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Part 2 – Prescribed Scope

[TEL is mentioned many times in this document but not defined. Replace all references to “TEL” with references to “tie”]

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[Replace all references to “Transdev” to “the Operator”]

1 General

1.1 Introduction

This Section of the Employer's Requirements summarises the minimum works and services required from the Infraco considered necessary to address the requirements of the Agreement. For convenience, reference has been made to other selected Sections of the Agreement, but this does not preclude the Infraco from the responsibility of identifying any other sections of the Agreement to which the scope of works and services might be relevant.

The works and services as described in this Section relate to all those elements forming the Infraco Works, to be undertaken by Infraco in accordance with this Agreement.

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1.2 Summary of Overall Scope

Without prejudice to the Infraco's other obligations, and unless otherwise expressly agreed with **tie** in accordance with this Agreement, the Infraco shall, as a minimum, be fully responsible for the works and services described as follows.

- to ~~carry out~~ [construct [?]] and/or manage to completion, the design, construction and setting to work of the Edinburgh Tram Network;
- to obtain any outstanding approvals and consents, including those for trams [?];
- to procure and install all materials and equipment [add trams?], required for the complete operating Edinburgh Tram Network, as summarised in Section 2 of this Part 2 and as further detailed within the Employer's Requirements;
- _____
- Add something about the Operator's scope of supply?
- to construct the Edinburgh Tram Network;
- to execute (or have novated to it) the Agreements relating to the Trams as summarised in Volume 1 of the ITN;
- to integrate, test and commission the Edinburgh Tram Network, in accordance with the Employer's Requirements System Acceptance included in Part 1;
- to maintain the infrastructure of the Edinburgh Tram Network in accordance with the Infrastructure Maintenance Agreement [if the Infrastructure Maintenance Agreement is a stand alone Agreement, are we duplicating this scope here?];
- to supply comprehensive documentation as defined within various sections of this Agreement, including design documentation, as-built documentation, statutory information, as-built information, maintenance documentation and training documentation;
- to ~~provide~~ procure such training as is necessary for the operator, the tram supplier, and all other parties who may be required to work on

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the Edinburgh Tram Network to safely carry out their contractual obligations;

- to liaise and work closely (and timely) in partnership with the Operator ~~(Transdev)~~ to meet the requirements of this Agreement;
 - to provide such spare parts as are necessary to ensure the continuous operational performance [definition – reference the appropriate section of the O&P spec?] and availability of each Section of the Edinburgh Tram Network once introduced to the public service;
 - to provide such special tools [there are defined terms that can be used here], plant, and test equipment that are necessary to ensure the continuous performance [definition – reference the appropriate section of the O&P spec?] and availability of each Section of the Edinburgh Tram Network; and
 - to provide comprehensive management and technical services and deliverables to ensure that all of the above is delivered in a timely and safe manner [in full compliance with the Executives Requirements] and to the required quality and environmental criteria.
- Commissioning
 - Energisation
 - Driver Training
 - Stakeholder Management

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2 Infraco Works

2.1 Summary Scope of Infraco Works

Detailed requirements associated with the Infrastructure and Equipment for the Infraco Works are described within other sections of these Employers Requirements.

The scope defined within this Section of Part 2 is limited to a summary of the principal elements of the works.

- ~~[Add something on tram procurement?]~~
- Trackwork - A total of approximately 18.8km and 5.5km (for phases 1a and 1b, respectively) of Track Kilometres, on street and off street trackform
- Tramstops - A total of 22 and 9 tramstops, for Phases 1a and 1b, respectively, together with associated infrastructure, and including ~~the~~ Park and Ride facility, at Ingliston
- Tramstop Furniture, Systems and Equipment
- Interchange [where are the detailed requirements set out – signpost them] facilities provided at Foot of the Walk, St Andrews Square, Haymarket and Ingliston (for Phase 1a) and Crewe Toll (for Phase 1b). ~~the~~ The bus / tram interchange at Crewe Toll is to be capable of accommodating a feeder bus service for the Western General Hospital. The proposed interchange layout is shown on drawing

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ULE90130-03-HRL-00011 Rev2 [It looks as if there is too much detail here. IS this best moved to later in the document?].

- Points and crossings including point machines, their power supplies, point heating and the control thereof, detection and indication
- Traffic / tram signals
- Tram Detector System
- The provision of all 11kv, ~~400-15~~-volt and 2430 volt power supplies [are **tie** not providing these? Clear interfaces between **tie** and Infraco are needed on who does what here. Please see Transdev's question to Bob Dawson on this matter]
- Traction substations and d.c. traction distribution
- OLE (Including all trackside isolators) and the Tram Pantographs
- Supervisory Controls and Communications
- Supervisory Control, and Communication Systems and sub-systems including all field, Tram (free issue for installation by Tram Supplier) network and central control and interface equipment for the following systems [what following systems?]
- Accept delivery of of fixed and portable Ticket Vending Machines from **tie** and then the installation of such machines and the provision of the necessary supporting infrastructure (including power supplies, communication links and foundations).
- The comment that we made to tie on about 26 Sept at the foot of the page on which section 2.2 started appears not to have been addressed. In DPOFA, **tie** provides the Operator's internal office IT system. IT is Transdev's view that this is best procured by Transdev as part of a **tie** change to the DPOFA. A this has been omitted from the Infraco scope, we assume that **tie**'s intention is to initiate a **tie** change to the DPOFA as suggested above.]
- The Tram Depot containing :
 - A depot building containing a maintenance shed workshop and associated workshops, offices, stores and equipment.
 - The Edinburgh Tram Network Control Room (First Floor) and associated Equipment Room (Ground Floor)
 - The Edinburgh Tram Network Administration offices
 - A depot yard and stabling area
 - A ~~tractor~~-traction power substation
 - A Building Services Transformer and associated Switchgear
 - A boiler house
 - Emergency Standby dDiesel aAlternator facilities
 - Approach rRoads
- Tram Associated Road Works
- Traffic Management
- Road Furnishings

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- Provision of Bridges, Structures & Retaining walls, including the necessary services and facilities e.g. lighting, drainage, fencing and guardrails, earthing and bonding etc
- Ingliston Park & Ride Facility
- Civil Works including earthworks (inclusive of contamination removal, demolition, Site Clearance, Excavation, Bridges & structures (see also elsewhere), All necessary temporary works and drainage.
- demolition / modification of certain buildings as identified in the Preliminary Design Phase Scheme Base plans
- Relocating the War Memorial at Haymarket Junction (the Infraco shall be required to seek approval from **tie** prior to re-location).
- Landscaping including, Hard Landscaping, Soft Landscaping, Boundary Treatments
- Lighting
- Signage
- Fencing

3 Infraco Services

3.1 General

This Section 3 provides a summary of the services that will be required to be undertaken by the Infraco throughout the duration of the Infraco Works, or during particular stages of the Infraco Works, as appropriate. However the services, and deliverables, listed should not be regarded as limiting in order to meet the requirements of the Agreement.

3.2 Management and Technical Services

3.2.1 Summary of Deliverables

This Section summarises the deliverables that will required to be provided by the Infraco. The deliverables will require to provided in accordance with the requirements of this Section 3.2 and ~~also with~~ the Review Procedure.

The Infraco will be required to complete all appropriate deliverables, in the timescales agreed by **tie**, and as identified in the Submittals Schedule ~~[[should this be “the Programme?”]~~.

In addition to the selected deliverables, this Section 3.2 also develops, where appropriate, the management and technical systems and services that will be required to be provided by the Infraco to meet the requirements of the Agreement.

The Infraco shall develop and submit the following deliverables for approval by **tie** in accordance with the requirements identified in this Part 2.

~~[Page break in wrong place here]~~

Communications, Meetings and Reporting

Submittals Schedule

[Schedule of Deliverables \[?\]](#)

Communications Plan

Meetings Schedule

Progress Reports

Progress Photos

Site Reports

Topics Register

Programme

Construction Programme [\[to include Snagging Commissioning, training, shadow running and opening to passenger service\]](#)

Time Chainage Diagram

Management Plans

Project Management Plan

Construction Plan

[Commissioning Plan](#)

[Training Plan](#)

[Shadow Running Plan](#)

Network Rail Interface Plan

Quality Management Plan

Quality Forms (associated with the Project Safety and Quality Interface document)

Safety Management Plan

Construction Health and Safety Plan

Project Health & Safety File

Safety Forms associated with the Project Safety and Quality Interface document.

