations and any other employment and/or training organisations operating in Edinburgh of any staff vacancies in connection with the Project Operations before advertising the vacancies.

8. REPORTING

8.1 Subject to the provisions of Clause 12.19 of the Agreement, the Operator shall supply the following information to tie in the form of Service Quality Reports in accordance with Clause 12 (*Service Performance and Quality Monitoring*) of the Operating Appendix and at other such times and in such form (including Annual Service Reports) as tie may reasonably require:-

8.1.1 Patronage information in the form of Actual Tram Patronage (boarders) and on-board tram revenue collection and ticket checking data in consolidated format;

8.1.2 Operating Costs;

8.1.3 Data for concessionary fare and multi-modal ticket type usage in conjunction with paragraph 8.1.1;

8.1.4 Reliability and punctuality records;

8.1.5 Quality assurance certificates in accordance with the Quality Management Plan;

8.1.6 Company accounts;

8.1.7 Failure information; and

8.1.8 Any information necessary for tie to audit the achievement or otherwise of Key Performance Indicators and other Performance Indicators.

8.2 tie shall also have the right in accordance with Clause 16.5 of the Operating Appendix to commission or undertake passenger surveys, including face-to-face interviews, to determine usage and other information.

- 8.3 The Operator shall, where necessary, collate and report on information received from Infrastructure Providers relevant to reporting upon the operation of the System.

9. INFORMATION FOR THE PUBLIC

- 9.1 Subject to the provisions of Clause 12.19 of the Agreement, the Operator shall display information as instructed and provided by tie at each Tramstop at all times throughout the Service Period:

9.1.1 accurate information relating to the scheduled times and Headways of all Trams in service arriving at and departing from that Tramstop, provided that for any period when the scheduled Headway is less than 10 minutes, the Operator need only provide information in relation to the duration of such Headway;

9.1.2 real time information about Transport Services at all Tramstops including the anticipated time of departure from that Tramstop of the next Tram and interchange buses and the destination of such Trams or interchange buses, as the system can display; and

9.1.3 details of the first and last Tram at each such Tramstop for each day.

- 9.2 tie shall provide paper copies of the Timetable to the Operator and the Operator shall make these copies available (free of charge) to members of the public following any request. tie shall display copies of the Timetable at Tramstops and at any bus or railway station or other passenger interchange from time to time and subject to the approval of such third parties as may be necessary. If the Operator makes any change to the Timetable (to the extent that such changes are permitted under this Agreement) the Operator shall make copies of the revised Timetable available to tie and TEL at least 30 days prior to implementation of the planned changes to the Timetable.

- 9.3 The Operator shall use its best endeavours (including any steps reasonably requested by tie from time to time) to inform potential users of the System on at least 7 prior days' notice if:

9.3.1 it will be unable to operate any Transport Services in accordance with the Timetable; or

9.3.2 it will be providing additional or modified Transport Services in connection with Special Events,

and shall notify potential users of the System at the same time of any revised Timetable or travelling arrangements.

9.4 The Operator shall:

9.4.1 immediately inform tie of any material disruption of the Transport Services and any mitigating action taken or to be taken so that this information can be widely circulated; and

9.4.2 when requested by tie, provide information about its current operations and future proposals in a form agreed with tie to facilitate the provision of public information;

9.5 The Operator shall comply with the Public Liaison and Media Plan and co-operate with tie and provide such information and assistance as tie may reasonably require from time to time in the provision of information to the travelling public regarding public passenger transport services in Edinburgh.

10. PASSENGER'S CHARTER

10.1 Pursuant to paragraph 29 of the (*Project Development Output Specification*), the Operator shall produce, publish and maintain in force and comply with throughout the Service Period, and update from time to time, the approved passengers' charter outlining the expectations which passengers may have of the Transport Services on the System and a procedure for passenger complaints, such charter to be subject to the prior written approval of tie (such approval not to be unreasonably withheld or delayed).

11. CONTROL CENTRE

11.1 The Operator shall be responsible for ensuring that staffing and consumables for the Operator are provided on a 24/7 basis for operation of the Control Centre and for interface management between Tram operations and System infrastructure and vehicle availability and maintenance.

11.2 The Operator shall at all times at the Control Centre man a priority telephone facility (with dedicated handsets and direct lines) for external communications to the emergency services, regional electricity control and other key parties.

11.3 The Operator shall automatically and continuously log at the Control Centre Tram movements so as to provide for day-to-day performance monitoring and incident and fault inquiry and also for periodic off-line evaluation of service quality and compliance with this Operating Output Specification.

12. OPERATOR MAINTENANCE RESPONSIBILITIES

12.1 The Operator shall be responsible for implementing the Operator Maintenance Plan.

13. MANAGEMENT OF INFRASTRUCTURE PROVIDER MAINTENANCE

13.1 The Operator shall be responsible for managing the implementation of System Maintenance by the Infrastructure Provider(s).

14. CONSUMABLES, MATERIALS AND EQUIPMENT

14.1 The Operator shall ensure that the goods, equipment, consumables and materials to be provided by the Operator and used by it or any Sub-Contractor in connection with the provision of any of the Project Operations (each as a distinct and separate obligation) are:

14.1.1 of satisfactory quality;

14.1.2 maintained and stored in a safe, serviceable and clean condition in accordance with Good Industry Practice;

14.1.3 of the type specified in this Operating Output Specification or as agreed during the development of the Operating Method Statements; and

14.1.4 in compliance with Law and Necessary Consents,

and shall, as soon as reasonably practicable after receiving a request from the tie Project Manager, supply to the tie Project Manager reasonable evidence to demonstrate its compliance with this paragraph 14.1 in so far as practicable.

14.2 The Operator shall be responsible for and shall procure that sufficient stocks and continuous supply of goods, spares, consumables, equipment and materials to be provided by the Operator are available at all times in order to comply with its obligations under this Agreement.

14.3 The Operator shall not install, keep or use in or on the Site any materials, equipment or apparatus, the installation, keeping or use of which is likely to cause (or in fact causes):

14.3.1 material damage to the System;

14.3.2 environmental contamination or the generation, accumulation or migration of any hazardous substance in an unlawful manner whether within or outside the Site (or the soil, air or water surrounding it); or

14.3.3 health or safety risk to the public or its own staff;

and shall use all reasonable endeavours to ensure (by directions to staff and otherwise) that all consumables, materials, equipment or apparatus to be provided by the Operator in or on the System Land are stored, operated and used in accordance with the Environmental Statement and so as to minimise noise and vibration (through the relevant medium) likely to cause damage, annoyance or disturbance and prevent environmental contamination or the unlawful generation or migration of any hazardous substance.

14.4 Without prejudice to the generality of its obligations under this Agreement, the Operator shall:

14.4.1 procure that all hazardous materials and equipment used or stored by the Operator on the Site shall be kept in accordance with Good Industry Practice, properly and securely labelled and stored, under appropriate supervision and used only by appropriately trained and competent staff; and

14.4.2 use all practicable and reasonable means to:

14.4.2.1 prevent and counteract the unlawful emission or theft of such hazardous substance;

14.4.2.2 avoid the unlawful discharge into any conducting media serving or passing through, under or over the Site of such hazardous substance;

14.4.2.3 prevent the unlawful generation, accumulation or migration of such hazardous substance at or from the Site; and

14.4.2.4 prevent any environmental claims arising or any circumstances arising likely to result in any environmental claims.

15. REVENUE PROTECTION

The Operator shall implement in transit inspection of tickets on every Tram in operation on the Edinburgh Tram Network and other methods as agreed with tie from time to time to check that passengers are in possession of a valid ticket or tickets for journeys that are taken and to ensure that ticketless or other fraudulent travel is deterred.

15.1 If required by tie in the Service Integration Plan, the Operator shall as practicable link its fare collection system to the OneTicket scheme currently in operation.

15.2 The Operator shall as practicable ensure that its on-board inspectors check and record smartcards: (a) for the provision of transaction and validation data ;and (b) to take action to confiscate the smartcard in the event that it is on a hot list as provided by tie to the Operator.

16. PARK AND RIDE FACILITIES

16.1 Security

16.1.1 The Operator shall if monitored by the Control Room and a CCTV system is provided operate a CCTV system covering each Tramstop, facilities provided (including ticket machines, shelters, buildings and other structures) and the whole of the car park and footpaths at all park and ride sites.

16.1.2 The Operator shall, if monitored by the Control Room and a CCTV system is provided, respond appropriately to any incidents at the park and ride sites.

17. SYSTEM OPERATING ENVIRONMENT AND LANDSCAPE

In carrying out the Project Operations, the Operator shall comply with such parts of the Design Manual as are mandated in this Operating Output Specification and shall give due consideration to the contents of the Design Manual as a whole.

17.1 Environmental Plan and Policy Statement

17.1.1 The Operator shall comply with the Design Manual.

17.1.2 The Operator shall implement the Environmental and Sustainability Management Plan in relation to the Operator Maintenance.

17.1.3 The Environmental and Sustainability Management Plan shall be in accordance with best environmental practice, validated by independent audit and in compliance with ISO 14001 (or equivalent). Following commissioning of the System, the Operator shall carry out an annual audit of such plan.

17.2 Operational Noise and Vibration

The Operator shall take all reasonable steps to minimise operational noise (including from public address systems and audible passenger boarding signals), vibration, emissions or other disturbance during the Term which might result in interference with and/or nuisance to the public and to nearby properties, in particular at night or with respect to buildings and structures with sensitive equipment and ensure that operation of the System complies as far as reasonably practicable having regard to the Infrastructure and Equipment with the requirements of the Design Manual, the Environmental Statement, the Code of Maintenance Practice and the Noise and Vibration Policy.

18. SYSTEM QUALITY PROTECTION

The Operator shall be responsible during the Term for continual assessment of System quality protection through the provision of advice to tie, in particular on the introduction of technology upgrades and replacement and on the general whole life performance of the System, including Assets used by the Operator in conjunction with the Infrastructure Provider.

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**Director/Authorised Signatory
tie Limited**

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**Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited**

17.1.2 The Operator shall implement the Environmental and Sustainability Management Plan in relation to the Operator Maintenance.

17.1.3 The Environmental and Sustainability Management Plan shall be in accordance with best environmental practice, validated by independent audit and in compliance with ISO 14001 (or equivalent). Following commissioning of the System, the Operator shall carry out an annual audit of such plan.

17.2 Operational Noise and Vibration

The Operator shall take all reasonable steps to minimise operational noise (including from public address systems and audible passenger boarding signals), vibration, emissions or other disturbance during the Term which might result in interference with and/or nuisance to the public and to nearby properties, in particular at night or with respect to buildings and structures with sensitive equipment and ensure that operation of the System complies as far as reasonably practicable having regard to the Infrastructure and Equipment with the requirements of the Design Manual, the Environmental Statement, the Code of Maintenance Practice and the Noise and Vibration Policy.

18. **SYSTEM QUALITY PROTECTION**

The Operator shall be responsible during the Term for continual assessment of System quality protection through the provision of advice to tie, in particular on the introduction of technology upgrades and replacement and on the general whole life performance of the System, including Assets used by the Operator in conjunction with the Infrastructure Provider.