Environmental Action Plan (EAP)

Construction Stage Environmental & Sustainability Management Plan(s)

Infraco Performance Measurement

Infraco KPI Reporting

Research, Surveys and Inspections

Documentation associated with the completion of all research, surveys and inspections

Design Deliverables

Design Stage Configuration Management Plan

Design Stage Verification & Validation Plan

Staged Case for Safety [check this is adequately explained elsewhere]

List of Applicable Standards

Hazard Log & Risk Register

System Architecture Specification

System Design Specification

System Design Test Specification

Functional Hazard Analysis

Detailed Cause Consequence Analysis

Requirements Specification / Database

Scheme Plan

Map of the road

Procurement Plan

Interface Schedules

Bonding Plan

Detailed drawings and other detailed design

documentation

Schedule 3 (Code of Practice) Deliverables

Schedule and Conditional Surveys of Structures / Buildings Documentation (Dilapidation)

Survey Photographs of Reinstatement Work

Procedures for dealing with Unidentified Apparatus or Recorded Artificial Obstructions

Waste Management Plan

Construction Site Drainage Plan

Landscape and Habitat Management Plan

Archaeological & Heritage Mitigation Plan

Method of Working around Protected Species

Strategy for controlling Invasive and Alien Species

Construction Advice

Initial and Final Buildability Reports

Temporary Works, Security and Fencing Arrangements Plan

Other Construction advice as noted in this Part 1

Cost Management

Cost Report

Actual / Planned / Forecast Spend Tables / Curves

Change Control Schedule and background information

Schedule of Compensation Events and background information

Cost Loaded Programme / Earned Value Analysis based on WBS structure

Value Management Estimates / Analysis

Risk

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Infraco Risk Management Plan

Infraco Assumptions Register

Infraco Risk Register [\[H&S also?\]](#)

Risk Progress Reports

Construction Risk Control Report

Commissioning Risk Control Report

Residual Risk Control Report

Operational and Maintenance Report

Traffic Management and TTROs

Traffic Management and Work Site Staging Plan

TTRO Obligations and Traffic Management Procedures

Access Control Permits and Permits to Work

Access Control Permit Procedures

Permits to Work and Utility Permits to Work Procedures
[\[Isolations, or is this covered under the Infrastructure Maintenance Agreement?\]](#)

Method Statements

Method Statements

Surveys of Structures which may affect Progress

Schedule and Conditional Surveys of Structures / Buildings and Documentation (to avoid delay to the Service Commencement Date)

Survey Photographs of Reinstatement Work

Stakeholder Management Deliverables

Weekly updates of Progress

Traffic Routing Map

Weekly Newsletter

Information for the tie monthly newsletter

Communications Log

Procurement Schedule

Other Deliverables (as defined within the following Sections of the Employer’s Requirements)

System Integration – including System Integration Plan

Simulation

System Acceptance

Spare Parts, Tools & Test Equipment

Documentation

As Built Documentation

Training

Infrastructure Maintenance

3.2.2 Submittals Schedule

Within 4 weeks of the Effective Date the Infraco shall provide an initial schedule identifying all deliverables anticipated under the project and the anticipated date for submission. The submission schedule shall take full cognisance of the need to meet the Programme and the Review Procedure.

From time to time throughout the Agreement, the Infraco shall amend and update the Schedule to reflect amendments, which have been agreed to by **tie**.

3.2.3 Communications

The Infraco shall develop- a "Communications Plan" and this shall be submitted in accordance with the Review Procedure.

The Communications Plan shall illustrate how all the communication processes, activities and issues are to be managed, progressed and satisfactorily resolved. The Communications Plan shall detail how the Infraco will communicate with Sub-Contractors (including Tramco [?]), the Operator, tie, the MUDFA Contractor, key stakeholders and third parties. The Communications Plan shall also include the intended processes for dealing with enquiries, particularly complaints, from all sources. The Infraco shall refer to the requirements set out in Schedule 3 of the ItN and the Stakeholder Services in this Part 2-, in order to ensure that the Communications Plan includes all necessary requirements.

The Infraco shall implement all the requirements of the Communications Plan.

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The Infraco shall liaise with the relevant parties to ensure that the Infraco 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.

3.2.4 Meetings

The Infraco shall work with **tie** to develop the meetings schedules and requirements for progress reporting throughout the duration of the Infraco Works. The following table provides an outline of the minimum requirements:

Meetings	Frequency	Chaired by / Minutes taken
<u>Safety Meeting [moved to the top of the list for obvious reasons]</u>	<u>Weekly</u>	<u>Infraco</u>
Management Review Meetings	Two monthly	tie /Infraco alternately
Project Progress Meetings	Four weekly (Fortnightly prior to site start)	tie
Design and Planning Meetings	Fortnightly	Infraco
Stakeholder & Third Party Meetings	As required	tie
Site Meetings	Weekly	Infraco
Cost Review Meetings	Four weekly	tie
<u>Safety Meeting</u>	<u>Weekly</u>	<u>Infraco</u>

The primary purpose of these meetings will be to enable the Infraco to advise on: -

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- Any safety issues;
- The current state of the programmed Infraco Works;
- Progress made in the various activities;
- Communication issues;
- Third party issues; and
- Commercial issues (Including Change Control).

The Infraco shall propose a comprehensive meetings schedule indicating those meetings which the Infraco shall chair and those meetings which the Infraco will attend.

Prior to commencement on site, progress meetings shall 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 Infraco shall provide an agenda, for all meetings to which they are designated as Chair. The Infraco shall also provide appropriate documentation in advance of each of the meetings, as defined in the following sections, or otherwise as considered necessary.

3.2.5 Progress Reporting

A progress report shall be submitted by the Infraco to **tie** no later than three Business Days before each progress meeting.

The Infraco Progress Reports shall contain comprehensive information and will be structured in a manner which is commensurate with **tie**'s own reporting structure. The various sections of the report will require to be agreed with **tie**, but should be broadly inclusive of the following

1. Executive Summary,
2. Health & Safety Report,
3. Quality & Environment
4. Financial Summary Report,
5. Project Performance / Programme.

Information provided within the Progress Reports will include, but not be limited to, the following: -

- Health & Safety Report including a summary of H&S records
- Summary Financial information (summarised from the separate Cost Report (refer to "Cost" Section in this Part 2) including Summary and headline data on Planned Spend / Actual Spend, Forecast Spend and Summary of Costs for Compensation Events and Future forecast.
- Planned versus actual resource summary;
- Physical progress against milestones anticipated/required completion dates;
- Four weekly forecast of all activities;
- Eight weekly critical impact notice (including all information on any internal or external factor which may affect programme delivery);

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- Labour histograms detailing planned, actual and forecast across all disciplines;
- The activities commenced and completed since the previous report and upon what dates;
- The expected remaining duration of all activities commenced but not completed;
- Additional ~~[don't understand why we use "additional" here]~~ activities with expected durations, methods, and resource requirements and sequence assumptions;
- Schedule ~~and programme for the delivery~~ of method statements, ~~permits and isolations~~ for the next four weeks;
- Any changes to expected durations, method, resource requirements and sequence assumptions;
- Forecast completion dates for all Infraco Works in each Section and Sector including any slippage or advance upon the Date for Completion;
- Programme comparison between actual vs planned;
- Schedule of information received;
- Schedule of outstanding information;
- One set of progress photographs as defined in this Part 2;
- Top 10 opportunities;
- Top 10 risks.

3.2.6 Progress Photos

The Infraco shall on a monthly basis throughout the Works Period procure that photographs covering all of the Works are taken by a professional photographer whose appointment in respect of the Project shall be approved by **lie**, such approval not to be unreasonably withheld or delayed.

lie shall determine the scope of the photographs referred above.

The Infraco shall ensure that:

- A minimum of 50 colour photographs shall be taken on a monthly basis;
- ~~One set of 10 inch x 8 inch size prints shall be prepared from the colour photographs referred to above;~~
- ~~All prints referred to above shall be presented in albums with individual clear plastic wallets and marked on the reverse side with the date that the photograph was taken, the name and address of the photographer, identification reference number and a brief description of Work being undertaken and the direction from which the photograph was taken;~~
- ~~All prints and negatives shall be delivered to **lie** within two weeks of being taken; and~~

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- [Convert all of the above into electronic deliverables. Technology has moved on since this was drafted!]
- Except where **tie** have provided their prior written consent, the photographs shall not be used for any purpose other than as set out in this Agreement.

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The Infraco shall procure that all Intellectual Property in respect of the photographs vests in **tie**.

3.2.7 Site Meeting Report

A brief report shall be submitted by the Infraco to **tie** no later than one Business Day before each site meeting. The report shall include reference to any significant issues (associated with safety, programme, design, cost, planning and consultee aspects), which have arisen since the previously monthly progress report.

The site meeting report shall also identify actual manpower resources (labour returns), plant and equipment that have occurred on site, for the previous week.

3.2.8 Topic Register

It is **tie**'s intention to continue to develop a "Topics Register" for the Infraco project. The Topics Register is used to record all issues as they arise that require to be specifically addressed. The record is then amended as appropriate to track the manner in which issues have been resolved to the satisfaction of project. The Infraco is required to add to, or respond to issues as appropriate and attend regular review meetings at which the Topics Register will be updated and actions assigned.

The Infraco shall participate in the management of the Topics Register.

3.2.9 Work Breakdown Structure

An agreed Work Breakdown Structure is included within Part 3 [a better signpost please] of this document. The Infraco will ~~be required to~~ adopt this WBS to ensure a recognised, structured analysis, by all parties, when interrogating the programme and cost analysis. The WBS may be further developed by the Infraco with the written consent of **tie**.

Accordingly there will be a requirement for the Infraco to adopt all aspects of the WBS in the development of programme and cost documentation.

3.2.10 Programme Management

The Infraco will undertake Programme Management including of the production, implementation, regular updating and management of a fully detailed comprehensive Infraco Programme illustrating how the Infraco propose to execute the whole of the Infraco Works in compliance with the Project Programme. This Infraco Programme shall be in Primavera P3e (Version 5 or otherwise as agreed with tie) format and accompanied by a Time Chainage

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programme illustrating the same information. The Infraco Programme shall be cost and resource loaded and coded to reflect the Infraco WBS activities.

The Infraco shall be responsible for liaising directly with TEL [\[see note on the cover page to this “Part 2 – Prescribed Scope” section\]](#), CEC (and other appropriate third parties) to maximise delivery of the project but minimise disruption to bus and other services, and ensuring that any necessary diversion routes are agreed. The Infraco shall also take note of the constraints as identified in Part 3 of this document.