Director/Authorised Signatory
tie Limited


Director/Authorised Signatory
TRANSDEV Edinburgh Tram Limited



**THIS IS SCHEDULE PART 43 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 43

RESERVE ACCOUNT

1. Bilfinger Berger UK Limited, on behalf of the Infraco, shall establish a Reserve Account within 30 days of the Effective Date, such account to be established and maintained with a bank acceptable to **tie** at the cost of the Infraco and to be operated only for the purposes set out in this Schedule Part 43.
2. The Reserve Account shall be funded by the Infraco up to the maximum agreed level, THREE MILLION POUNDS (£3,000,000), by the date of issue of the Certificate of Service Commencement. The Infraco shall demonstrate the level of funding maintained in the reserve account at quarterly intervals to **tie**.
3. In the event that:
 - 3.1 a claim is brought against or a liability is incurred by **tie** or the Indemnified Parties for uninsured third party economic consequential loss prior to the issue of the Reliability Certificate which arises as a consequence of the Infraco's performance or non performance of the Infraco Works (including as described under Clause 77.1.1 or 77.1.2) which would have been recoverable from Infraco pursuant to Clause 77 (*Indemnity by Infraco, Liability and Sole Remedy*) but for the provisions of Clause 77.8, **tie** shall be entitled to set off (as a debt), in accordance with Clause 69.2 against any payment due to the Infraco pursuant to this Agreement (but if there are no such payments due to the Infraco, to recover as a debt), any payment made by **tie** or the Indemnified Parties in respect of such claims or liability incurred up to a maximum in aggregate of THREE MILLION POUNDS (£3,000,000) less the aggregate of any payments made by Infraco to which paragraph 3.2.2 applies as at the date **tie** is entitled to set off pursuant to this paragraph 3.1;
 - 3.2 the Infraco has properly made any payment in respect of a claim made against it by or liability incurred to a third party for uninsured economic consequential loss which has arisen as a consequence of the Infraco's performance or non performance of the Infraco Works (and has notified **tie** prior to making such payment):
 - 3.2.1 in the case where the aggregate of: (i) such payment (or part of such payment), (ii) amounts set off by **tie** pursuant to paragraph 3.1; and (iii) payments previously made by the Infraco (to which this paragraph 3.2 applies), exceeds THREE MILLION POUNDS (£3,000,000), then **tie** shall

reimburse to Infraco within 30 Business Days the lesser of the amount which equals: (i) the amount by which the aggregate exceeds THREE MILLION POUNDS (£3,000,000) and (ii) the payment made by Infraco to which this paragraph 3.2 applies; or

3.2.2 in the case where the aggregate of: (i) such payment, (ii) amounts set off (or recovered) by **tie** pursuant to paragraph 3.1 and (iii) payments previously made by Infraco to which paragraph 3.2 applies, is less than THREE MILLION POUNDS (£3,000,000), then such payment (or part thereof) shall be taken into account when calculating the amount **tie** is entitled to set off (or recover) pursuant to paragraph 3.1 and the Infraco shall be entitled to be reimbursed from the Reserve Account and **tie** shall have no liability to reimburse the Infraco.

4. Without the prior written consent of the Parties, the Reserve Account shall not be used for any purpose other than as stipulated in this Schedule Part 43 (*Reserve Account*). For the avoidance of doubt, all obligations of Bilfinger Berger UK Limited pursuant to this Schedule Part 43 shall be owed to **tie** on a joint and several basis on behalf of the Infraco.
5. For the avoidance of doubt, any amounts set off or recovered from Infraco by **tie** as a debt due or to which paragraph 3.2.2 applies shall be included in the aggregate liability of Infraco under this Agreement for the purposes of Clause 77.7.



**THIS IS SCHEDULE PART 44 REFERRED TO IN THE
FOREGOING AGREEMENT BETWEEN TIE AND THE
INFRACO**

SCHEDULE PART 44

EAL WORKS

1. DEFINITIONS AND INTERPRETATION

1.1 In this Schedule Part 44 (*EAL Works*), save as otherwise expressly stated or as the context otherwise requires:

1.1.1 "**2005 Agreement**" means the agreement between EAL and CEC in relation to the Tram Project dated 14 September 2005;

1.1.2 "**Abandoned**" means, in respect of the EAL Works, that they have not been materially progressed once started for a period of more than 18 consecutive months;

1.1.3 "**Act**" means the Edinburgh Tram (Line Two) Act 2006;

1.1.4 "**Aerodrome Safeguarding Guidance**" means the policies, advice notes and guidance listed in Appendix 9 to this Schedule Part 44 (*EAL Works*);

1.1.5 "**Agreed EAL Works Data**" means all Reviewable EAL Works Data, issued or re-issued by the Infraco pursuant to Appendix 3 to this Schedule Part 44 (*EAL Works*) and to which **tie** has not objected pursuant to this Appendix;

1.1.6 "**Airport Regulations**" means all laws and regulations affecting airports and aerodromes as they apply to and/or affect EAL and/or Edinburgh Airport including:

1.1.6.1 any regulations issued by the Civil Aviation Authority or NATS Limited;

1.1.6.2 any airport bye-laws and regulations to the extent relating to safety, security and airport operational matters (including radio communications, staff checks and the materials and plant policy) as notified to the Infraco by EAL and/or **tie**;

1.1.6.3 Department for Transport aviation security regulations;

1.1.6.4 any policies of EAL in respect of health and safety and security matters, as notified by EAL and/or **tie** to the Infraco; and

1.1.6.5 the EAL Site Rules,

all as may be amended from time to time.

- 1.1.7 "**Authorised Tramway**" has the meaning given to it in the Act;
- 1.1.8 "**Burnside Drawing**" means drawing number 38602TEDD_219_300 annexed and signed as relative hereto;
- 1.1.9 "**Burnside Land**" means any land which EAL and **tie**, acting reasonably, agree is required in connection with the carrying out of the Burnside Road Re-alignment Works and which is within the area shown marked "Burnside Licensed Land" and shown in the plan included in Appendix 1 to this Schedule Part 44 (*EAL Works*);
- 1.1.10 "**Burnside Road Re-alignment Works**" means the works specified and described in outline on the Burnside Drawing and as further specified in and pursuant to paragraph 4 of Appendix 5 to this Schedule Part 44 (*EAL Works*);
- 1.1.11 "**Draft Drawdown Information**" means a draft of the drawdown information which the Infraco intends to submit pursuant to this Schedule Part 44 (*EAL Works*);
- 1.1.12 "**Drawdown Information Requirements**" means the schedule of information in the form set out in Appendix 2 to this Schedule Part 44 (*EAL Works*), to be completed by the Infraco, as appropriate which will be used by **tie** in respect of applying for each Drawdown Notice;
- 1.1.13 "**Drawdown Notice**" means a notice submitted by **tie** to EAL for the purpose of securing access to the Licensed Land;
- 1.1.14 "**EAL Construction Programme**" means the Infraco's construction programme in so far as it relates to the EAL Works (which shall include its programme as regards the commissioning of, and trial operations and the commencement of passenger services on, the Authorised Tramway at Edinburgh Airport) as it may be amended and updated from time to time;
- 1.1.15 "**EAL Emergency Procedures Protocol**" means the protocol set out in Appendix 7 to this Schedule Part 44 (*EAL Works*), as it may be amended from time to time;
- 1.1.16 "**EAL Lease Force Majeure**" means fire, explosion, aircraft crash, legal challenge pursuant to an enforceable court order, industrial action, storm, earthquake, lightning, riot, war, civil commotion or terrorism;

- 1.1.17 "**EAL Licence Force Majeure**" means fire, explosion, aircraft crash, storm, earthquake, lightning, unforeseeable ground conditions, riot, war, civil commotion or terrorism;
- 1.1.18 "**EAL Regulator**" means any of the following: Civil Aviation Authority, NATS Limited or the Department for Transport acting in their respective capacities under the Airport Regulations and/or where the context requires the Department for Transport, the Scottish Ministers, Transport Scotland and/or the Office of Rail Regulation and/or HMRI acting in their respective capacities under the Light Railway Regulations;
- 1.1.19 "**EAL Site**" means, as the context requires, the Licensed Land, the Leased Land and any additional areas of ground at Edinburgh Airport used by the Infraco (with the consent of EAL and **tie**) in connection with the EAL Works;
- 1.1.20 "**EAL Site Rules**" means the EAL site rules, policies and procedures applicable to Edinburgh Airport listed in Appendix 6 to this Schedule Part 44 (*EAL Works*), and those rules, policies and procedures as they may be updated from time to time and notified to the Infraco;
- 1.1.21 "**EAL Works**" means any works authorised by the Act on or affecting the EAL Site (including construction and maintenance activities) and including the Burnside Road Re-alignment Works;
- 1.1.22 "**EAL Works Data**" means Draft Drawdowns and:
- 1.1.22.1 all calculations, designs, design information, specifications, plans, design and construction programmes (other than proprietary computer programs), drawings, planning application submissions, graphs, sketches, models, engineering and other forms of data of a materially relevant nature in whatever medium; and
- 1.1.22.2 all construction methodologies, plans, procedures and method statements,
- in both cases which the Infraco is required to produce or otherwise produces in connection with the EAL Works or the EAL Site;
- 1.1.23 "**Edinburgh Airport**" means Edinburgh Airport, Edinburgh, registered in the Land Register of Scotland under Title Number MID97007;

- 1.1.24 "**Emergency**" means an event causing or, in the reasonable opinion of a Party and/or EAL, threatening to cause death or injury to any individual, or material damage to property;
- 1.1.25 "**Leased Land**" means the land comprising the Plot numbers listed as such in Appendix 1 to this Schedule Part 44 (*EAL Works*), which is marked as "Leased Land" and shown in the plan included in Appendix 1 to this Schedule Part 44 (*EAL Works*);
- 1.1.26 "**Licensed Land**" means the Leased Land (but will not include the Leased Land after execution of the EAL Lease), the Temporary Land (marked as "Licensed Land" and shown in the plan included in Appendix 1 to this Schedule Part 44 (*EAL Works*)), and the Burnside Land (marked as "Burnside Licensed Land" and shown in the plan included in Appendix 1 to this Schedule Part 44 (*EAL Works*));
- 1.1.27 "**Light Rail Regulations**" means all laws and regulations affecting the operation of tramways and light railways in the United Kingdom;
- 1.1.28 "**Permitted Use**" means:
- 1.1.28.1 constructing the EAL Works including any necessary surveys, investigations, enabling works, commissioning and testing of the EAL Works;
 - 1.1.28.2 to the extent consistent with Clause 1.1.28.1, in respect of a particular Phase, for the purposes set out in the relevant Drawdown Notice;
 - 1.1.28.3 maintaining the Edinburgh Tram Network in accordance with the Agreement;
 - or
 - 1.1.28.4 use of the EAL Site for a tram stop (together with associated plant, machinery, apparatus and equipment) and the operation of regular daily passenger services to and from Edinburgh Airport on operational trams when Edinburgh Airport is open;
- 1.1.29 "**Phase**" means any part of the Licensed Land in respect of which a Drawdown Notice has been validly issued and is in effect;
- 1.1.30 "**Pro-forma Objection**" means the pro-forma of the objection to be used by **tie** pursuant to paragraph 5.3 of Appendix 3 to this Schedule Part 44 (*EAL Works*), and which is set out in Appendix 4 to this Schedule Part 44 (*EAL Works*);

1.1.31 "**Restoration Works**" means any element of the EAL Works which relates to the Restoration of Assets;

1.1.32 "**Reviewable EAL Works Data**" (or "**REWD**") has the meaning given to it in Appendix 3 to this Schedule Part 44 (*EAL Works*);

1.1.33 "**Stated Vacation Date**" means, in relation to a Phase, the date on which the Infraco will vacate that Phase as specified in the relevant Drawdown Notice;

1.1.34 "**Temporary Land**" means the land forming part of the Site comprising the Plot numbers listed as such in Appendix 1 to this Schedule Part 44 (*EAL Works*), marked as "Licensed Land" and shown in the plan included in Appendix 1 to this Schedule Part 44 (*EAL Works*);

1.1.35 "**Tram Project**" means the project to construct and operate the Authorised Tramway;

1.1.36 "**Vacation Date**" means, in respect of a Phase, the earlier of:

1.1.36.1 the Stated Vacation Date; and

1.1.36.2 the date on which the Infraco no longer reasonably requires the Phase for the purposes specified in the relevant Drawdown Notice; and

1.2 In this Schedule Part 44 (*EAL Works*), unless the context otherwise specifies or requires, an obligation on the Infraco to "**Restore**" an "**Asset**" shall be interpreted and applied as follows (with "Restored" and "Restoration" being interpreted accordingly):

1.2.1 the following definitions will apply:

1.2.1.1 "**Asset**" means a facility or an asset or part of a facility or part of an asset at the EAL Site (including all structures, buildings, utilities, roads, aircraft stands, helipads, taxi ways, car parks and transport links);

1.2.1.2 "**Existing Asset**" means an Asset which is to be displaced (permanently or on a temporary basis) as a result of the Tram Project, and:

(a) which is used by EAL and/or;

(b) which is leased or licensed by EAL as landlord or licensor to any third party; and/or

(c) in respect of which EAL shares possession with any third party

1.2.1.3 "**New Asset**" means an Asset as Restored pursuant to this Schedule Part 44 (*EAL Works*); and

1.2.1.4 "**Applicable Laws**" means all applicable laws, consents, approvals and technical standards at the time an Asset is Restored.

1.2.2 an obligation on the Infraco to "**Restore**" an Asset shall mean:

1.2.2.1 an obligation to Re-instate that Asset; or

1.2.2.2 if that is not reasonably practicable, or if it is agreed by EAL and **tie**, **tie** notifies the Infraco to Re-provide that Asset.

1.2.3 an obligation to "**Re-instate**" an Asset is to:

1.2.3.1 provide, where no reasonable alternative to the continuous use of the Asset exists, a temporary replacement for the displaced Existing Asset which complies with all Applicable Laws and is sufficient to allow EAL an equivalent level of use of its Assets generally as it enjoyed prior to such displacement; and

1.2.3.2 at the end of the period of displacement to re-instate the Existing Asset in its original location such that the New Asset is to at least the standard, condition, quality and capacity of the Existing Asset prior to its being affected by the Tram Project, and so that the New Asset complies with all Applicable Laws.

1.2.4 the obligation to "**Re-provide**" an Asset is to re-provide an Existing Asset in a location to be agreed by EAL and **tie**, (both acting reasonably) so that the New Asset is of at least the standard, condition, quality and capacity of the Existing Asset immediately prior to its being affected by the Tram Project, and so that the New Asset complies with all Applicable Laws.

1.3 The expression "**adverse impact upon Edinburgh Airport**" means "an adverse impact on the safe, efficient and/or secure operation of Edinburgh Airport, and any material adverse impact (taking into account the nature and size of the EAL Works) on the operations of Edinburgh Airport generally".

2. INTERRELATIONSHIP BETWEEN THE EAL LICENCE AND THE EAL LEASE

2.1 The Infraco shall carry out the EAL Works in accordance with this Schedule Part 44 (*EAL Works*) and the other relevant provisions of the Agreement.

- 2.2 The Infraco acknowledges that parts of the EAL Site (and the associated EAL Works including the Burnside Road Re-alignment Works) will be subject to the terms of the EAL Licence only, and that other parts of the EAL Site (and the associated EAL Works) will initially be subject to the terms of the EAL Licence but that once the EAL Lease has been executed by EAL and CEC, such parts of the EAL Site shall become subject to the terms of the EAL Lease.
- 2.3 The Infraco further acknowledges that it is intended that the EAL Lease will be executed prior to the construction of the main works for the Authorised Tramway. **tie** shall notify the Infraco when the EAL Lease is effective.
- 2.4 The provisions in the EAL Lease and EAL Licence with which the Infraco must comply have been included in this Schedule Part 44 (*EAL Works*).
- 2.5 The Leased Land and the Licensed Land are shown on plans included in Appendix 1 to this Schedule Part 44 (*EAL Works*).
- 2.6 As a Drawdown Notice in respect of EAL Works on any part of the Leased Land is not required, the Infraco shall not be required to submit any Drawdown Information in respect of any part of the Leased Land, and clause 4 of this Schedule Part 44 (*EAL Works*) shall not apply in this circumstance.
- 2.7 The Infraco shall submit a Drawdown Information in respect of EAL Works on the Licensed Land, and clause 4 of this Schedule Part 44 (*EAL Works*) shall apply in this circumstance.

3. DEVELOPMENT RIGHTS AND OBLIGATIONS

3.1 The Infraco is bound as follows:

3.1.1 to use the EAL Site only for the Permitted Use;

3.1.2 notwithstanding clause 3.1.1 of Schedule Part 44 (*EAL Works*):

3.1.2.1 to exercise its rights in relation to the Temporary Land on a temporary basis only, and only for the purposes listed in respect of each Plot number in Appendix 1 to this Schedule Part 44 (*EAL Works*); and

3.1.2.2 to exercise its rights in relation to the Burnside Land on a temporary basis only, and only for the purposes of the Burnside Road Re-alignment Works;

- 3.1.3 to use all reasonable endeavours to keep the EAL Site safe and secure so as to prevent unauthorised access to any part of the EAL Site during the period when the Infraco is carrying out and completing the EAL Works;
 - 3.1.4 not to do or permit or omit to do anything which has an adverse impact upon Edinburgh Airport without prejudice to the statutory obligations of CEC in terms of the Act provided that carrying out the EAL Works in accordance with this Agreement shall not be a breach of this clause 3.1.4;
 - 3.1.5 to protect the legitimate interests of EAL to safeguard the safe and efficient operation of Edinburgh Airport provided that carrying out the EAL Works in accordance with this Agreement shall not be a breach of this clause 3.1.5;
 - 3.1.6 not to undertake any works on the EAL Site without the consent of tie and EAL other than EAL Works carried out in accordance with Agreed EAL Works Data; and
 - 3.1.7 to comply at all times with Good Industry Practice in respect of carrying out and completing the EAL Works.
- 3.2 Following 48 hours' notice in writing (or forthwith in the case of an emergency), the Infraco shall permit EAL access to enter the EAL Site:
- 3.2.1 for any purpose related to:
 - 3.2.1.1 the exercise of any right conferred on or reserved to EAL; or
 - 3.2.1.2 the fulfilment of any obligation incumbent on EAL,in each case under the EAL Licence, the EAL Lease or the 2005 Agreement;
 - 3.2.2 to carry out any works to the Phase or to EAL's adjoining property;
 - 3.2.3 to effect safeguarding measures to protect property or persons from the effects of any Emergency or to effect measures to remedy, mitigate or address the effects of the Emergency; or
 - 3.2.4 to inspect the EAL Site and to investigate any right of the nature of servitude, wayleave, privilege or encroachment.
- 3.3 The Infraco hereby acknowledges that EAL has not warranted the EAL Site or any part of it as being fit for purpose.

- 3.4 The Infraco will produce to **tie** and EAL upon reasonable notice all documents, information and other such evidence as **tie** may reasonably require in order to satisfy itself that the Infraco has complied with the whole provisions of this Schedule Part 44 (*EAL Works*).
- 3.5 The Infraco shall comply with and shall not breach the title conditions relating to the EAL Site specified in the title deeds or title sheet of the EAL Site in so far as such title conditions have been notified to the Infraco. Any new title conditions which are notified to the Infraco shall be treated as a Mandatory **tie** Change.
- 3.6 The Infraco shall not use the EAL Site for any offensive, noisy or noxious trade, business or occupation nor for any illegal or immoral purpose nor for any purpose or in any way which may be or tend to become a nuisance or disturbance to EAL, their tenants, owners or occupiers of any neighbouring properties nor for any use which could constitute a hazard to health or cause harm to the environment or cause any undue noise or vibrations causing nuisance or disturbance to the use of Edinburgh Airport and/or surrounding land provided that for the avoidance of doubt that using the EAL Site for the Permitted Use shall not per se be a breach of the foregoing obligations provided that the Infraco shall act in accordance with Good Industry Practice and comply with all applicable Law.

4. DRAWDOWN INFORMATION, DRAWDOWN NOTICE AND EAL LICENCE - LICENSED LAND ONLY

4.1 Not less than 25 Business Days prior to its intention to occupy any part of the Licensed Land in accordance with the Programme, the Infraco will provide to **tie** Drawdown Information with accompanying coloured plans indicating the land to be occupied.

4.2 Drawdown Information submitted by the Infraco must:

4.2.1 be fully completed;

4.2.2 include Agreed EAL Works Data;

4.2.3 not include land which is:

4.2.3.1 is outwith the Licensed Land;

4.2.3.2 is land in respect of which vacant possession has occurred pursuant to the EAL Lease;

4.2.3.3 is a Phase or part of a Phase; or

- 4.2.4 refer to plans forming part of the Drawdown Information are extracts from the Plans.
- 4.3 The Infraco acknowledges that **tie** is required to submit each Drawdown Notice to EAL for approval. **tie** will without delay notify the Infraco in writing when the Drawdown Notice is confirmed as valid or invalid by EAL
- 4.4 The Infraco acknowledges that a Drawdown Notice will not be approved by EAL if the Infraco has not executed a collateral warranty in the form set out in Appendix 8 to this Schedule Part 44 (*EAL Works*) in accordance with the Infraco's obligations under Clause 74.10 of this Agreement.
- 4.5 On receipt of an acknowledgement that a Drawdown Notice is valid the Infraco shall be:
- 4.5.1 granted with effect from the commencement date specified in the Drawdown Notice a sub-licence to occupy the Licensed Land subject to the Drawdown Notice until the Vacation Date, subject to the terms of this Schedule Part 44 (*EAL Works*); and
- 4.5.2 entitled to take access to such Licensed Land and to use it for the Permitted Use as set out in the Drawdown Notice, from the commencement date specified in the Drawdown Notice.
- 4.6 Subject to clause 3.2 of Schedule Part 44 (*EAL Works*), the sub-licence to occupy granted to the Infraco in respect of any Phase shall be exclusive:
- 4.6.1 unless any part of any Phase is not a fenced work-site; or
- 4.6.2 unless any part of any Phase is a road; or
- 4.6.3 EAL is not able to grant exclusive occupation,
- in which case the sub-licence in respect of such Phase (or part of a Phase) shall be non-exclusive and shall be subject to the rights of EAL, **tie** and all other persons authorised or permitted by EAL, **tie** or by Law.
- 4.7 For clarity, it is acknowledged by the Parties that it is envisaged that there will be a number of Drawdown Notices submitted for short term occupation of Phases to allow the Infraco to carry out enabling and advance works and surveys and such like.

5. VACATION OF A PHASE - LICENSED LAND ONLY

- 5.1 The Infraco shall vacate each Phase on the Vacation Date and shall not be entitled to occupy that Phase after the Vacation Date (unless it is the subject of a further Drawdown Notice).
- 5.2 If the Infraco no longer reasonably requires any part of any Phase for the purposes specified in the relevant Drawdown Notice, the Infraco shall vacate that part of the Phase, and shall not be entitled to occupy that part of the Phase after that date (unless it is the subject of a further Drawdown Notice).
- 5.3 The Infraco will act reasonably in considering any proposals made by **tie** and/or EAL for the management and reduction in size of Phases and the resultant vacation of parts of Phases pursuant to clause 5.2 of Schedule Part 44 (*EAL Works*).

6. EXTENSION OF TIME IN RESPECT OF A PHASE - LICENSED LAND ONLY

- 6.1 If the Infraco requires to occupy any Phase beyond the Stated Vacation Date it will submit a written notice to **tie** requesting an extension, propose a revised vacation date, and provide justifications for that extension.
- 6.2 **tie** shall request EAL to consider the request for an extension and **tie** will endeavour to agree with EAL a new Stated Vacation Date.
- 6.3 The failure of EAL and **tie** to reach agreement pursuant to clause 6.2 of Schedule Part 44 (*EAL Works*) shall not prevent the Infraco from submitting further Drawdown Information in respect of the same area of Licensed Land pursuant to this Schedule Part 44 (*EAL Works*).
- 6.4 If the Infraco submits Drawdown Information to **tie** in the circumstances described in clause 6.3 of Schedule Part 44 (*EAL Works*) the 25 Business Day requirement in clauses 4.1 of Schedule Part 44 (*EAL Works*) will not apply to that Drawdown Information, but it must otherwise be valid in accordance with clause 4.2 of Schedule Part 44 (*EAL Works*).

7. OBLIGATIONS ON VACATION

- 7.1 By no later than the Vacation Date in respect of a Phase and on completion of any part of the EAL Works on the Leased Land in accordance with the Agreement, the Infraco will:
- 7.1.1 remove all personnel, equipment, temporary works materials, waste and rubbish from the relevant Phase or the relevant part of the Leased Land;

7.1.2 leave the Phase or the relevant part of the Leased Land together with all additions and improvements made thereto vacant and clear, and in such state of repair and condition and in all such other respects as shall be consistent with due performance by the Infraco of the obligations undertaken by the Infraco pursuant to this Schedule Part 44 (*EAL Works*) and the Agreement;

7.1.3 be responsible for the Restoration of all Assets on the relevant Phase or on the relevant part of the Leased Land; and

7.1.4 to the extent not addressed pursuant to the Restoration of Assets on the relevant Phase or on the relevant part of the Leased Land, be responsible for the re-instatement of the Phase or the relevant part of the Leased Land (and any adjoining land to the extent affected by the EAL Works carried out on the Phase or on the relevant part of the Leased Land) without betterment but at least to the standard, condition and quality of that land prior to the occupation of the Phase or the relevant part of the Leased Land by the Infraco pursuant to this Schedule Part 44 (*EAL Works*), including:

7.1.4.1 the rectification of all physical damage; and

7.1.4.2 the remediation of all contamination and harm to the environment caused by those EAL Works,

all to the reasonable satisfaction of **tie** and EAL.