The Programme shall be submitted to **tie** in accordance with the Review Procedure in sufficient time to ensure that the Infraco Works can be progressed and monitored by the Infraco and **tie** against the details contained therein. The Programme shall clearly identify the following: -

- the commencement, construction and completion constraints for all elements of the Infraco Works; separated into sectors by WBS code.
- all milestones
- [the constraints, procedures, documentation and approvals specified in this Agreement. [\[There is an opening square bracket here\]](#)
- the Infraco manufacture and construction execution strategy, Infraco Works and site testing and commissioning, all constraints, procedures, documentation and approvals periods;
- seasonal constraints and constraints applied by CEC and other third party and statutory bodies as defined in this Agreement.
- [the](#) required design approvals and notices;
- all works to be undertaken by any Sub-Contractor;
- ~~contain~~ sufficient detail to illustrate the integration of the Infraco Services deliverables with the proposed dates of possessions and the commencement and completion of construction for all elements of the Infraco Works; by WBS code.
- all other projects affecting the Infraco Works and how they are integrated into the Infraco Works. For example, any street works to be carried out by CEC, and works by or on behalf of all third parties (including landowners and developers);
- any witnessing, inspections, testing etc of the Infraco Works which requires to be carried out by third parties
- long lead time materials and works;
- the identification and duration of all Advance Works; other than those already underway.
- the requirements and approval periods for traffic management and TTROs, including any third party's requirements for notices and road closures;
- the commencement, completion dates and relationships of Sectors of the Infraco Works within each Section of the Infraco Works;
- the links and relationships between all activities and the justification of the underpinning logic;
- all design, manufacture and construction periods;

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- the identification and timing of inputs and approvals required from **tie**, Third Parties, and any Approval Bodies are clearly identified; and
- the interface and relationship with the MUDFA Works.
- The Programme shall meet the following minimum requirements:
- shall be in Primavera P3e (Version 5) for detailed implementation;
- shall follow and fully reflect the **tie’s** Work Breakdown Structure ("WBS") included within Part 3 of this document.
- shall be [cost and] [square brackets to resolve] resource (named [?] loaded down to activities;
- all resource reporting and progress reporting shall be coded to suit the activities contained within the WBS;
- records of time spent against activities shall be completed weekly against planned works as generated by Primavera P3e; and
- Any deviations shall be reported in the progress report and include notification of remedial actions [to be authorised by **tie**]. [Resolve square brackets]
- weekly records shall be collated by 09:00hrs on the Tuesday following the week to which the records relate [surely it is only the delivery to tie that matters here?]
- the Programme shall also take into account programming input and attendance at meetings, both as required by **tie**; and
- the Programme shall also contain cost/spend tables and cumulative curves to match the achievement of major deliverables and activities within the WBS

The Infraco shall take into account the availability of alternative materials or components when developing the Programme. The Infraco shall identify those materials and components which require advance ordering and processing. Any advanced orders which are approved shall be identified and defined in the Programme.

The Infraco shall update the Programme every four weeks to take full account of the Infraco progress in completing the Infraco Works.

A hard and soft copy updated Programme and an Infraco Progress Report shall be submitted by the Infraco to **tie** and TEL no later than three Business Days before each monthly progress meeting.

3.2.11 Time Chainage

The Infraco shall also produce, manage, develop and work in accordance with his Time Chainage Diagram.

The Infraco Time Chainage Diagram shall be submitted to **tie** in accordance with the Review Procedure to ensure that the Infraco Works can be progressed and monitored by the Infraco against the details contained therein but in any case, the Time Chainage Diagram will be submitted not later than six weeks after the Commencement Date. [What about updates?]

The Infraco Time Chainage Diagram shall fully reflect, accommodate and comply with the information detailed on the Programme.

3.2.12 Planning and Other Consents

The Infraco will be required to obtain all Consents ~~as described in the ItN.~~

3.2.13 Project Management Plan

General

The Infraco will be required to submit a plan describing the approach to Project Management for the delivery of the complete scope of the Infraco Works. This Project Management Plan shall include sections to clearly and separately describe the approach to the specific topics set out below.

Resource and Competence

A description of the procedures employed to ensure that the required resource and competence level throughout the duration of the Infraco Works, will be achieved.

Documentation

Identify key policies and procedures to deliver such works, infrastructure and equipment to programme, specification, budget and otherwise safely and efficiently and in a manner which is fully integrated with the activities of other relevant contractors.

The approach to the development of a suite of project specific documentation, indicating how they will effectively be integrated with, and reflect, the Infraco's corporate procedures and policies (including any Joint venture or consortia procedures).

Templates that will be used for the procurement and delivery of the service deliverables as listed in this Part 2, which will be required to be prepared by the Infraco.

Outline proposals covering the suite of required documentation including : training, maintenance and operations manuals; as-built drawings; design information; testing procedures and proposals; and certification and records (e.g. testing).

Regulations

Management arrangements and procedures for ensuring/monitoring compliance with all applicable Regulations (e.g. HMRI), Law, and the requirements of the Agreement and its Schedules.

Procedures

Details of internal procedures for decision making and review in your management team with particular emphasis on safety, programme, budget, quality, the management and control of non-compliance and the implementation of continuous improvement.

Proposals on reporting and controlling design information requirements

Procedures which will be followed in obtaining outstanding consents and approvals for the works

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Definition of the process for managing the approvals interface with **tie**, HMRI, Planning Authority, Roads Authority, Network Rail, Transdev and third parties with whom agreements have been entered into.

Interfaces

Given that successful co-operation between the Operator, Tram Supplier/Maintainer, Infraco, and **tie** is essential to the delivery of a successful project, a description of the key areas of this interface and details which demonstrate how this is successfully achieved.

Details of supply chain process/procedures, in particular provide details of the criteria for selection of sub-contractors/suppliers for this project.

Details of how the Tram Provider will be managed.

Details regarding the commissioning and handover of the System or Sections thereof to the Operator.

Details of the management procedure for maintenance period [surely this goes into the Infrastructure Maintenance Agreement?].

Design

Clear definition of the areas where the Infraco will undertake design work and an explanation of where you believe this may deviate from the previous design work done.

3.2.14 Construction Management Plan

The Infraco will be required to submit a Construction Plan relating to the Programme. This Construction Plan shall include sections to clearly and separately describe the approach to the specific topics set out below.

Mobilisation

Detailed mobilisation plan, to incorporate comprehensive details of all aspects of mobilisation including, but not limited to, number of work sites, the facilities on each, a general arrangement drawing of main sites, lay down areas, materials storage, welfare and car parking. This should detail timescales and immediate resource availability and should also provide details of the permissions required and assumptions made.

Plant

A description of the plant that will be used use for the construction of the project and of how long the plant will be used. This should include description in relation to plant used for specialist purposes such as rail laying or wire stringing (these should be separately identified).

Sub-Contractors

Details of the sub-contractor management & control process during the construction phase, including how the performance of sub-contractors will be measured and reviewed and how sub-contractor compliance with standards will be assured.

Method Statements

A description of the process by which method statements will be developed and approved, and a schedule summarising those method statements that are anticipated. An initial schedule will be submitted in accordance with the Review Procedure and this will be updated from time to time with agreement from **ie**.

Avoidance of Disruption

Description of the management process for ensuring that traffic disruption is kept to a minimum, particularly in relation to Traffic Management and TTR0 requirements. Details of procedures of how unforeseen works (that are outwith the area covered by the Temporary Traffic Restriction Order, but are necessary to complete the Infraco Works within the TTR0 area) will be dealt with.

Proposals for maintaining reasonable access to premises at all times and what measures The Infraco might employ when access is denied taking into account the requirements of the Disability Discrimination Act 1995.

Details of how it is proposed to liaise with all potentially affected third parties, and an assessment of the likely identities of such parties.

3.2.15 Network Rail Interface Plan

The Infraco will be required to submit a plan describing the approach to managing the ongoing interface requirements with Network Rail. The plan should identify the critical activities and the key risks associated with this interface and proposals to mitigate these risks. Notwithstanding the Infraco's responsibility of complying with this Agreement (including compliance with the Third Party Agreement and the Asset Protection Agreement) the Plan should address the following issues.

- A description of procedures for gaining access to Network Rail's infrastructure both in terms of the approval process and the physical access proposals.
- Confirmation, in terms of safety and in terms of undertaking the Infraco Works, the personnel- utilised will be appropriately qualified, skilled, experienced and adequate in quantity.
- The proposed Possession Strategy for works on or adjacent to Network Rail infrastructure, to include identification of Possessions & Isolations on Programme taking cognisance of lead time.
- Summary of the required method statements for principal construction activities associated with Works adjacent to Network Rail infrastructure.
- The proposals which allow access for Network Rail to maintain their infrastructure
- Details as to how the Railway Group & Network Rail Line standards., will be complied with.
- Specific details of how Network Rail's infrastructure and rail vehicles will be protected from injury/damage arising from the works activities.
- Details of how staff and any third parties will be protected from injury from Network Rail's infrastructure or vehicles using it.
- The strategy for Red & Green Zone working

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- Proposals for competencies, making specific reference to management of Sentinel.
- A specific accident/incident procedure with regard to Network Rail infrastructure which details action to be taken, including the communications regime.
- Proposals for security and prevention of trespass onto site, especially onto adjacent Network Rail property.
- Proposals with regard to work in and around First Scotrail's Haymarket Depot and its associated stabling & sidings. There will be a requirement to highlight proposals for ensuring access to Haymarket Depot is maintained for staff; road and rail vehicles, especially if rail vehicles require access/egress to the depot by road. There will be a requirement to identify how First ScotRail operations will not be restricted.
- [There is significant risk associated with the procurement of satisfactory ongoing operational and maintenance arrangements with Network Rail. We should be absolutely clear what is in Infraco's scope in this respect, or add the cost of this risk separately to our business plan]

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3.2.16 Quality Management

The Infraco will have to undertake the Works fully in compliance with Quality Management for ensuring staff are competent & can prove achievement of Network Rail Systems consisting of the implementation and use of those processes and procedures referenced in ISO 9001 and ISO 9004. **[I do not know where to start in trying to unravel this paragraph]**

There will be a requirement [when?] for the Infraco to develop a Quality Plan, to meet the requirements of ISO 10005 [check reference] - 1995, and which fully defines all Quality aspects of the Works. The Quality Plan will ~~require to be~~ submitted in accordance with the Review Procedure. The Quality Management Plan shall demonstrate an integrated quality management system relating to the design, construction, testing and commissioning, operation [will it?] and maintenance One for the Infrastructure Maintenance Agreement? of the system and shall show how ~~the your team Infraco and its, including~~ sub-contractors, will comply with this [what?].