7.2 If any part of a Phase or part of the Leased Land has been vacated pursuant to clause 5.2 of Schedule Part 44 (*EAL Works*), the obligations in clauses 7.1.1 to 7.1.4 of Schedule Part 44 (*EAL Works*) will apply as regards that part.

7.3 The Infraco will notify **tie** upon vacation of each Phase in writing or part of the Leased Land.

7.4 The occurrence of a Vacation Date in respect of a Phase or a part of the Leased Land will not affect the obligations of the Infraco to comply with the obligations in clauses 7.1.1 to 7.1.4 of Schedule Part 44 (*EAL Works*) in respect of the land which comprised the Phase or part of the Leased Land.

8. TERMINATION

8.1 The Infraco acknowledges that both EAL and **tie** are entitled to terminate the EAL Licence with immediate effect by notice in writing if the Act is repealed. In this instance any right to

occupy any Phase in favour of the Infraco under this Schedule Part 44 (*EAL Works*) will terminate automatically.

8.2 The Infraco further acknowledges that EAL will be entitled to terminate the EAL Licence with immediate effect by notice in writing at any time after the date falling three months after the commencement of passenger services to and from Edinburgh Airport on the Authorised Tramway.

8.3 The Infraco acknowledges that EAL will be entitled to terminate the EAL Licence with immediate effect by notice in writing (and consequently the Infraco's right to occupy) if:

8.3.1 the EAL Works are Abandoned (unless as a result of damage or destruction caused by EAL Licence Force Majeure which means that additional EAL Permissions are required by the Infraco to progress the EAL Works); or

8.3.2 if the EAL Works are Abandoned as a result of damage or destruction caused by EAL Licence Force Majeure which means that additional EAL Permissions are required by the Infraco to progress the EAL Works; and

8.3.2.1 the Infraco does not demonstrate to the reasonable satisfaction of EAL that it is using its reasonable endeavours to pursue and obtain those EAL Permissions in circumstances where the Infraco is obliged under this Agreement to obtain EAL Permissions; or

8.3.2.2 the EAL Works are not materially progressed within 9 months of those EAL Permissions being obtained.

8.4 The date on which the Infraco's right to occupy any Licensed Land terminates will be deemed to be the Vacation Date for all Phases.

8.5 If the Infraco's right to occupy the Licensed Land is terminated this will not affect any rights or liabilities of the Parties accrued under it prior to or arising pursuant to its termination.

8.6 The Infraco acknowledges that EAL will be entitled to terminate the EAL Lease by 90 days' written notice if:

8.6.1 the Leased Land ceases to be used for the Permitted Use for any period of more than 12 continuous months (subject to the terms of clause 8.7 of Schedule Part 44 (*EAL Works*)) in any period of 24 successive months (discounting any period (1) where the cessation is a result of EAL Lease Force Majeure (provided that such EAL Lease

Force Majeure does not exceed 36 continuous months) or (2) for repair, maintenance renewal or reinstatement of Tram Line Two); or

8.6.2 **tie** has never operated or has ceased to operate the operations on the EAL Site for longer than 36 months due to EAL Lease Force Majeure.

8.7 For the purposes of calculating such period of 12 continuous months referred to in clause 8.6.1 of Schedule Part 44 (*EAL Works*), no account shall be taken of any interruption of periods of time when the Leased Land is not used for the Lease Permitted Use if, but for such interruption, a period of 12 continuous months during which the Leased Land was not used for the Lease Permitted Use within a period of 24 successive months would have expired and such interruption is identified as designated or intended to frustrate the proper operation of clause 8.6.1 of Schedule Part 44 (*EAL Works*).

9. SUB-LICENCE

9.1 The Infraco may not sub-licence its right to occupy any Phase or any part of the Leased Land to any other person.

APPENDIX 1

SECTION 1 - TEMPORARY LAND PLOT NUMBERS

Nature of Occupation Rights	Power Description Specified in the Act and Description	Plot Numbers
Intermittent temporary occupation	Schedule 7 Working Site and Access	334, 336, 339, 340, 341, 342, 343, 346, 347 and 348

SECTION 2 – LEASED LAND PLOT NUMBERS

328, 330, 331, 332, 333, 335, 337, 338, 345, 349, 350, 351, 352, 353, 360 and 498.

SECTION 3 - EAL PLANS

Edinburgh Airport

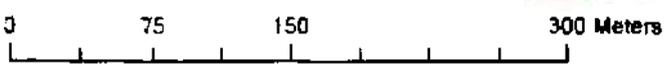


Legend

- Leased Land
- Licensed Land
- Burnside Licensed Land



Trams For Edinburgh: EAL Licence/Lease Step Down Plan 1



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Legend

- Leased Land
- Licensed Land
- Burnside Licensed Land

Trams For Edinburgh: EAL Licence/Lease Step Down Plan 2

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APPENDIX 2

Pro-Forma Drawdown Information

tie Limited
[◆]

Dear Sirs

THE EDINBURGH TRAM PROJECT EDINBURGH AIRPORT DRAWDOWN INFORMATION - EAL WORKS

We refer to the Agreement between tie Limited and [◆] dated [◆] (the "**Agreement**"). Terms used in this notice have meanings given to them in the Agreement.

Pursuant to clause 4 of Schedule Part 44 (*EAL Works*) to the Agreement, we give you notice of an intention to occupy under the Agreement the area(s) of Licensed Land shown coloured ## on the plan annexed and signed as relative hereto ("**Phase**") and undertake as follows:

1. Our occupation of the Phase shall be governed by Schedule Part 44 (*EAL Works*) to the Agreement and the other relevant provisions of the Agreement.
2. We will commence occupation of the Phase on [date].
3. The Stated Vacation Date in relation to the Phase will be [date].
4. This Drawdown Information is consistent with the following Agreed EAL Works Data with reference ##.
5. The purposes for which we require to occupy the Phase are set out in [reference to Agreed EAL Works Data or annex to this letter].
6. We have executed a collateral warranty in favour of EAL in respect of the EAL Works to be carried out on the Phase as required by the Agreement.
7. Additional information as relevant on a case by case basis.

[To be signed for and on behalf of the Infraco.]

APPENDIX 3

Protocol for review of tram works data

1. Purpose

This Appendix 3 sets out a protocol for the development and review of EAL Works Data.

2. Reviewable EAL Works Data

2.1 Upon the reasonable request from time to time of **tie**, the Infraco will provide **tie** and EAL with a schedule describing and programming the different elements of the EAL Works in relation to which EAL Works Data will be or has already been prepared.

2.2 The Infraco acknowledges that within 28 days of receipt of the schedule referred to in paragraph 2.1 of this Appendix 3, EAL will indicate to **tie**, by reference to that schedule, the elements of the EAL Works in relation to which it wishes to review the EAL Works Data.

2.3 The EAL Works Data from time to time which relate to the elements of the EAL Works which EAL has indicated it wishes to review and all Draft Drawdown Information shall be the "**Reviewable EAL Works Data**" or "**REWD**";

2.4 The Parties and EAL will agree, acting reasonably, a programme for the submission of REWD to EAL.

3. Review of REWD

3.1 Subject to paragraph 2.4 of this Appendix, the Infraco will send to **tie** for review in accordance with the protocol set out in this Appendix 3:

3.1.1 Draft Drawdown Information, as far as possible in advance of the period of occupation to which they relate; and

3.1.2 2 copies of all other REWD, as soon as reasonably practical after receipt of any notification from EAL to **tie** as referred to in paragraph 2.2 of this Appendix 3.

3.2 The Infraco acknowledges that EAL will be entitled to review the REWD on the terms outlined herein (and may appoint, acting reasonably, a third party to review the REWD on its behalf);

3.3 The Infraco shall not commence any element of the EAL Works until all REWD related to that element of the EAL Works has been reviewed by EAL (such review to be completed as soon

as reasonably practical), and no objection has been raised by EAL within 30 days following receipt of the relevant REWD, or any objection has been dealt with in accordance with paragraph 4 of this Appendix 3;

3.4 **tie** shall notify the Infraco immediately upon completion of the review by EAL of any REWD and formally confirm, where appropriate, that EAL has no objection to such REWD;

4. EAL Works relating to REWD

4.1 The Infraco shall not commence any element of the EAL Works which relates to REWD which is the subject of an objection until:

4.1.1 such objection has been withdrawn; or

4.1.2 the REWD which is the subject of such objection has been amended and reviewed by EAL and no further objections have been raised within 30 days of receiving the amended REWD.

5. Objection

5.1 The Infraco acknowledges that EAL shall not be entitled to raise any objection to any REWD that relates to the applicability of Light Rail Regulations.

5.2 Other than REWD which relates to or may impact on:

5.2.1 stray current;

5.2.2 the location and finishings of the tram stop at Edinburgh Airport;

5.2.3 signage at the tram stop at Edinburgh Airport;

5.2.4 the integration of the tram stop at Edinburgh Airport into any co-ordinated public transport hub at Edinburgh Airport and/or corridor to Edinburgh Airport terminal building;

5.2.5 ticketing machines and facilities at Edinburgh Airport (including those proposed to be located within the co-ordinated transport hub outside the terminal building);

5.2.6 the tram crossing at Eastfield Road;

5.2.7 the Burnside Road Re-alignment Works;

5.2.8 radio frequency communications; and/or

5.2.9 bird control,

EAL shall not be entitled to raise any objection to any REWD other than on the grounds of the potential for an adverse impact upon Edinburgh Airport or on the grounds of compliance with the Aerodrome Safeguarding Guidance.

5.3 The Infraco acknowledges that when raising an objection pursuant to the protocol set out in this Appendix 3, EAL shall use the Pro-forma Objection (in Appendix 4 to Schedule Part 44 (*EAL Works*)), set out the grounds to substantiate its objection and provide such information, documents and material as to enable its objection to be considered and indicate in full those matters which need to be addressed in order to enable EAL to withdraw its objection.

5.4 The Infraco acknowledges that EAL will act reasonably both in indicating the elements of the EAL Works in relation to which it wishes to review the EAL Works Data and in raising any objections and in considering whether to remove any objection.

6. Dispute

If EAL raises an objection, and EAL, **tie** and the Infraco cannot agree how to resolve that objection within 21 days of the date on which the objection is raised, any of EAL, **tie** or the Infraco may refer the matter to dispute resolution.

7. Changes to REWD

Subject to the provisions of clause 6 of Schedule Part 44 (*EAL Works*) as to extension of time, any material changes to the EAL Works Data in respect of REWD will be provided for approval to **tie** by the Infraco as soon as reasonably practicable, and the protocol set out in this Appendix 3 will apply in relation to that change.

8. Limit on EAL's liability

The Infraco acknowledges that EAL shall not have any liability in connection with the making of any comment or objection by EAL pursuant to this Appendix 3 (or any failure to do so) other than to the extent that any liability for death or personal injury arises due to EAL's negligence.

APPENDIX 4

Pro-forma tram review objection

REVIEWABLE EAL WORKS DATA:	
DATE OF RECEIPT OF REVIEWABLE EAL WORKS DATA:	
EAL OBJECTION:	
GROUNDS FOR EAL OBJECTION:	
MATTERS TO BE ADDRESSED TO REMOVE EAL OBJECTION:	
INFORMATION / DOCUMENTS / MATERIAL PROVIDED TO ENABLE EAL OBJECTION TO BE CONSIDERED:	

Signed:

Dated:

APPENDIX 5

Development rights and obligations

1. Construction programme

1.1 The Infraco will provide **tie** with a copy of the EAL Construction Programme:

1.1.1 as soon as reasonably practicable and in any event within 2 Business Days of a request by **tie**; and

1.1.2 when it is subject to any material change.

1.2 The Infraco shall carry out all elements of the EAL Works which are scheduled in the EAL Construction Programme in accordance with the EAL Construction Programme.

2. Telecommunications Equipment

2.1 To the extent such matters are not or will not be dealt with in Agreed EAL Works Data, the Infraco will consult with **tie** and EAL in relation to any equipment which it proposes to use in relation to the EAL Works with a view to ensuring that such equipment does not have an adverse impact on EAL's radio, telecommunications or other airport operational equipment.

2.2 If following such consultation EAL determines that such equipment will have an adverse impact on EAL's radio, telecommunications or other airport operational equipment, the Infraco will not install or operate such equipment and ensure it is not installed or operated by any Infraco Party in relation to the EAL Works.

2.3 The Infraco shall not install or permit the installation of any transmitting or receiving communications equipment (including masts) other than as may be required for the Permitted Use.

3. Site meetings and Inspections

The Infraco acknowledges that EAL shall be entitled, without the requirement for notice, to attend all site meetings and works inspection meetings between **tie**, the Infraco and any Infraco Party which relate to the EAL Works. The proceedings and outputs of such meetings shall not be vitiated by reason of the non-attendance of EAL. EAL may nominate an appropriate third party to attend on its behalf.

4. Burnside Road Re-alignment Works

- 4.1 The Burnside Road Re-alignment Works shall form part of the EAL Works. The Infraco will be responsible for the design and construction of the Burnside Road Re-alignment Works. The Burnside Road Re-alignment Works will involve the upgrading of existing road infrastructure to be incorporated into the realignment.
- 4.2 The construction of the Burnside Road Re-alignment Works will not be commenced until the EAL Works Data relating to such works constitute Agreed EAL Works Data.
- 4.3 Until the Burnside Road Re-alignment Works have been completed by the Infraco to the reasonable satisfaction of EAL and **tie**, the Infraco will not:
- 4.3.1 close, stop up, alter or divert Burnside Road, whether permanently or temporarily; or
 - 4.3.2 carry out any other works which may adversely affect Burnside Road.
- 4.4 The Infraco will ensure that the design and construction of the Burnside Road Re-alignment Works ensures the provision of the re-aligned road and bridges sufficient to accommodate the movement of 20 tonne heavy goods vehicles along its entire length. Subject to paragraph 4.5 of this Appendix 5, the re-aligned road and bridges shall be two-lane.
- 4.5 The new bridge over the Gogar Burn to be constructed by the Infraco as part of the Burnside Road Re-alignment Works:
- 4.5.1 may be a temporary Bailey bridge type of structure with a design life of not less than 20 years;
 - 4.5.2 may be designed for traffic light controlled single file traffic only;
 - 4.5.3 must not adversely affect or impair the flood defences maintained in relation to the Gogar Burn; and
 - 4.5.4 must include a pedestrian walkway on at least one side of the bridge.
- 4.6 The element of the Burnside Road Re-alignment Works involving the removal of the footbridge across the Gogar Burn (marked "A" on the Burnside Drawing) will not be carried out until the remainder of the Burnside Road Re-alignment Works has been completed by the Infraco to the reasonable satisfaction of EAL and **tie**.

4.7 If no EAL Works will be carried out which close, stop up, alter or divert Burnside Road, whether permanently or temporarily, or which otherwise may adversely affect Burnside Road, the Infraco will not be obliged to carry out the Burnside Road Re-alignment Works.

4.8 The Infraco shall not:

4.8.1 close, stop up, alter or divert Burnside Road, whether permanently or temporarily; or

4.8.2 carry out any EAL Works which may adversely affect Burnside Road.

5. Site rules and security

5.1 Subject to paragraph 6.2 below, the Infraco shall comply with all relevant EAL Site Rules.

5.2 In the case of an Emergency, the EAL Site Rules which relate to security and access procedures need not be complied with by the Infraco, **tie** and/or EAL to the extent that this is not reasonably practicable or to the extent that compliance would materially aggravate the Emergency.

5.3 The provisions of Appendix 5 of Schedule Part 44 (*EAL Works*) will take precedence over the EAL Site Rules relating to aerodrome safeguarding (with the reference MDD 07/05) to the extent that there is any inconsistency.

6. Compliance

6.1 The Infraco will comply with all the lawful requirements of any notice which may be served upon any of the Infraco, **tie** or EAL in relation to the EAL Works by any public, local or statutory authority or any EAL Regulator.

6.2 The Infraco will execute the EAL Works in such a manner as any EAL Regulator may lawfully direct and will (in the absence of any practicable and economic alternative acceptable to the relevant EAL Regulator) execute additional works if a EAL Regulator so directs.

6.3 The Infraco will not do (or fail to do) any act or thing which would:

6.3.1 cause (or might reasonably be expected to cause) **tie** and/or EAL to be in breach of any permits, licences, consents, approvals or permissions; or

6.3.2 render **tie** and/or EAL liable to pay any penalty imposed by or to bear any expense incurred under any applicable Law, direction, requirement or notice.

6.4 If any activities of the Infraco in connection with the EAL Works cause EAL to be in breach of the Airport Regulations, EAL and/or **tie** shall be entitled to require that the Infraco cease those activities on the EAL Works until the breach is remedied (if the breach is capable of remedy by such cessation of the EAL Works).

6.5 The Infraco acknowledges that, in order for the Infraco to construct the EAL Works, EAL may need to obtain the approval of EAL's Regulators on certain matters, and the Infraco acknowledges that:

6.5.1 the method of seeking such approvals shall be decided on a case by case basis by EAL and **tie**;

6.5.2 EAL and/or **tie** will facilitate appropriate contact between the Infraco and EAL's Regulators (if appropriate); and

6.5.3 in obtaining such approvals, each of **tie**, the Infraco and EAL will act reasonably at all times.

7. Aerodrome safeguarding

7.1 The Infraco will comply with the Aerodrome Safeguarding Guidance in relation to the design and construction of the EAL Works.

7.2 All EAL Works Data will, where relevant, indicate how the Aerodrome Safeguarding Guidance has been taken into account, interpreted and complied with.

8. Hazard management

8.1 Other than as set out in Agreed EAL Works Data, the Infraco will not:

8.1.1 knowingly bring onto any part of the EAL Site anything which is or may become dangerous, offensive, radioactive or explosive; or

8.1.2 carry on or do any hazardous trade or act

8.1.2.1 which **tie** and/or EAL consider represents a risk to health and safety and security; or

8.1.2.2 in consequence of which EAL's insurances, the Required Insurances, the OCIP Insurances or any Additional Insurances could be vitiated or prejudiced or

made void or voidable in whole or in part, or whereby the insurers may decline to cover any of the risks insured.

8.2 If the Infraco is in breach of this paragraph 8, **tie** and/or EAL are entitled (but not bound) to remove such substances or take such steps as they require to terminate the breach and the Infraco shall pay to **tie** and/or EAL the costs properly incurred by **tie** and/or EAL forthwith on demand.

9. Use of the EAL Site

9.1 The Infraco, in relation to any part of the EAL Site:

9.1.1 will not affix or exhibit any placard, poster, signboard or other advertisement or directional signage without the prior written consent of EAL and **tie**;

9.1.2 will not erect any construction accommodation or site offices or similar without the prior written consent of EAL and **tie** as to the design and location of such accommodation or offices within a Phase;

9.1.3 will keep all of its construction accommodation, plant and equipment and all of its materials in a clean and tidy condition free of graffiti and fly posting at all times;

9.1.4 will not at any time to occupy, impede or obstruct the airspace above the levels shown on drawing reference GA0/E01/75 as issued by **tie** to the Infraco (as that drawing may be updated from time to time and notified to the Infraco) temporarily or permanently whether by erections, cranes, antennae, equipment, personnel, accommodation or otherwise without the prior written consent of **tie** and EAL;

9.1.5 will operate cranes in accordance with British Standard 7121 or such other standard as may replace that standard or as EAL and **tie** acting reasonably in the interests of the safe and efficient operation of Edinburgh Airport may require from time to time;

9.1.6 will not permit any cranes or other equipment or personnel to extend at any time (temporarily or otherwise) outwith the boundaries of the Phases or the Leased Land (as appropriate) from time to time without the prior written consent of EAL and **tie**;

9.1.7 will erect secure perimeter fences around all work sites where this is appropriate;

9.1.8 will ensure that any photographs or video recordings made of Edinburgh Airport by the Infraco or any Infraco Party are used solely in connection with the monitoring and assessment of the EAL Works and the EAL Site and are not published or used for any

other purpose without the prior written consent of EAL and **tie** and will ensure that such photographs or video recordings are returned to EAL and **tie** upon conclusion of such monitoring and assessment;

9.1.9 will not permit any lighting or illumination other than at the times and in the manner approved by EAL and **tie**;

9.1.10 will not obstruct, overload or in any way adversely affect the operation of any drainage, sewerage, power, plumbing, heating, ventilation, alarm, fire fighting or fire control system utilised (whether exclusively or otherwise) by EAL or situated within the EAL Site or serving (whether exclusively or otherwise) the EAL Site or Edinburgh Airport;

9.1.11 will not use any part of the EAL Site for any sale by auction or for any exhibition or public meeting;

9.1.12 will not use any part of the EAL Site as a residence for any person;

9.1.13 will not impede at any time access and egress of EAL, its customers, tenants or any other party authorised by EAL or **tie** to and from Edinburgh Airport;

9.1.14 will not place or keep on the EAL Site any articles in such position or in such quantity or otherwise in such manner as to overload or cause damage to or be likely to overload or cause damage to the EAL Site or any subjects common to the EAL Site and other property;

9.1.15 will provide support for the adjacent, supra-adjacent and sub-adjacent land and will not withdraw support for the adjacent, supra-adjacent and sub-adjacent land; and

9.1.16 will not cause damage (including damage caused directly or indirectly by stray electrical current) to Edinburgh Airport or adjoining land and to make good any such damage forthwith on request and if the Infraco fails to make good such damage forthwith **tie** and/or EAL shall be entitled to make good such damage and the Infraco shall be bound to pay to **tie** and/or EAL the properly incurred costs of making good such damage.

9.2 Subject to paragraph 9.3 of this Appendix 5 the Infraco will not connect into, use or rely on any utilities (including electricity, gas and water) at Edinburgh Airport and used by EAL, unless such connection, use or reliance:

9.2.1 constitutes Agreed EAL: Works Data; or

9.2.2 has been approved in writing in advance by EAL and **tie**.

9.3 The Infraco may connect into, use and rely on the foul water and storm water utility infrastructure used by EAL at Edinburgh Airport, but for runoff water only.

10. Environmental Matters

10.1 The Infraco will not, in respect of the EAL Site:

10.1.1 release or discharge into any environmental medium (namely, air, water (including without limitation, ground water, pipes and sewers) and land) any substance that is, or in such quantities or concentrations as are, capable of causing harm to the health of man or any other living organism supported by the environment;

10.1.2 keep, treat, deposit or dispose of any controlled, special, hazardous, toxic, dangerous or radioactive waste, or any other substance which may produce concentrations or accumulations of noxious gases or noxious liquids in such quantities or concentrations as are capable of causing harm to the health of man or any other living organism supported by the environment; or

10.1.3 do (or fail to do) any act or thing which would cause (or might reasonably be expected to cause) EAL and/or **tie** to be in breach of any permits, licences, consents, approvals or permissions which relate to environmental matters.

11. EAL Emergency procedures protocol

11.1 The Infraco will comply with the EAL Emergency Procedures Protocol, and will ensure that each Infraco Party so complies.

11.2 The Infraco shall provide **tie** with the names and contact details of the Infraco and any Infraco Parties as may be reasonably required by **tie**, in relation to the EAL Emergency Procedures Protocol.

11.3 The Infraco will notify **tie** if it requires to update the names and contact details for the Infraco or any Infraco Party within the EAL Emergency Procedures Protocol.