The Infraco will be required to have all associated documentation readily available for internal review and review by **tie**. Internal audits will require to be undertaken by the Infraco [how often? How defined?] to ensure full compliance with ISO 9001 and ISO 9004 [now that would be an achievement] -in accordance with Volume 3, Schedule 5.1 [cannot find this reference]. Furthermore **tie** will undertake external audits in accordance with Volume 3, Schedule 5.2 [cannot find this reference].

The Infraco shall ensure that their management system for the Infraco Works is developed to ensure that it aligns with the requirements of the Tram Project Quality policy Statement (40-91-POL-003) [check reference].

Quality control including materials and works on site will also be undertaken in accordance with the requirements of Schedule 3.2 [refine reference].

Volume 7 of the ITN contains the Project Safety and Quality Interface Document. The Infraco shall be required to comply with the requirements of this document including the completion of forms and other systems in order to assist tie in complying with tie own safety and quality management systems.

3.2.17 Health & Safety

Safety Management Plan

The Infraco will be required to submit a Safety Management Plan that is overarching with regard to safety and defines the management procedures that will be put in place to ensure Health & Safety for the design, construction, commissioning, operation [is this down to Infraco?], and maintenance is this down to Infraco or the Infrastructure Maintenance Agreement? of the system. This document will stand alone and separate from other safety deliverables such as Project Health and Safety Plan, Case for Safety development etc. The Safety Management Plan shall address all issues relating to the safety of the Works, staff and third parties, however it is requested that specific details relating to the items below are required to be given:-

- The plan will detail the approach and all management procedures relating to health and safety for the Edinburgh Tram Network.
- The plan shall show how you will ensure that its sub-contractors apply all relevant health and safety policies and procedures to all sub-contractors.
- 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 you propose that a safety culture will be cascaded and enforced throughout the team including with sub-contractors.
- Your proposals for how safety will be incentivised throughout the team, including with sub-contractors.
- The Emergency procedures which you propose to implement.
- Details of how you will implement Accident & Incident reporting and promotion of an open culture.
- Your Safety Inspection & Safety Tour regime.
- An outline of your procedures relating to safety for dealing with **fi**e's Drugs & Alcohol Policy and procedures and your details of your own similar policy and procedures.
- Details of any particular safety issues you consider would be significant and initial mitigation measures.
- Commissioning of the ETN
- Driver Training on the ETN

Occupational Health & Safety Management System

The Infraco will be required to adopt an Occupational Health & Safety Management System consisting of the implementation and use of those processes and procedures referenced in BS 8800, OHSAS 18001- 1999, ISO 18002-2000 and/or HSG 65 (Successful H&S Management).

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Project Health & Safety Plan and Health & Safety File

The Infraco will be required to develop a Project Health & Safety Plan and subsequent Project Health & Safety File [where does the role of the CDM Supervisor under the CDM regulations fit in here, as this role is undertaken by TSS?] in accordance with the Construction (Design and Management) Regulations 1994 and HSG 224 (Managing H&S in Construction) and as described in the Pre-tender H&S Plan. The H&S Plan will require to be submitted in accordance with the Review Procedure.

Interface with tie’s Safety Systems

The Infraco shall ensure that the management system for the Infraco Works is developed to ensure that it aligns with the requirements of the Tram Project Safety Policy Statement (40-91-POL-004) [this is a repeat]. Volume 7 of the ITN contains the Project Safety (and Quality) Interface Document. The Infraco shall be required to comply with the requirements of this document including the completion of forms and other systems in order to assist tie in complying with tie own safety and quality management systems.

Case for Safety

The Infraco will be required to design and execute the Infraco Works using safety management and procedures to demonstrate that the Edinburgh Tram Network is acceptably safe, including the development of the Case for Safety. These aspects form an integral part of the design of, the Edinburgh Tram Network as provided [check meaning is as intended] and are detailed in the Design section, 3.2.21, of this Part 2.

3.2.18 Environmental Management

Environmental Management System

Environmental Management System consisting of the implementation and use of those processes and procedures referenced in ISO 14001. [This is not a sentence]

Documentation developed to meet the requirements of the Environmental Management System will require to be submitted in accordance with the Review Procedure.

The Infraco shall ensure that the management system for the Infraco Works is developed to ensure that it aligns with the requirements of the Tram Project Environmental Policy Statement (40-91-POL-007).

Environmental Action Plan

[There is a separate section on “Environmental” on about page 443 of the Employer’s Requirements. Check that there is no conflict, gap or overlap between page s 80 and 443] The Infraco will be required to submit an Environmental & Sustainability action Plan (EAP). This shall cover environmental issues associated with the duration of this Agreement, including design and construction stages. It shall describe the management process, procedures and interface requirements associated with meeting the Infraco’s environmental responsibilities.

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It shall then develop in detail the potential impacts on environmental resource, mitigation measures and responsibilities associated with all stages of this Agreement.

The EAP will be prepared using the following sources of information.

- Environmental Statement for Line One;
- Environmental Statement for Line Two;
- The Tram Design Manual;
- The Edinburgh Tram Noise and Vibration Policy;
- The Code of Construction Practice;
- The Landscape and Habitat Management Plan for the Roseburn Corridor;
- The Badger Mitigation Plan for the Roseburn Corridor;
- Agreements made with statutory bodies; and
- Parliamentary agreements.

The EAP will be amended and updated as necessary to reflect any changes to the tram design or engineering solutions and the results of surveys undertaken during the design and pre-construction phases of the project.

The Action Plan will refer to the need for separate plans including Waste Management Plan, Landscape and Habitat Management Plan, Mitigation Measures for Working around Protected Species, Strategy for controlling Invasive and Alien Species, Archaeological and Heritage Mitigation Plan (all as further described in this Part 2 of this Agreement [\[Insert a better reference\]](#)).

Construction Environmental Management Plan (CEMP)

Notwithstanding the Infraco's responsibility to produce an over-arching Environmental Action Plan (EAP) as defined in the previous section, the Contractor shall prepare a Construction Environmental Management Plan (CEMP) including Method Statements, as necessary, to convey the required level of information during the construction stage.

It is expected that the works on INFRACO stages [\[what are these?\]](#) will be divided into a number of discrete elements, either as activities or geographical sections, for which Site Specific EMPs will be required to be prepared by the ~~contractor~~Infraco. These plans are to be produced by the contractor prior to any works commencing on site and must be checked by tie before work starts. The list below illustrates how the works may be divided [\[inappropriate introduction to the following list\]](#):

- Site accommodation, compound and offices and storage areas;
- Site Clearance;
- Sections of Tram route;
- Tram depot [\[?\]](#);
- Any other [\[?\]](#) structures, such as sub-stations not already included in the above; and
- All other [\[?\]](#) road, cycleway and footway works, including drainage, signage and lighting.

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- A series of generic EMPs will also be produced by the contractor that will cover the principle environmental topics, landscape, ecology etc. These will cover the general control and protection measures that meet good practice for each topic and provide information for inclusion in the site specific EMPs that will relate to relevant issues in the plan area.
 - The Contractor will have responsibility for the production, content and implementation of the Site Specific and Generic EMPs.
 - Agreement [with whom?] of Site Specific and Generic EMPs.
 - The contractor shall submit to **tie** the site specific and generic EMPs prior to the commencement of the relevant section of works on site [when?].
 - **tie** shall comment on the plan(s) submitted and agree the final plans prior to the commencement of any work on the relevant section or activity. [subject to Review Procedure?]
 - Requirement of Site Specific EMP's [?]
 - The contractor shall develop the site specific EMPs to include the following details: [indentation of following sub list is incorrect]
- i. A description of the works to be undertaken;
- List of all separate work activities that fall within the scope of the works.
- ii. A detailed programme [surely this is delivered elsewhere and does not need to be duplicated?] of the construction activities;
- Proposed dates and sequence of the works (showing how environmental impacts are affected by potential changes to the programme);
 - Details of proposed normal working hours and intended start up and close down times; and
 - Outline of any works which may require construction activities outside of normal working hours.
- iii. Location of the works, including a site plan, showing construction site boundaries.
- This shall show the position of plant and position of any sensitive receptors e.g. watercourses, local residents, etc.
- iv. Personnel access routes/points;
- Location plan of each access route/point;
 - List of activities for which each access point is to be used
- v. Vehicular access routes/points;
- Location plan of each access route/point;

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- List of activities for which each access point is to be used
- vi. Equipment and plant to be used (including type, make [why? Infraco probably does not know yet] and expected number);
- vii. Method of delivery/removal of materials and plant;
- viii. Details of proposed site accommodation;
- ix. Details of how public right of way and access to property will be retained and managed;
- x. A list of consents/permissions obtained or to be obtained for the works;
- xi. External Consultation:
 - A list of those notified of the works and the date notified;
 - A list of proposed notifications and dates
- xii. Significant environmental impacts relating to each activity. (This should draw upon the definitions of significant impacts used in the Environmental Statement).
- xiii. Significant environmental risks relating to each activity.
- xiv. Receptors which are likely to be affected by the works.
- xv. On-site mitigating measures for each impact and risk. These will be transferred onto Site Management Statements which will briefly state the key risks, and mitigating measures which have been agreed. The Site Management Statement will be attached to the construction method statement for the works to ensure that it is briefed out to all site staff. The Site Management Statement will be briefed out to all site based staff as a toolbox talk.
- xvi. Monitoring proposals that shall include:
 - The receptors for which monitoring will be undertaken;
 - Frequency of monitoring;
 - Factors against which the monitoring results will be analysed;
 - Threshold levels;
 - Speed at which results will be analysed;
 - List of organisations/individuals to whom results will be distributed; and
 - Actions to be taken in the event that thresholds are breached.

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3.2.19 Infraco Performance Measurement

As part of the overall project reporting regime, a four weekly report incorporating performance against Key Performance Indicators (KPI) will be required from the Infraco. These will be project, as opposed to company, specific.