12. Notification

12.1 The Infraco will notify **tie** and EAL forthwith of:

12.1.1 the receipt by it or any Infraco Party of any notice, order, requisition or direction (or proposal for a notice, order, requisition or direction to be made or given) affecting the EAL Site and, if so requested by **tie** and/or EAL, will deliver a copy of such notice, order, requisition or direction to **tie** and/or EAL (as appropriate); and

12.2 any damage to the EAL Site or any defect which could give rise to a duty on **tie** and/or EAL or on any other person having an interest in the EAL Site. The Infraco will notify **tie**, as soon as it becomes aware, of any damage to the EAL Site or any defect in the EAL Site which could give rise to a duty on **tie** or EAL or any other person having an interest in the EAL Site.

13. Surveys and Reinstatement

13.1 The Infraco will:

13.1.1 carry out, in accordance with Good Industry Practice, condition, environmental and defect surveys and settlement assessments of Edinburgh Airport to the extent affected by the EAL Works, including roads to be used by construction traffic, prior to any EAL Works being carried out, and to report the methodologies and results of those surveys and assessments to **tie** and EAL, as soon as available;

13.1.2 carry out such surveys and assessments after the EAL Works have been completed in accordance with Good Industry Practice; and

13.1.3 be responsible on the completion of the EAL Works (including upon the abandonment of the EAL Works) for:

13.1.3.1 the Restoration of all Assets; and

13.1.3.2 to the extent not addressed pursuant to the Restoration of Assets, the reinstatement of land affected by the EAL Works without betterment but at least to the standard, condition and quality of that land prior to the carrying out of the EAL Works, including:

13.1.3.2.1 the rectification of all physical damage; and

13.1.3.2.2 the remediation of all contamination and harm to the environment caused by the EAL Works,

all to the reasonable satisfaction of **tie** and EAL and by reference to the surveys and assessments, where appropriate.

14. Heave and Settlement

14.1 The Infraco will:

14.1.1 ensure that the EAL Works do not adversely affect the adjacent land or structural integrity of any infrastructure and buildings on land or in the adjacent, supra-adjacent or sub-adjacent land or airspace above the EAL Site;

14.1.2 ensure that there is no heave or settlement which adversely affects the adjacent land or structural integrity of any infrastructure and buildings on land adjacent, supra-adjacent or sub-adjacent to the EAL Site or the Gogar Burn;

14.1.3 ensure that the EAL Works do not adversely affect the Gogar Burn or cause it to flood; and

14.1.4 carry out any preventative measures which are required to ensure that there is no risk to public safety or damage to property in relation to the EAL Works.

14.2 Without prejudice to **tie's** other rights and remedies, the Infraco will rectify any failure to comply with the obligations contained in paragraph 14.1 of this Appendix 5 at the Infraco's cost.

15. Restoration of Assets

15.1 The Infraco will ensure that:

15.1.1 all Existing Assets are Restored;

15.1.2 all Restoration takes place at such time and in such manner so as to ensure that EAL are at no time deprived of the use of Assets;

15.1.3 all New Assets are appropriately protected from damage and/or interference which may result from the EAL Works; and

15.1.4 without prejudice to the obligation of the Infraco to Restore roads and transport links, the Infraco acknowledges that EAL is at all times afforded unimpeded access to the relevant Existing Assets prior to their Restoration and to the relevant New Assets (including in each case vehicular access to their location).

15.2 All electricity substations at the EAL Site which may need to be Re-provided as a result of the EAL Works shall, without prejudice to paragraph 15 of this Appendix 5, be Re-provided by the Infraco (together with all associated cables, plant and equipment) and will be fully commissioned to the reasonable satisfaction of **tie** and EAL prior to the commencement of any other EAL Works in or around or above the location of each of those substations, associated cables, plant or equipment.

15.3 Without prejudice to paragraph 15.1 of this Appendix 5, in relation to all utilities (including power, telecommunications, gas and potable and foul water) at the EAL Site which may be affected by the EAL Works, the Infraco will ensure:

15.3.1 there is no interruption of supply (or disposal, in the case of foul water) other than in each case a planned interruption agreed to by **tie** and EAL);

15.3.2 that any such utilities are

15.3.2.1 protected; or

15.3.2.2 Re-provided (with the relevant New Assets fully commissioned),

to the reasonable satisfaction of **tie** and EAL prior to the commencement of any other EAL Works in or around the location of the relevant Existing Assets.

16. Maintenance of Works

16.1 The Infraco will keep, maintain, repair, renew and reinstate the EAL Works to the extent they have been carried out and completed in good order and good working condition in accordance with the Agreement unless EAL takes over any part of the EAL Works pursuant to paragraph 18 of this Appendix 5 any Asset which has been Restored in relation to Restoration Works.

17. Flood Protection

17.1 The Infraco shall at all times maintain adequate flood protection measures and defences at the EAL Site so that the EAL Works do not increase the risk of flooding at the EAL Site, which measures and defences shall be at least to the standard of those maintained by EAL prior to the commencement of the EAL Works.

18. EAL Works relating to the Restoration of Assets

18.1 The Infraco will notify **tie** and EAL of the date on which the Infraco considers (acting reasonably) that any Restoration Works will be complete, and will do so not less than 10

Business Days prior to such date. In such notice the Infraco will specify the times and dates of any scheduled tests or inspections of the Restoration Works, and (acting reasonably) the times and dates during which **tie** and/or EAL may itself elect to inspect and/or test the relevant Restoration Works.

18.2 Following the receipt of the notice referred to in paragraph 18.1 of this Appendix 5, **tie** and/or EAL shall be entitled to:

18.2.1 inspect and/or test the relevant Restoration Works on the dates and at the times specified by the Infraco in the notice; and

18.2.2 to attend any of the tests or other inspections on completion, without prejudice to the generality of paragraph 3 of this Appendix 5.

18.3 If **tie** and/or EAL, following the inspection or testing (or attendance at other tests or inspections) considers acting reasonably, that any Restoration Works are not complete, **tie** and/or EAL shall within 5 Business Days notify the Infraco of any matters which **tie** and/or EAL considers to be outstanding and are required to be attended to before the Restoration Works can be considered to be complete, including the repetition of any of the tests. The Infraco shall attend to such matters as soon as reasonably practicable and shall issue to EAL and **tie** a further notice pursuant to paragraph 18.1 of this Appendix 5.

18.4 The procedures in paragraphs 18.1 to 18.3 of this Appendix 5 may be repeated as often as may be necessary to ensure that all matters which EAL and **tie** reasonably considers to be outstanding in relation to the Restoration Works are attended to.

18.5 On the completion of Restoration Works the Infraco shall hand over and EAL shall take over the Assets which have been Restored as part of those Restoration Works. As soon as reasonably practicably following completion, and in any event within 10 Business Days of completion, the Infraco will provide to each of EAL and **tie** a copy of the as-built specifications, together with all drawings relating to the Restoration Works and the appropriate section of any health and safety file, together with any operations and maintenance manuals and commissioning documents.

18.6 From the date on which EAL takes over any Asset which has been Restored until the anniversary of that date, the Infraco shall be responsible for the prompt remediation, to the reasonable satisfaction of EAL and **tie**, of any defects in the relevant Restoration Works or Asset. During such defects period **tie** shall itself have the right to remedy any defect if the Infraco fails to:

18.6.1 commence the remedy of the relevant defect within 30 days of a **tie** notification of that defect; or

18.6.2 progress the remedy of the relevant defect in a reasonable manner; or

18.6.3 complete the remedy of the relevant defect within a reasonable period.

19. As built drawings

19.1 After the completion of the EAL Works the Infraco will forthwith deliver to **tie**, two complete sets of as-built drawings and final design specifications relative to the EAL Works (or any part of such drawings or specifications which may be requested).

19.2 The Infraco warrants to EAL for the benefit of EAL the as-built drawings which relate to any element of the EAL Works which relate to the restoration of assets at the EAL Site, but otherwise any as-built drawings delivered to EAL will be without warranty from the Infraco to EAL.

20. Car Parking

If the Infraco or any Infraco Party utilises EAL's parking facilities, the Infraco shall procure that it shall comply with EAL's and the parking facilities licensed operator's regulations and requirements at all times.

21. EAL Artefacts

21.1 All fossils, antiquities, and other objects having artistic, historic or monetary value and human remains which may be discovered on or at the EAL Site ("**EAL Artefacts**") as a consequence of or in connection with the EAL Works shall become or remain, upon discovery, the property of EAL.

21.2 The Infraco will notify **tie** and EAL, without delay, if any EAL Artefacts are discovered, and, if **tie** and/or EAL so request, shall handover to EAL any such EAL Artefacts.

21.3 The Infraco's obligations in paragraph 21 are subject in each case to the requirements of applicable Law.

APPENDIX 6

EAL Site Rules

1. BAA Security Notice

Title	Reference No.	Date
Identity pass application procedures – All BAA airports	GSN 02/01/2007/10	24 January 2007

2. Managing Director's Directives

Title	Reference No.	Date
Environmental pollution control	MDD 12/02	20 September 2002
Control of all radio installations	MDD 14/02	31 July 2002
Wearing high visibility clothing and heavy protection	MDD 02/04	17 March 2006
The dangerous substances and explosives atmospheres regulations 2002	MDD 04/05	01 February 2005
Procedure for the approval of temporary obstructions (cranes and/or other equipment) at, or around, Edinburgh Airport	MDD 06/05	29 March 2005
Aerodrome safeguarding: Guidelines to those responsible for the development or construction activities on, and in the vicinity of, Edinburgh Airport	MDD 07/05	29 March 2005
Oil and chemical storage and the prevention of contamination of water courses and surrounding land areas	MDD 12/05	08 April 2005

Title	Reference No.	Date
Perimeter Fence: 3 metre clear zone	MDD 07/06	12 May 2006
Presentation and display of identity cards	MDD 08/06	12 May 2006
Provision of fire precautions and evacuation training by airport fire service	MDD 11/06	01 June 2006
Escort arrangements temporary pass holders	MDD 12/06	26 June 2006
Spillage response	MDD 01/07	11 January 2007

3. Engineering Instructions

Title	Reference No.	Date
Service clearance	552/02	June 2004
Use and Storage of LPG and HFL	504	October 2004
Personal protective equipment	514/04	November 2004

4. Safety Leadership Team Directives

Title	Date
Acetylene restrictions	Undated



APPENDIX 7

EAL Emergency Procedures Protocol

1. Scope

1.1 This Appendix 7 defines the reporting and liaison procedures to be followed by the Infraco and the Infraco Parties in the following circumstances:

1.1.1 the occurrence of any **Emergency** or **Reportable Incident** resulting from or associated with the construction of the EAL Works; and

1.1.2 the occurrence of any **Emergency** or **Reportable Incident** occurring elsewhere within Edinburgh Airport which in the opinion of EAL and/or tie affects or may affect the EAL Works or anyone engaged on the construction of the EAL Works.

1.2 This Appendix 7 also specifies procedures for contingency planning and training in preparation for any of the incidents listed in paragraph 1.1 of this Appendix 7.

1.3 This Appendix 7 is not intended to define procedures to be followed by the Infraco and the Infraco Parties for the avoidance and/or management of **Emergencies**, but specifies requirements to be included in all such procedures relating to compliance with this Appendix 7.

2. Definitions

2.1 In this protocol, the terms listed in Annex 1 to this Appendix 7 shall have the meanings ascribed to them in that Annex. For ease of reading, the terms which have particular definitions are used in bold.

2.2 Other terms used in this Appendix 7 have the meanings given to them in this Part 44 (*EAL Works*) of the Schedule or the Agreement, unless the context otherwise requires or a different definition is given in Annex 1.

3. Key Personnel Contact Details

3.1 The contact details to be used for the implementation of this protocol are contained in Annex 2 to this Appendix 7.

3.2 Annex 2 to this Appendix 7, as it is updated from time to time, also details the key personnel posts within EAL, the **tie** and the Infraco which are referred to in this Appendix 7, and specifies other contact points.

3.3 EAL, **tie** and the Infraco will each keep Annex 2 to this Appendix 7 updated at all times, and each will notify the others of changes which require to be made, without delay.

4. Action required in an Emergency or after a Reportable Incident

4.1 Action to be taken in an Emergency occurring on the Work Site

4.1.1 The Infraco shall introduce its own safety procedures for actions to be taken in an **Emergency** anywhere on the **Work Site**. Such procedures must include a requirement:

4.1.1.1 to inform the **Site Emergencies Hotline** operator as soon as reasonably practicable;

4.1.1.2 immediately to inform the **Airport Control Centre**, the **EAL Representative** and **tie's** Representative; and

4.1.1.3 to inform the **Airport Control Centre**, the **EAL Representative** and **tie's** Representative as soon as reasonably practicable once the **Emergency** no longer exists.