A fundamental consideration is that the KPIs agreed must be measurable and without dispute, thus they will be fact based. It is anticipated that the outputs will be compared on a four weekly bases against both four weekly and rolling targets. A colour coded “traffic light” visual warning is also anticipated to be used.

It is likely that the KPIs agreed will be split into a number of different areas. The following provides some indication of likely components within each of the areas. These will be subject to discussion and final agreement. However, whilst ~~While~~ the format and content is still to be agreed, the following provides some indication of what will be required:

Safety

- Accident Frequency Rate (AFR)
- Equivalent Fatality Rate (EFR)
- Lost Time Accidents (LTA)
- RIDDOR
- Road Traffic Injuries
- Road Traffic Damage (caused by Infraco actions)
- Accident Investigations (late receipt)
- HSE inspections, observations, improvement notices and prohibitions
- Working at height
- PPE – not using/not using correctly
- Review of Accident Book entries
- Possible 3rd Party specific (eg Network Rail)

Quality

- NCRs
- CARs (non-completion/late response or action)
- Procedure compliance
- Test failures (to include concrete and; welding)
- Safety Tours
- Safety Inspections
- Security
- Meeting Achievement of programme? target times [if that is what is intended]
- Snagging correction

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- Method Statements/Risk Assessments – failure to operate in compliance therewith
- Late Possessions / Overruns

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Environmental

- Spills
- Working hours contraventions
- Complaints
- Pollution – water courses; noise; light; dust; others
- Trespass
- COSHH contraventions
- Signage and warning signage

Performance

- Specific parameters may need to be devised relating to programme; performance; reporting and other specific issues that are important to the client.

3.2.20 Research, Site Survey, Investigations etc.

The Infraco will be required to carry out and complete all the necessary research, surveys and investigations necessary to meet the requirements of this Agreement and support the provision of the most cost effective implementation of the Edinburgh Tram Network.

The Infraco shall carry out:

- all research, surveys and other investigative work necessary to enable Infraco to complete all design and construction work necessary to fulfil this Agreement.
- all post construction condition surveys
- all post construction surveys to verify conformity with the Employer's Requirements.
- post construction surveys to verify that design assumptions for noise and vibration, stray current and EMC factors are correct to ensure that **tie** shall not be exposed to claims by third parties.

3.2.21 Design

General Obligations

The Infraco will be liable for the complete design of the Edinburgh Tram Network including the achievement of full compliance with the Employers Requirements. The Infraco will be responsible for achieving the following :

- The deliverables necessary to enable the Edinburgh Tram Network to be procured, constructed, tested, commissioned and brought into

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commercial service and alongside the requirements for training and case for safety [use defined terms here] (taking account of the need to fully co-ordinate these activities, including with other physically-related projects, so as to minimise overall disruption) to meet the Employers Requirements and Infraco's programme the Programme.

- The Infraco shall produce a tram service simulation that will demonstrate that their implementation of the design will achieve the required run times, power consumption and service performance as defined in the Employers Requirements.
- The Infraco shall ensure that the design covers all aspects of the Edinburgh Tram Network and the associated works as defined in the Employers Requirements.
- The Infraco shall approach the Design and Technical Services in a structured manner using a recognised 'V' life cycle model with regard to the integration of design engineering, systems engineering and safety engineering activities.
- The Infraco is responsible for ensuring that there are no gaps and omissions in the specification and design of the Edinburgh Tram Network.
- The Infraco shall demonstrate that the design has properly considered and adopted the most advantageous whole life cost solutions.

Design Approach

The Infraco will be obliged to approach the design and submit the necessary deliverables to form the Infraco Proposals, using the same processes as defined within the "SDS Provider's Agreement with **tie** (which is being novated under this Agreement and which is included in Volume 7 of the ItN.

In summary the following deliverables will require to be submitted in accordance with the Review Procedure, based on any design work which is undertaken.

The Design approach will be to:

- Adopt, develop and adapt the existing "~~SDS Provider~~" SDS [check that all of these are available as reference documents to Infraco, otherwise all that they will do is ask for them] Management Plans covering Configuration Management and Verification and Validation.
- undertake such [supplementary] safety analysis that will allow further development of the case for safety [defined term?] concurrent with any design undertaken to prove that the Edinburgh Tram Network is acceptably safe;
- Where any new technologies are proposed by the Infraco, submit reports and presentations analysing and assessing the options and justifying the final selections of technologies in terms of time, cost, quality, safety, risk and maintainability, for review by **tie**.
- Prepare and maintain the Risk and Hazard Log
- Prepare and maintain the System Architecture Specification
- Prepare and maintain the System Design Specification
- Prepare and maintain the System Design Test Specification

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- Prepare and maintain the Functional Hazard Analysis
- Prepare and maintain the Detailed Cause Consequence Analysis
- Prepare and maintain the Requirements Specification / Database
- Prepare and maintain the Scheme Plan [what is this?]
- Prepare and maintain the Procurement Plan (refer below)
- Prepare and maintain the Interface Schedules
- Prepare and maintain the Bonding Plan [seems odd to have this level of detail here. Delete?]
- Prepare and maintain the detailed drawings and other detailed design documentation

Procurement Plan

The Infraco will be required to submit samples, manufacturers literature, documentation and other such materials to demonstrate compliance with the Employers Requirements, from time to time, for review by **tie**, in advance of the associated materials or equipment being procured. The Infraco is required to prepare a Schedule of Procurement Proposals to identify all such proposed submissions and their timing.

Transport Modelling

[Delete all of this section if it flows automatically from the novation of SDS to Infraco. Otherwise, this section is not reviewed]. Under the obligations of this Agreement, the Infraco will be responsible for addressing requirements as defined from the “SDS Agreement” with **tie**, including, but not limited to the following:

- 3.5.6. The “SDS-JRC” Modelling Suite shall be developed in order to produce all required outputs by the simplest functional principles. It shall satisfy the Scottish Executive STAG requirements and conform in all material aspects to the Department for Transport “Transport Analysis Guidance” as set out in the website WebTAG.
- 3.5.8. Throughout the life of the commission, the Infraco shall ensure the “SDS-JRC” Modelling Suite is regularly calibrated, updated and maintained (including upgrades) to resolve any issues that become apparent during use and to prevent it becoming obsolete.
- 3.5.9. The “SDS-JRC” Modelling Suite shall be capable of local modelling within the city centre and at key junctions in order to simulate with requisite precision the interaction of capacity, congestion and Edinburgh Tram Network design and operation. The Infraco should ensure that the modelling suite is technologically current and that any novel features have been adequately tested. The “SDS-JRC” Modelling Suite shall function to:
 - at a lower level, model the highly complex interaction between competing public transport, traffic movements and Level 1 tram priority in the city centre at multiple junctions and key interchanges;
 - at the higher level, model congestion at key junctions in the wider network area and overall travel demands in the surrounding areas;

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iterate until a state of equilibrium is reached between supply and demand.

~~3.5.10~~The Infraco and the JRC shall be jointly and severally responsible for ensuring that the “SDS-JRC” Modelling Suite is capable of supporting the performance of the Infraco and of the JRC under their respective mandates with **tie**. The “SDS-JRC” Modelling Suite shall be configured to include the following applications, in addition to any application the Infraco considers necessary to answer its own or tie’s requirements:

- public transport demand and patronage/revenue forecasting capable of modal disaggregation;
- detailed traffic junction design recognition and evaluation and wider area effect assessment;

~~3.5.11~~• temporary traffic diversion and traffic regulation order impact analysis.

The “SDS-JRC” Modelling Suite shall be competent and responsive in relation to requested specific inputs for project evaluation tools, financial and economic case analysis (including funding options analysis) and risk assessment. The SDS-JRC Modelling Suite shall be sensitive to the interaction of the Infraco’s detailed tram line design with vehicular traffic, pedestrians and other urban infrastructure users and capable of generating responses relevant for designing countermeasures to alleviate adverse knock-on affects in the wider area transport network.

~~3.5.12~~The correction of any fault or incapacity in the “SDS-JRC” Modelling Suite shall be the joint and several responsibility of the Infraco and the JRC.

~~3.5.13~~Copyright and all intellectual property rights in (and all related work in progress) the SDS-JRC Modelling Suite shall vest in tie. Use of the models by the Infraco shall be by licence from **tie**.

3.2.22 Construction Related Deliverables (Schedule 3 Requirements)

The Infraco will comply with the requirements of Schedule 3 [of what?]. The following deliverables, from Schedule 3, are highlighted for submission in accordance with the Review Procedure:

- The Infraco shall compile a Schedule of all buildings, or other structures, which may be at risk of physical damage, in accordance with Schedule 3, Clause 18.2.1. Furthermore records of the condition and surveys of any defects shall be prepared, also as described under Schedule 3, Clause 18.2.1.
- Under this [which?] Agreement there is a requirement for the Infraco to undertake works to address defects in existing structures, caused by the Infraco Works. Where such work is completed the Infraco will be required to take appropriate photographs to fully demonstrate the quality of the reinstatement works.
- The Infraco shall prepare and develop the "Waste Management Plan" in accordance with Schedule 3, Clause 20.1.

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- The Infraco shall prepare and develop the "Construction Site Drainage Plan" in accordance with Schedule 3, Clause 22.1.1.
- The Infraco shall prepare and develop the "Landscape and Habitat Management Plan" in accordance with Schedule 3, Clause 22.1.1.3.
- The Infraco shall develop "Mitigation Measures for Working around Protected Species" in accordance with Schedule 3, Clause 22.3.
- The Infraco shall develop the strategy for controlling "Invasive and Alien Species", in accordance with the requirements of Schedule 3 Clause 22.5. This shall be further developed, and services will be implemented by the Infraco, as further described in Schedule 3.
- The Infraco shall develop an "Archaeological and Heritage Mitigation Plan" in accordance with the requirements of Schedule 3 Clause 23. This shall be further developed, and services will be implemented by the Infraco, as further described in Schedule 3.