4.1.2 The Infraco shall comply with and shall procure that the Infraco Parties shall comply with the protocols and safety procedures referred to and developed as a result of this Appendix 7.

4.2 Action to be taken in respect of Reportable Incidents on the Work Site

4.2.1 All reports of **Reportable Incidents** occurring on the **Work Site** shall within 24 hours be copied to the **Infraco's Safety Manager** and **tie's Safety Manager**, together with a statement of actions taken or proposed to avoid recurrence.

4.2.2 **Infraco's Safety Manager** shall keep a log of all **Reportable Incidents** occurring on the **Work Site** and shall provide a monthly report to **tie's** Safety Manager and to the **EAL's Safety Compliance Manager**.

4.3 Action to be taken in an Emergency occurring elsewhere within Edinburgh Airport but outside the Work Site

4.3.1 The Infraco acknowledges that **EAL** will have their own safety procedures for actions to be taken in an **Emergency** occurring elsewhere within Edinburgh Airport but outside the **Work Site**. Such procedures shall include a requirement:

4.3.1.1 to inform the **Airport Control Centre** as soon as reasonably practicable;

4.3.1.2 where the **Emergency** may affect the safety of persons or the safe continuation of construction activities on the **Work Site**, immediately to inform the **Site Emergencies Hotline** operator;

4.3.1.3 to inform the **Airport Control Centre** once the **Emergency** no longer exists; and

4.3.1.4 if the **Emergency** has been notified to the **Site Emergencies Hotline**, in compliance with paragraph 4.3.1.2, to inform the **Site Emergencies Hotline** operator as soon as reasonably practicable that the **Emergency** no longer exists.

5. Procedures for evacuation

5.1 Procedures for Work Site evacuation

5.1.1 Within 2 months of the Commencement Date, the Infraco will draft for approval by **tie** and **EAL** procedures for the evacuation and reoccupation of Work Sites.

5.1.2 When the procedures are agreed between the Infraco, **EAL**, and **tie** (and each party will act reasonably in so doing) they will be included in this Appendix 7 by agreeing a change to this Appendix 7.

5.2 Procedures for airport evacuation

As soon as reasonably practicable, **tie** shall notify the Infraco of **EAL**'s procedures relevant to the **EAL Works** for the evacuation and reoccupation of Edinburgh Airport.

6. Infraco's Emergency plans

6.1 Emergency plans shall be prepared, kept available and communicated to all those on the **Work Site** by the Infraco. Such plans may contain the entire text of this Appendix 7, or as a

minimum a summary of its contents and a copy of key personnel contact details (in Annex 2 of this Appendix 7).

6.2 All changes to the names or contact details of the key personnel of the Infraco shall be communicated in writing without delay to the **EAL Representative** and **tie's** Representative.

6.3 The Infraco's emergency plans shall include the following:

6.3.1 the establishment and maintenance of a **Site Emergencies Hotline**, manned at all times while construction activities are in progress anywhere on the **Work Site**.

6.3.2 provisions for regular checking and updating of the key **EAL Personnel** contact details, which shall be done no less frequently than monthly.

6.3.3 the training of staff on emergency procedures including **Work Site** and airport evacuation. Arrangements for training on airport evacuation shall be co-ordinated with **EAL's Safety Compliance Manager**.

6.4 The Infraco acknowledges that if, from time to time, there is more than one contractor working on the EAL Site, only a single **Site Emergencies Hotline** will be established and maintained, and the Infraco will co-operate with every other contractor on the EAL Site in this regard.

Annex 1 to Appendix 7 (Emergency Procedures Protocol)

1. Defined Terms

1.1 In this Appendix 7:

"**Airport Control Centre**" as listed in Annex 2 to this Appendix 7;

"**EAL's Personnel**" as listed in Annex 2 to this Appendix 7;

"**EAL Representative**" means the individual nominated by EAL as notified to the Infraco from time to time;

"**EAL's Safety Compliance Manager**" as listed in Annex 2 to this Appendix 7;

"**Emergency**" means an event causing or, in the reasonable opinion of **tie** and/or EAL, threatening to cause death or injury to any individual, or material damage to property;

"**Infraco's Safety Manager**" as listed in Annex 2 to this Appendix 7;

"**Reportable Incident**" means an incident reportable under RIDDOR (the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995);

"**Site Emergencies Hotline**" as listed in Annex 2 to this Appendix 7;

"**tie's Safety Manager**" as listed in Annex 2 to this Appendix 7; and

"**Work Site**" means any area of ground at Edinburgh Airport which is from time to time used by, leased, licensed to or under the control of CEC, **tie** and/or the Infraco in connection with the EAL Works.

Annex 2 to Appendix 7 (Emergency Procedures Protocol)

Contact Details

Title	Name(s)	Phone Numbers			Email address
		office	mobile	home	
Emergency phone lines	Airport Control Centre	0131 344 3222			
	Site Emergencies Hotline		-----	-----	
EAL personnel					
EAL Representative	Stuart White	0131 344 3506	07785 556247		stuart_white@baa.com
Safety Compliance Manager	Fiona Birkinshaw	0131 344 3660	07795 645163		fiona_birkinshaw@baa.com
tie's personnel					
tie's Representative	to be advised				
tie's Safety Manager	to be advised				
Infraco personnel					
Project Manager					
Safety Manager					

APPENDIX 8

Form of Collateral Warranty

AGREEMENT

BETWEEN

- (1) **BILFINGER BERGER UK LIMITED**, a company incorporated in England and Wales under number 02418086 and having its registered office at 150 Aldersgate Street, London, EC1A 4EJ, which expression shall include its successors, permitted assignees and transferees and **SIEMENS PLC**, a company incorporated in England and Wales under number 00727817 and having its registered office at Faraday House, Sir William Siemens House, Frimley, Camberley, Surrey, GU16 8QD, which expression shall include its successors, permitted assignees and transferees, ("**Tram Contractor**"); and
- (2) **EDINBURGH AIRPORT LIMITED**, (company number SC096623) whose registered office is at St Andrew's Drive, Glasgow Airport, Paisley PA3 2SW ("**EAL**") which expression shall include its successors and permitted assignees.

BACKGROUND

- A By an agreement in writing dated [◆] ("**Tram Main Works Agreement**"), **tie Limited** (as hereinafter defined) appointed the Tram Contractor to provide the Works (as hereinafter defined) in connection with the Edinburgh Tram Project.
- B It is a term of the Tram Main Works Agreement that the Tram Contractor shall enter into this Agreement with the Beneficiary.

IT IS AGREED as follows:

1. Definitions and interpretation

In this Agreement:

- 1.1 the following words and expressions have the following meanings, unless the context requires otherwise:

"**Act**" means the Edinburgh Tram (Line Two) Act 2006;

"**Agreement**" means this document (as amended from time to time pursuant to clause 11);

"**Deliverables**" means all documents, information, reports, diagrams, pricing schedules, records, method statements, risk assessments, manuals, schedules, databases, reinforcement details, photographs, formulae, plans, designs, specifications, drawings (including as-built drawings), details, calculations, analysis, operation and maintenance manuals, software, data, data configuration designs, tools and details, software protocols, source and object codes, transport and other models and simulations, the outputs and reports based on any models, programmes and all other material created and/or provided by the Tram Contractor (and/or any Tram Contractor Party or any other third party) in relation to the Tram Main Works Agreement required to deliver the Works;

"**EAL Group**" means the group of companies comprising EAL and its holding companies and the subsidiaries of such holding companies (including any subsidiaries of EAL) (as such terms are defined in the Companies Acts);

"**Edinburgh Tram Project**" means the project to construct and operate the Authorised Tramway (as defined in the Act);

"**Good Industry Practice**" means using standards, practices, methods and procedures conforming to law and exercising that degree of skill, care, diligence, prudence and foresight that would reasonably be expected from a large, reputable, professionally qualified, competent and skilled organisation experienced in carrying out activities of a similar nature, scope and complexity to those comprised in the Works, and seeking in good faith to comply with its contractual obligations and all duties owed by it;

"**Intellectual Property Rights**" means any rights in or to any patent, design right, utility model, trade mark, brand name, service mark, trade name, business name, logo, invention (whether registered or unregistered), domain name, semi-conductor right, topography right, software designs and/or other materials, source code, copyright, moral right, know-how, or rights in databases and any other rights in respect of any industrial or intellectual property, whether capable of being registered or not, including all rights to apply for any of the foregoing rights or for an extension, revival or renewal of any of the foregoing rights and any similar or analogous rights to any of the above, whether arising or granted under the law of Scotland or of any other jurisdiction;

"**Liability Cap**" means as defined under the Tram Main Works Agreement;

"**Party**" means each and any of the parties to this Agreement and "**Parties**" shall be construed accordingly;

"Project IPR" means any Intellectual Property Rights arising out of, used in or created to implement the Works and to produce Deliverables (including the Specially Written Software, any asset management system and/or Works programming system) and for the extension of the Edinburgh Tram Network in accordance with the Tram Main Works Agreement but excluding any Tram Contractor IPR contained in the Deliverables;

"Site" means those areas of ground at Edinburgh Airport used (with the consent of EAL) in connection with the Works;

"Required Insurances" means the Required Insurances required under the Tram Main Works Agreement, which shall include professional indemnity insurance of not less than £10,000,000.00 on an each and every claim basis and in the aggregate during each twelve month period of insurance (subject to one reinstatement of the limit of indemnity for each twelve month period of insurance in the case of Bilfinger Berger UK Limited) so long as such professional indemnity insurance may be obtained in the European Union insurance market at commercially reasonable rates and on commercially reasonable terms to contractors of the same status as at the effective date of the Tram Contractor;

"Statutory Requirements" means all general or local Acts of Parliament and the regulations and Bye-laws of any local or other statutory authority which may be applicable to the Works, together with any accompanying code of practice or guidance, and the rules and regulations of all public bodies and companies whose property or rights are or may be affected in any way by the Works;

"tie Limited" means tie Limited, incorporated under the Companies Acts (Company Number SC230949) in Scotland and having its registered office at City Chambers, High Street, Edinburgh, EH1 1YJ;

"Tram Contractor IPR" means:

- (a) all Intellectual Property Rights in the Deliverables (including Intellectual Property Rights in relation to the Tram Contractor Software) which were already existing and owned by, or licensed to, the Tram Contractor prior to the Effective Date;
- (b) any modifications or developments of any of the Intellectual Property Rights referred to in paragraph (a) above which are generic in nature and not specific to the carry out of the Works; and
- (c) all Intellectual Property Rights in tram signalling systems, communications systems, SCADA systems and system integration programmes, methodologies or software.

"Works" means any works authorised by the Act on or affecting the Site and to be undertaken by the Tram Contractor under the Tram Main Works Agreement; and

1.2 unless the context requires otherwise:

1.2.1 words importing:

1.2.1.1 the singular include the plural and vice versa; and

1.2.1.2 one gender include all other genders.

1.2.2 a reference to:

1.2.2.1 persons includes firms, companies, corporations, partnerships, trusts, authorities and other incorporated and/or unincorporated bodies; and

1.2.2.2 a clause is a reference to a clause in this Agreement.

1.3 The list of contents and clause headings in this Agreement are included for convenience only and do not affect its interpretation.

1.4 Where a party comprises two or more persons:

1.4.1 any obligations on the part of that party contained or implied in this agreement are deemed to be joint and several obligations on the part of those persons; and

1.4.2 references to that party shall include references to each and any of those persons.

1.5 Any capitalised terms not defined above shall have the meaning accorded to them pursuant to the Tram Main Works Agreement.

2. Standard of care

2.1 The Tram Contractor warrants and undertakes to the Beneficiary that it has carried out and shall carry out the Works and its other duties and obligations under the Tram Main Works Agreement subject to and in accordance with the terms thereof.

2.2 In addition to and without derogation from clause 2.1, the Tram Contractor warrants to the Beneficiary that:

2.2.1 in the performance of the Works and its other obligations under the Tram Main Works Agreement it shall exercise a reasonable level of professional skill, care and diligence to be expected of a properly qualified and competent contractor experienced in

carrying out works and services similar to the Works in connection with projects of a similar size, scope and complexity;

2.2.2 any design produced by the Tram Contractor will satisfy in every respect any relevant performance specification or any requirement included or referred to in the Tram Main Works Agreement and will be suitable in every respect for the purposes included in the Tram Main Works Agreement; and

2.2.3 any design produced by the Tram Contractor will fully comply with Statutory Requirements.

2.3 The Tram Contractor shall owe a duty of care to the Beneficiary in carrying out its duties and obligations under the Tram Main Works Agreement.

3. Materials

3.1 The Tram Contractor warrants to the Beneficiary that it has not and shall not use in relation to the Works any materials which at the time of use:

3.1.1 are known to be deleterious in the particular circumstances in which they are used (either to health and safety or to the durability of the Works); or

3.1.2 contravene any relevant standard or code of practice issued from time to time by the BSI Group or under a European directive relating to standards; or

3.1.3 do not accord with the guidelines contained in the edition of the publication "Good Practice in Selection of Construction Materials" (Ove Arup & Partners) current at the date of specification of use; or

3.1.4 contravene Good Industry Practice.

4. Copyright licence

4.1 The Beneficiary and the Tram Contractor acknowledge that under the terms of the Tram Main Works Agreement, the Tram Contractor has assigned to **tie** Limited, with full title guarantee the Project IPR which is created by the Tram Contractor and used by it to carry out its obligations under the Tram Main Works Agreement.

4.2 The Beneficiary and the Tram Contractor acknowledge that under the terms of the Tram Main Works Agreement the Tram Contractor has granted to **tie** Limited a non-exclusive perpetual irrevocable royalty free licence to use such Tram Contractor IPR which is contained in the

Deliverables as may be necessary for **tie** Limited to use in relation to the Works and the Maintenance Services and any extension of the Edinburgh Tram Network and undertakes to procure for **tie** Limited a licence on the same terms as above in respect of any Project IPR created by the Infraco Parties.

4.3 The Beneficiary and the Tram Contractor acknowledge that under the terms of the Tram Main Works Agreement the Tram Contractor grants to **tie** Limited, with the prior written consent of the Tram Contractor such consent not to be unreasonably withheld, the right to grant non-exclusive non-assignable sub-licences to third parties for such periods of time as **tie** Limited may reasonably require and otherwise on the same terms as the licence granted to **tie** Limited as described in Clause 4.2 above, to use the Tram Contractor IPR referred to in Clause 4.2 (other than in relation to Third Party Software and commercially available software which is subject to the provisions of Clause 102.9 of the Tram Main Works Agreement) in so far as is necessary or desirable for such third party to use such Tram Contractor IPR in relation to the Works for the Edinburgh Tram Network, the Maintenance Services and any extension of the Edinburgh Tram Network. The Tram Contractor hereby consents to the grant of such non-exclusive non-assignable sub-licence by **tie** Limited to the Beneficiary if **tie** Limited so requires for the period of time as **tie** Limited may reasonable require.

4.4 The Tram Contractor shall, if so requested at any time, execute such documents and perform such acts as may be required fully and effectively to assure to the Beneficiary the rights referred to in this Clause 4.

4.5 The Tram Contractor shall provide to the Beneficiary (at the Beneficiary's cost) a copy of any of the Deliverables as soon as reasonably practicable after receipt by the Tram Contractor of a written request from the Beneficiary to do so.

5. Required insurances

5.1 The Tram Contractor undertakes that:

5.1.1 cover under the Required Insurances (and the Additional Insurances, if any) is extended to include the Tram Contractor's liabilities under this Agreement, to the extent that the Tram Contractor is obliged to maintain such insurances under the Tram Main Works Agreement;

5.1.2 this Agreement has been disclosed to the Tram Contractor's current insurers or brokers (as the case may be) and shall be disclosed to any future insurers or brokers providing the insurance required by this Agreement; and

5.1.3 the Tram Contractor shall abide by the terms and conditions of the Required Insurances and the OCIP Insurances and shall use all reasonable endeavours not to do or omit to do anything that might prejudice the respective cover or rights to make a claim.

5.2 As and when reasonably required by the Beneficiary, the Tram Contractor shall produce for inspection documentary evidence that such insurance is being properly maintained.

5.3 If the insurer makes or attempts to make any material alteration or purports to withdraw the Tram Contractor's cover under the Required Insurances or the Additional Insurances (if any), or if the Tram Contractor is unable to obtain insurance for any other reason whatsoever, the Tram Contractor shall promptly give notice of this to the Beneficiary.

6. Assignment

6.1 The Tram Contractor shall not assign, novate or otherwise transfer the whole or any part of this Agreement without the prior written agreement of the Beneficiary which will not be unreasonably withheld or delayed in respect of:

6.1.1 an assignment, novation or transfer of the whole of this Agreement to any person to which the whole of the Tram Main Works Agreement has been assigned, novated or otherwise transferred; or

6.1.2 an assignment, novation or transfer of any part of this Agreement to any person to which the relevant and equivalent part of the Tram Main Works Agreement has been assigned, novated or otherwise transferred.

6.2 Subject to notice being served on the Tram Contractor and on **tie** Limited, the Beneficiary shall be entitled to assign, novate or otherwise transfer the whole or any part of this Agreement:

6.2.1 without the consent of the Tram Contractor to any person provided that no more than two such assignments will be permitted. Any assignments by the Beneficiary to a subsidiary or associated company of the Beneficiary or a member of the same group of companies will not count as an assignment;

6.2.2 with the prior written consent of the Tram Contractor (such consent not to be unreasonably withheld or delayed).

6.3 The Tram Contractor undertakes to the Beneficiary not to contend in any court proceedings under this Agreement that any person to whom the Beneficiary assigns or has assigned its rights under this Agreement or any of them in accordance with the foregoing provisions of this Clause 6 is to be precluded from recovering any loss resulting from any breach of this Agreement (whenever happening) by reason that such person is an assignee and not the original contracting party under this Agreement or by reason that the Beneficiary is named under this Agreement or any intermediate assignee of the Beneficiary escaped loss resulting from such breach by reason of the disposal of its interest in the same.

7. Liability of the Tram Contractor

7.1 No provision of this Agreement is intended to exclude any obligation or liability which would otherwise be implied whether by the law of contract, delict or otherwise.

7.2 The responsibility of the Tram Contractor under this Agreement is not to be reduced or in any way released or limited by any enquiry or inspection by or on behalf of any person notwithstanding that such enquiry or inspection may give rise to a claim by the Beneficiary against a third party.

7.3 The rights and benefits conferred upon the Beneficiary by this Agreement are in addition to any other rights and remedies that the Beneficiary may have against the Tram Contractor including (without prejudice to the generality of the foregoing) any remedies in delict.

7.4 Subject to the other provisions of this Agreement, the liability of the Tram Contractor to the Beneficiary is to be determined in all respects in accordance with the terms of the Tram Main Works Agreement and, in the event of any claim by the Beneficiary under this Agreement, the Tram Contractor shall be entitled to rely upon any defence, right, limitation or exclusion under the Tram Main Works Agreement as though the Beneficiary were named as **tie** Limited under it, except that:

7.4.1 the Beneficiary shall not be affected by any subsequent variation of the Tram Main Works Agreement which would adversely affect the obligations owed by the Tram Contractor or the waiver, compromise or withdrawal of any claim made by **tie** Limited; and

7.4.2 the Tram Contractor shall not be entitled to exercise any right of set-off, retention or withholding against the Beneficiary to which the Tram Contractor may be entitled against **tie** Limited.

7.5 The Tram Contractor shall not be liable to the Beneficiary for any delay in achieving the issue of any Certificate of Sectional Completion, Milestone Completion Certificate, the Network Certificate, Certificate of Tram Commissioning, the Certificate of Service Commencement and/or the Reliability Certificate.

7.6 Without prejudice to Clause 7.4:

7.6.1 the Beneficiary acknowledges and agrees that the Tram Contractor shall have no liability to the Beneficiary under this Agreement to the extent that such liability would result in the total aggregate liability of the Tram Contractor in connection with the Edinburgh Tram Network exceeding the relevant Liability Cap; and

7.6.2 the Tram Contractor shall have no liability to the Beneficiary under this Agreement in respect of any latent defects in the Works following expiry of the period of 12 years from the earlier to occur of the date of issue of the Reliability Certificate and the date of termination of the Tram Main Works Agreement.

8. Notices

8.1 Any notice required to be given under this Agreement is to be hand delivered or sent by prepaid registered or recorded delivery post to the party concerned at its address set out in this Agreement or to such other addresses as may be notified by such party for the purposes of this clause.

8.2 Any notice given pursuant to this Clause, if sent by recorded delivery, shall be deemed to have been received upon proof of delivery.

9. Rights of third parties

9.1 A person who is not a party to this Agreement shall have no right to enforce any term of this Agreement.

10. Invalid terms

10.1 If any term of this Agreement shall be held to any extent to be invalid, unlawful or unenforceable:

10.1.1 that term shall to that extent be deemed not to form part of this Agreement; and

10.1.2 the validity and enforceability of the remainder of this Agreement shall not be affected.

11. Variations and waivers to be in writing

11.1 No variation, alteration or waiver of any of the provisions of this Agreement shall be effective unless it is in writing and signed by or on behalf of the Party against which the enforcement of such variation, alteration or waiver is sought.

12. Waiver

12.1 Save where expressly stated, no failure or delay by either Party to exercise any right or remedy in connection with this Agreement shall operate as a waiver of it or of any other right or remedy nor shall any single or partial exercise preclude any further exercise of the same, or of some other right or remedy. A waiver of any breach of this Agreement shall not be deemed to be a waiver of any subsequent breach.

12.2 The Parties' rights and remedies under this Agreement are, except where provided otherwise in this Agreement, independent, cumulative and do not operate to exclude one another or any rights or remedies provided by law.

13. Jurisdiction and law

13.1 This Agreement is governed by and is to be construed according to Scots law and the Scottish courts shall have jurisdiction in relation to all matters arising under it.

IN WITNESS WHEREOF these presents on this and the preceding [◆] pages are executed as follows:

EXECUTED for and on behalf of **BILFINGER BERGER UK LIMITED** at

on _____ 2008 by:

Director/Authorised Signatory _____

Full Name _____

Witness Signature _____

Full Name _____

Address _____

EXECUTED for and on behalf of **SIEMENS PLC**

at

on 2008 by:

Director/Authorised Signatory

Full Name

Witness Signature

Full Name

Address

EXECUTED for and on behalf of **EDINBURGH AIRPORT LIMITED**

at

on 2008 by:

Authorised Signatory

Full Name

Witness Signature

Full Name

Address

ACKNOWLEDGED for and on behalf of **TIE LIMITED**

at

on 2008 by:

Director/Authorised Signatory

Full Name

Witness Signature

Full Name

Address

APPENDIX 9

Aerodrome Safeguarding

Aerodrome Safeguarding Guidance comprises the following documents:

1. CAP 168 : Licensing of Aerodromes
2. CAP 680 : Aerodrome Bird Control
3. CAA Safeguarding of Aerodromes Advice Note 1 (Safeguarding - An Overview)
4. CAA Safeguarding of Aerodromes Advice Note 2 (Lighting near Aerodromes)
5. CAA Safeguarding of Aerodromes Advice Note 3 (Potential Bird Hazards from Amenity Landscaping and Building Design)
6. CAA Safeguarding of Aerodromes Advice Note 4 (Cranes and Other Construction Issues)
7. CAA Safeguarding of Aerodromes Advice Note 5 (Potential Bird Hazards from Landfill Sites)
8. BAA Safeguarding of Aerodromes Advice Note 6 (Pre-Application Advice)
9. BAA Standard Conditions for Aerodrome Safeguarding
10. Town and Country Planning (Safeguarded Aerodromes, Technical Sites and Military Explosives Storage Areas)(Scotland) Direction 2003 (SEDD Circular 2/2003)

Director/Authorised Signatory

BILFINGER BERGER UK LIMITED

.....
Director/Authorised Signatory

SIEMENS PLC

Director/Authorised Signatory

tie LIMITED