3.2.23 Construction Advice and Buildability

The Infraco shall be required to develop an Initial Buildability Report [when?] and Final Buildability Report [when?] in accordance with the Review Procedure.

The Initial Buildability report will be required to address the following.

- Be broken down into the various Sections of the works and/or manageable elements within these sections.
- Achieve economically efficient design and buildability.
- The Initial Buildability Report shall include proposals in relation to buildability, Temporary Works, access to premises or properties and the staging of Work Sites. The Infraco shall propose cost and time-saving initiatives and explore mitigation measures which are reasonably predicted to be required to protect the interests any of third parties affected by the Infraco Works.

[Delete gap here?]

The Infraco shall provide a Final Buildability Report in accordance with the Review Procedure, which shall address the following.

- The Infraco shall propose construction methods which shall be utilised in respect of the Infraco Works. The Infraco shall also advise **tie** on the time and cost implications of alternative solutions, and shall initiate the requirements for Temporary Works, and the programme for approvals for such Temporary Works and their execution.
- Notwithstanding the Infraco's obligations with respect to compliance with the third party agreements, the Infraco shall advise **tie** on the potential impact of the Infraco Works upon neighbouring occupiers and users of nearby roads, railways, buildings and airport facilities and the Infraco shall plan the execution of the Infraco Works in such a way as to minimise disruption and prevent nuisance.

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- The Infraco shall advise **tie** on the provision and layout of the main site office and local Work Sector /Work Section facilities and services to be provided or secured by the Infraco. **tie**'s requirements for office accommodation at the main site office are expressed in this Part 2.

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The Infraco shall prepare, maintain (and comply with) ~~plans~~, schedules and drawings that shall show the Infraco's proposals for temporary works, security and fencing arrangements throughout the duration of the Infraco Works ("Temporary Works, Security and Fencing Arrangements Plan").

3.2.24 Cost Management and Reporting

The Infraco shall carry out a pro-active role in cost management and reporting. A cost report shall be submitted by the Infraco to **tie** no later than 3 Business Days before each cost review meetings / or at a 4 weekly period, to be agreed with **tie**. In addition cost summary information shall be provided for inclusion in the Progress Reports.

The Infraco Cost Reports shall contain comprehensive information and will be structured in a manner that is commensurate with **tie**'s own reporting structure. The Cost Reports will be required to provide information, including the following:

- Executive Summary and narrative on significant changes from the previous report
- Actual / Planned / Forecast Spend Tables / Curves to match the achievement of major deliverables and activities within the Work Breakdown Structure.
- Change Control Schedule and background information
- Schedule of Compensation Events and background information
- Cost Loaded Programme / Earned Value Analysis based on WBS structure
- Value Management Estimates / Analysis

The Infraco will also be required to provide Value Engineering Estimates and Reports. These Reports shall be provided by Infraco from time to time, as proposed by the Infraco or as required by **tie**, for the purpose of achieving better value.

The Infraco will be required to comply fully with the requirements of the Change Control Procedure as refer to in the ItN.

3.2.25 Risk Management

Objectives

tie is dedicated to ensuring a consistent approach to Risk Management is adopted across the ETN Project, which will enable an informed view of risk to be taken.

ETN Project Risk Management's mission is "to successfully manage all risks to and opportunities for the project thus ensuring that a supported and fully functioning operational service is delivered within budget and on time". [Is Infraco obligated to do anything here, ior is this a statement of what **tie** will do?]

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The key drivers within this mission are to:

- Promote and support proactive management of risk and opportunity
- Integrate risk awareness / management, and not risk aversion, into the project culture
- Manage risk in accordance with best practice
- Reduce risk exposure to acceptable levels
- Capitalise on opportunities
- Ensure that all identified risks are owned and managed by the party best able to manage them
- Provide assurance and enhanced information to managers and stakeholders

Risk- [?] **tie** maintains a Project Risk Management Plan and Risk Register covering the strategic, project management and commercial aspects of the scheme and will continue to do so throughout the duration of the project and operation. **tie** seeks to have all service providers, including the Infraco, contributing towards this risk register. [There appears to be nothing for Infraco to do here!]

Risk Deliverables

The Infraco shall be responsible for the production, management, development, regular maintenance and necessary updating and distribution of the documentation included within the table below. The documentation shall be held by the Infraco in electronic format with hard and soft copies being made available as required.

A copy [I thought we had a standard requirement for 5 [?] copies of everything] in both electronic and hard format shall be submitted to **tie** for their approval in accordance with the Review Procedure and the required dates and frequencies are included in the table below.

<p><u>Required Action from the Infraco</u></p>	<p><u>Timing/Frequency applicable to the Infraco</u></p>
<p>The Infraco shall provide assurance that they shall manage design and construction risk to the satisfaction of tie and in order to fulfil the above <u>[which ones?]</u> objectives. As part of this obligation the Infraco shall be responsible for the production, development and maintenance of a Infraco Risk Management Plan ("IRMP") for the management of all risk aspects of the Edinburgh Tram Network throughout this Agreement. The IRMP shall focus on the risk factors related to the Infraco managed activities related to the Infraco Works for the delivery of the Edinburgh Tram Network including the risk deliverables noted below. The IRMP will identify individuals and their responsibility in relation to risk.</p>	<p>Agree format and delivery date for the IRMP with tie's designated risk manager within <u>1-one</u> month of the Effective Date. The Infraco shall update and maintain the IRMP throughout the term of this Agreement. The Infraco shall issue an update to the IRMP at least bi-annually throughout the term of this Agreement.</p>
<p>The Infraco shall be responsible for the production and development of the Infraco Assumptions Register ("IAR"), which shall record and report all capex, opex, lifecycle, programme and quality assumptions and consequent risks in relation to the Edinburgh Tram Network throughout the duration of the Infraco Works. The IAR</p>	<p>Agree format and delivery date for the IAR with tie's Infraco PM within <u>1-one</u> month of the Effective Date. The Infraco shall maintain and</p>

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<p><u>Required Action from the Infraco</u></p>	<p><u>Timing/Frequency applicable to the Infraco</u></p>
<p>shall be one central register, and the Infraco shall facilitate and incorporate input from third parties identified by tie from time to time.</p> <p>The Infraco should review the IAR on a regular basis until the end of the [Testing and Commissioning] <u>opening of the last Section to Passenger Services [or whatever the best defined term for this is]</u> to ensure that consequential risks of an invalid assumption are detailed and added to the IRR referred to below. The Infraco shall meet regularly with tie's Infraco PM <u>[who?]</u> to provide a brief on key assumptions.</p>	<p>update the IAR as required until the end of opening of the last Section to Passenger Services [or whatever the best defined term for this is] <u>[Testing and Commissioning]</u>.</p>
<p>The Infraco shall be responsible for the development and maintenance of an Infraco Risk Register ("IRR"), to best present all capex, opex, lifecycle, programme and quality risks to the Edinburgh Tram Network. The IRR shall also detail the proposed and completed mitigation of such risks. The platform used shall include the ability to generate reports, highlight risks to tie, key programme and cost impacts.</p> <p>The Infraco will be responsible for the identification of hazards <u>[confusion and overlap between the management of commercial risk and safety here. Resolve]</u></p>	<p>Agree format, platform and delivery date with tie's designated risk manager within 1- <u>one</u> month of the Effective Date. The Infraco shall update and maintain the IRR as required and shall distribute the IRR to tie on a bi-monthly basis throughout the term of this Agreement.</p>

<u>Required Action from the Infraco</u>	<u>Timing/Frequency applicable to the Infraco</u>
<p>associated with all interfaces related to the works and will facilitate and coordinate the inputs from stakeholders and other parties requested by tie from time to time.</p> <p>The IRR shall include analysis of each risk in terms of 'likelihood' and 'impact' providing detail on the inherent risk significance and current residual risk significance. Each risk shall have a designated responsible owner and the Infraco will provide dashboard type graphical summaries of the risk profile.</p> <p>The risks to be addressed should include technical, operational, infrastructure, interface, economic, legal and regulatory, organisational and environmental risks.</p> <p>The Infraco should review the IRR on a regular basis to ensure that it is current. The Infraco shall meet regularly with tie to discuss the control of key risks by the Infraco.</p>	

<p><u>Required Action from the Infraco</u></p>	<p><u>Timing/Frequency applicable to the Infraco</u></p>
<p>The Infraco shall prepare and submit a Risk Progress Report on risk to tie on the status of risk management and treatment in relation to the Infraco Works, giving a summary of new risks identified, new assumptions, key matters to be resolved and achievements, including risks that have been closed out as well as an indication of areas where Infraco would suggest that tie invests to treat risk in areas outwith the Infraco contract. The Progress Report must demonstrate how identified risks are being actively managed including but not limited to Network Rail interface, compliance with third party agreements, utilities diversions, long lead items, system integration, ticketing system design, [no longer in scope], power supply, temporary works, ground conditions, habitat, flora and fauna issues. The Progress Report should include co-ordinated input received from all Infraco parties. Opportunities should also be notified through this process.</p> <p>Risk shall be included on the agenda of Progress Meetings.</p> <p>This report should indicate "Red-Amber-Green" (RAG) status indicating progress on completion of treatment on key components for all future stages of the development of the Edinburgh Tram Network.</p>	<p>Agree format and delivery date with tie's designated risk manager within 1one month of the Effective Date. The Infraco shall submit a four weekly Risk Progress Report to tie throughout the term of this Agreement</p>

<u>Required Action from the Infraco</u>	<u>Timing/Frequency applicable to the Infraco</u>
<p>It is recognised that the identification, monitoring and progress of risk shall be discussed at regular workshops. The Infraco shall provide a schedule of and undertake workshops, regarding risk matters to assist tie in ensuring the effective management of risk in relation to the Edinburgh Tram Network, to tie. Tie, the Operator and/or relevant suppliers should receive timely notification of these in order to be able to attend. It is noted that tie may routinely request to attend workshops in order to be able to evaluate Infraco's approach to and performance in relation to risk.</p>	<p>Provide and agree Workshop Schedule for the coming 6 months within the Risk Progress Report to tie's designated risk manager within 2 months of the Effective Date.</p>

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<p><u>Required Action from the Infraco</u></p>	<p><u>Timing/Frequency applicable to the Infraco</u></p>
<p>Infraco shall also attend meetings and workshops with tie's project and risk management team and other ETN suppliers, the Operator and service providers as instructed by tie (maximum monthly)[?] to take part in update of existing project risk and identification of new risks. The representatives attending such workshops shall be qualified and shall have sufficient knowledge of the ETN project to be able to contribute pertinent information within these workshops.</p>	
<p>The Infraco shall prepare and maintain a Construction Risk Control Report ("CRCR") indicating the risks identified by the Infraco that will be of relevance during [Construction and Manufacturing and [Testing and Commissioning] including, but not limited to, construction sequence, construction methodologies, access, quality, approvals, security, safety and compliance. The CRCR shall demonstrate how risks are to be managed and coordinated with other relevant parties, including the MUDFA Contractor, the Tram Supplier, and the Operator including the use of 'informed' registers and co-ordination plans with regard to obtaining and utilising input from these parties and summarising plans.</p> <p>The CRCR shall be split by S<u>sectionally</u> (for example, Sections A to D).</p>	<p>Agree format and delivery date with tie's designated risk manager as soon as reasonably practicable after the Effective Date, with the delivery date to be not later than 1 month following the Effective Date. The Infraco shall update the CRCR as required until the end of [[Testing and Commissioning].]</p>

Edinburgh Tram Network – Employer’s Requirement

<u>Required Action from the Infraco</u>	<u>Timing/Frequency applicable to the Infraco</u>
<p>The Infraco shall be responsible for the preparation and maintenance of a Commissioning Risk Control Report which shall detail the plans for mitigating risks associated with the commissioning of the Edinburgh Tram Network. The Commissioning Risk Control Report should identify the areas where the largest <u>[so just forget those that are not the largest?]</u> commissioning risks may appear. This should cover <u>commissioning</u>, operational and design risks that could be associated with the whole project including, but not limited to the trams, the tracks, the power supply and the tram depot.</p> <p>The Commissioning Risk Control Report shall concentrate primarily on the commissioning process, but shall also refer to ongoing issues which also affect the construction and/or operation <u>[or part operation]</u> -of the Edinburgh Tram Network <u>[this has not been thought through and must be aligned to the requirements of the development of the Case for Safety, set out elsewhere in the Employer's Requirements]</u>.</p>	<p>Agree format of the Commissioning Risk Control Report to tie's designated risk manager (as notified to the Infraco from time to time) within 6 month of the Effective Date. Final report to be delivered at least 3-months prior to start of the Testing and Commissioning. The Infraco shall update the Commissioning Risk Control Report as required until the end of the Testing and Commissioning <u>of the entire project</u></p>
<p>The Infraco shall be responsible for the preparation and maintenance of a Residual</p>	<p>Agree format of RRRCR with tie's</p>

<p><u>Required Action from the Infraco</u></p>	<p><u>Timing/Frequency applicable to the Infraco</u></p>
<p>Risk Control Report ("RRCR") that will detail the plans for mitigating the risks arising from the construction and commissioning of the Edinburgh Tram Network, which are still of ongoing importance. The RRCR should clearly detail the areas of importance that could affect the project in the [Maintenance Period]. These areas could be associated with design, operational and defects factors.</p> <p>Risks to be noted in the RRCR may include, but shall not be limited to, snagging, claims, specification defects and commercial concerns. <u>[Where do we set out the snagging process? Does this paragraph align with the requirements set out elsewhere in the Contract?]</u></p>	<p>designated risk manager (as notified to the Infraco from time to time) within 12 months of the Effective Date. Final report to be delivered at least 3-three months prior to the Actual Opening Date <u>[staged opening?]</u>. The Infraco shall update the RRCR as required throughout the term of this Agreement.</p>
<p>The Infraco shall prepare and maintain an Operational and Maintenance Report ("OMR") that will detail the identified risks associated with provision of the [Maintenance Services] <u>[align this with the Case for Safety and the requirements that should (please check) be set out in the Infrastructure Maintenance Agreement in this respect]</u> in relation to the Edinburgh Tram Network.</p> <p>The Infraco shall liaise with the Tram Maintainer and the Operator and any other</p>	<p>Agree format of the OMR with tie's designated risk manager (as notified to the Infraco from time to time) within 12 months of the Effective Date. Final report to be delivered at least 3-three months prior to the Actual Opening Date. The Infraco shall update the OMR</p>

<u>Required Action from the Infraco</u>	<u>Timing/Frequency applicable to the Infraco</u>
relevant party as required in relation to the creation, development and updating of the OMR	annually continuously [that will not work if it is linked to the Case for Safety] -for the duration of this Agreement.

3.2.26 Traffic Management / Temporary Traffic Regulation Orders (TTR0’s)

The Infraco shall establish the policies and agreements for traffic management and the submission of the TTR0s which will be required in respect of the Infraco Works. The Infraco shall consult with and submit the TTR0 requirements and schedules, to CEC in its capacity as roads authority. The Infraco shall prepare Work Site plans, Temporary Works method statements, access routes for emergency vehicles, assumptions registers, issues logs and any other means to ensure prompt resolution of issues which could affect the progress and economic execution of the Infraco Works. This responsibility shall also include attendance by the Infraco (as required by **tie**) at meetings in relation to the TTR0 requirements and the Infraco being involved (as required by **tie**) in any representations to the Council-led RAUC [what are these?] Committee, which convenes quarterly [will this continue to be the case during the Contract?].

The Infraco shall ensure that TTR0s are obtained in accordance with the requirements of the Programme.

The Infraco shall work with **tie** and TEL to produce a "Traffic Management Plan" and a "Work Site Staging Plan" which shall be submitted by the Infraco to **tie** for approval in accordance with the Review Procedure within four weeks of the Commencement Date.

The Infraco shall update these plans every two weeks throughout the duration of the Infraco Works for review at design meetings and every four weeks at stakeholder and third party meetings.

The Traffic Management Plan and [[Work Site]] Staging Plan shall comply with the TTR0 protocol developed by **tie** and CEC and shall contain a detailed definition of the Work Sectors, Work Sections and Work Sites within the Work Sections.

The Traffic Management Plan and [[Work Site]] Staging Plan shall also include all necessary drawings, diagrams and supporting information to show the mobilisation, erection and dismantling of Temporary Works, traffic and pedestrian management during any pre-diversion works and the Infraco Works, access to properties, details of fencing and security measures.

The Infraco shall develop a set of requirements in relation to TTR0s and traffic management, which shall be based on information supplied to the Infraco by **tie** and/or TEL [oops] ("TTR0 Obligations and Traffic Management Plan") and shall take account of the interface on traffic management that will be required in relation to the MUDFA Works.

The Infraco shall prepare and develop project-specific procedures for complying with the TTR0 Obligations and Traffic Management Plan, and these procedures shall be submitted for approval by **tie**, TEL and CEC in sufficient time to avoid disruption to the Programme.

By appropriate induction, the Infraco shall ensure all site-based personnel, management staff, operatives and visitors are fully aware of and understand the procedures contained within this document.

The designated project or site manager appointed by the Infraco in relation to each [[work site]] shall be accountable for the implementation and compliance with these requirements and procedures.

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The Infraco shall ensure that the overriding considerations expressed in these procedures and requirements shall be the safety of road users, minimising disruption caused by the Infraco Works, pedestrian management and ensuring that traffic and pedestrian disruption is kept to a minimum.

This shall include taking such measures as CEC, in its capacity as roads authority, may reasonably require.

The Infraco shall ensure that reasonable access to all business, residential premises and properties along the route of the Edinburgh Tram Network is maintained at all times.

The proposals and procedures in relation to maintaining such access shall be contained within the TTRO Obligations and Traffic Management Procedures Plan.

3.2.27 Permits / Approvals

The Infraco will be required to obtain all necessary permits and approvals prior to undertaking investigations or works on site, in accordance with Schedule 3 [better reference please].

3.2.28 Method Statements

The Infraco will be required to prepare method statements in respect of all investigation and work activities, as detailed in this Part 2 and Schedule 3 [of the Contract?], and submit these in accordance with the Review Procedure.

The Infraco shall produce a method statement entitled "Procedures for dealing with Unidentified Apparatus or Unrecorded Artificial Obstructions", which shall be submitted by Infraco in accordance with the Review Procedure. This method statement shall contain procedures which shall confirm the processes for dealing with unforeseeable events or circumstances, the discovery of unidentified apparatus [I am sure I have seen this covered elsewhere in the Employer's Requirements] (including live services) or unrecorded artificial obstructions. The final version of the method statement and procedures shall be agreed with the relevant key third parties, Approval Bodies, the Utilities and the emergency services. —The method statement shall be updated and a final version produced which shall be finalised by the Infraco in accordance with the Review Procedure [no later than four weeks – confirmation of timescales – prior to commencement on site.

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3.2.29 Existing Structures Which May Affect Progress [I am sure I have seen this somewhere else in the Employer's Requirements]

Notwithstanding the requirements of the Infraco to undertake survey inspections associated with buildings and structures which may be at risk of physical damage during the Works, the Infraco will additionally be required to survey existing buildings or structures which have defects which are at risk of affecting the progress of the Works.

For such structures and buildings the Infraco will be required to compile an appropriate Schedule of such buildings / structures, and produce surveys / records similar to those described under Schedule 3, Clause 18.2.1.

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Under this Agreement there is a requirement for the Infraco to undertake works to address the condition of existing structure where such condition may affect the progress of the works. Where such work is completed the Infraco will be required to take appropriate photographs to fully demonstrate the quality of the reinstatement works.

3.2.30 Stakeholder Management

General

A Communication Plan / Strategy will be in place by **tie**. As noted previously [signpost], the Infraco will be required to comply with the requirements of this Plan/Strategy.

The Infraco shall assist **tie** to minimise any possible adverse impact of the implementation of the Edinburgh Tram Network on stakeholders (both statutory and non statutory), local businesses and the general public. This shall include.

Design

The Infraco incorporate into the preliminary design [defined term? Used elsewhere? Do we have this concept in the contract now?] (where appropriate) and the detailed design [defined term? Used elsewhere? Do we have this concept in the contract now?], the following requirements:

- Securing, implementing and incorporating into the design all necessary Network Rail, BAA and other third party agreements;
- Assisting by providing all technical details relevant to the compulsory purchase order process and land acquisition process (including wayleaves and servitudes);
- Liasing with CEC, Scottish Executive, Historic Scotland, World Heritage Trust, Scottish Natural Heritage and others as required by the Client tie in relation to the performance of the Services.

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Liaison and Public Information [I am sure I have seen this somewhere else. Code of Construction Practice perhaps]

The Infraco shall appoint a liaison officer to manage all public relations, information and press related matters relating to the Infraco Works, who shall along with the necessary technical, commercial and other Infraco resource, liaise with **tie**, TEL, and if so requested by **tie**, with CEC, other statutory bodies, HMRI [no – tie has special arrangements for dealing with HMRI, and these should be set out in the Employer's Requirements somewhere], members of the public, local businesses, the press and the media as may be necessary on all matters relating to the Infraco Works. Except where expressly stated in this Agreement, the Infraco shall not make any publicity or media statements or make any other formal disclosure of information regarding the Infraco Works without the prior approval of **tie**.

The liaison obligation referred to in the above paragraph shall include, but shall not be limited to the following matters:

- Participating in business, stakeholder and community liaison groups, public meetings and consultation meetings as the progress of the Infraco Works dictate

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- Providing proactive input, information and comment into information initiatives organised by or on behalf of **tie** and attending as requested by **tie** at any relevant consultation meetings
- Assisting **tie** with the development and maintenance of, and adherence to, a communications protocol for dealing with all stakeholders, businesses and members of the public affected by the Infraco Works
- Assisting with the development and maintenance of procedures developed by **tie** in relation to stakeholder management by way of the provision of information relating to the Infraco Works
- Provision of weekly updates to **tie** on the progress of the Infraco Works and all planned Infraco Works in a form reasonably requested by **tie**
- Informing **tie** at least two weeks in advance of all plans for any formal communication with stakeholders, businesses and members of the public. The form and content of such formal communication shall be subject to **tie's** prior approval
- Provision to **tie** of all information reasonably requested by **tie** in respect of the Infraco Works planned in a form prescribed by **tie**
- Recruiting and providing "Tram Helpers" to man each **[[location]]** and provide a customer interface at the time when the Infraco is carrying out the Infraco Works
- The identity of Tram Helpers employed by the Infraco will be subject to the individual prior approval of **tie** **[[TEL]]**. If required by **tie** and/or TEL, Tram Helpers shall be required to undergo an induction process, which may include briefing as to information they will be required to disseminate in relation to alterations to bus services brought about by the Infraco Works and the Infraco shall comply with all reasonable requirements of **tie**/TEL in respect of the duties and role of the Tram Helpers. Furthermore the Infraco will provide the "tram helpers" with uniforms (approved by **tie**/TEL).
- Provision and use of approved branding materials, PPE kit and signage at all operational [Work Sections]. No such materials, kit or signage shall be erected at any [Work Section] without the prior approval of **tie**
- The provision and distribution of traffic routing maps which conform to the terms of the TTROs for all areas affected by the Infraco Works in advance of the Infraco Works starting in any particular location as may be requested by **tie**. In the event that **tie** requires that such material is for public issue, public issue shall not occur before the form and content has been approved by **tie**. **Infraco will** ~~Ensure-ensure~~ that all public statements (including by way of media referred to in the Sections below ~~[which ones – be clear]~~, in relation to the Infraco Works) are consistent with **[[TEL's]]** Communications Strategy.

Information Centres [to be consistent with the following text]

The Infraco shall provide all information and documentation regarding the Infraco Works as may be reasonably required by **tie** in respect of the mobile and fixed information centres being operated by **tie** in relation to the Edinburgh Tram Network.

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Website

The Infraco shall provide all information regarding the Infraco Works, reasonably requested by **tie**, in order to populate the website, which shall be maintained and operated by **tie** throughout the progress of the Infraco Works, in respect of the Edinburgh Tram Network.

Weekly Newsletter

The Infraco shall produce and publish weekly newsletters [will need to produced in partnership with Operator if during commissioning , driver training and staged opening and /or whilst snagging is ongoing] every Wednesday, detailing the Infraco Works to be undertaken in the forthcoming week and outlining, with appropriate maps, drawings and diagrams, the impact on the general public, businesses and in particular any alterations to road traffic circulation patterns required by the coming week's Infraco Works. Separate standalone weekly newsletters shall be provided in respect of each of the Work Sections (A to D) [this will not always be appropriate, as one will do for the whole system at some times].

Each newsletter, the contents and format of which shall have the prior approval of **tie**, will also be issued, if requested by **tie**, by fax and email to: local and national newspapers and other news media, CEC, Lothian and Borders Police, the emergency services, to any party or parties requested by **tie** and to any other persons or organisations that have requested receipt of the newsletters.

The newsletters shall also be distributed door to door by the Infraco in affected locations and the Infraco shall advise **tie** when such distribution is occurring.

The Infraco shall monitor and record the distribution of ~~this~~ newsletters, recording who is carrying out such distribution, the intended recipients etc, so as to enable **tie** to carry out its own audit and monitoring of such distribution.

Sufficient free distribution take-away hard copies of these newsletters shall be delivered to and placed in the information centre by the Infraco before 08:00 every Thursday morning.

The Infraco is required to submit a draft of each issue of the newsletters to **tie** no later than midday on the Monday immediately preceding the proposed issue of the newsletters on the Wednesday. **tie** will respond before 17.00 hours the same day.

tie Monthly Newsletter

The Infraco shall provide all information and assistance reasonably requested by **tie** in relation to the publication by **tie**, of a monthly newsletter in relation to the progress of and future plans for the Edinburgh Tram Network.

Call Centre

The telephone number, fax number and e-mail address of the call centre to be operated by **tie** in relation to the Edinburgh Tram Network (the "hotline") shall be publicised through the press and the weekly newsletter and clearly displayed on all appropriate PPE kit, site signage, hoardings and at other suitable locations within and throughout the vicinity of the Infraco Works.

Communication Log [how does this integrate with the “Stakeholder Database”? One for Suzanne to comment on?]

All contacts, communications, complaints, comments and queries howsoever received by the Infraco shall be registered in a suitable electronic log (the "communication log").

The communication log shall set out each contact under the type (e.g General, Traffic, Safety, Vibration, Noise, Dirt, Disruption, Injury, Parking, Access, RTA, publicity, suggestions etc).

The method of approach shall also be logged (e.g. phone, direct, letter, email etc) as well as the time and date.

The log shall be so constructed such that statistical analysis of the different communications can be presented as part of the data to be provided to **tie**. It will be a requirement that the Infraco will deliver an "above average" customer satisfaction level. In order to demonstrate this, there will be a requirement for the Infraco (and as required **tie**) to undertake internal (and external) audits of the overall engagements with **tie**. All this information shall be summarised by the Infraco in its monthly progress report.

Infraco shall take such steps as are required to address any such contact, communication, complaint, comment or query in accordance with the response requirements set out in Table 3-1 below.

To the extent that a stricter response requirement is otherwise required under this Agreement, the stricter response requirement shall apply.

To the extent that Table 3-1 provides for the recovery of any amount by **tie** from the Infraco, such amount may be deducted from any monies due to or to become due to the Infraco or, alternatively, may be recovered from the Infraco as a debt.

A record of all remedial actions taken shall be maintained.

In the event of the Infraco receiving a complaint, a follow up letter or electronic communication shall be passed to the complainant by the Infraco within 24 hours of their receipt of the complaint, outlining the complaint and details and timing of the remedial action being undertaken by the Infraco.

An up to date copy of the communications log shall be compiled daily by the Infraco, together with a report on the progress of any actions.

The communications log shall be inspected and signed daily by a nominated senior representative of the Infraco and shall be counter signed by the Infraco's Representative at least once per week.

The Infraco's Representative shall write a report to **tie** and/or the Nominated City Officer of CEC (as notified by **tie** from time to time) at least once per month containing a list of any breaches of this **tie** requirement including the requirements of this Schedule 2 (Scope of Works and Services) and Code of Construction Practice occurring within the previous month, setting out;

- the nature of the breach
- the duration of the breach
- the action taken by the Infraco to mitigate the breach; and

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- the steps taken to minimise the likelihood of a subsequent occurrence of the breach.

Subject to the Infraco obtaining **tie**'s prior approval, a copy of each week's communication log shall be placed every Friday in the information centres, where it will remain until completion of the Infraco Works.

Any person, including representatives of **tie** and CEC's Nominated City Officer [another new term. Define?], may freely inspect all deposited copies of the communications log during the normal opening hours of the information centres.

The version of communications log on public display should not breach any data protection legislation or other Law.

Copies of the communication log shall be forwarded to **tie**'s Representative and/or and CEC's Nominated City Officer once per week.

The master communication log shall be available for **tie**'s Representative and CEC's Nominated City Officer to inspect at any other time during normal working hours.

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Level of Urgency	Category of Notification	Required Response Time
1	High urgency. <i>Involves an immediate threat to persons or property or the circumstances otherwise require immediate rectification.</i>	Immediate action required. <i>If response not completed by the Infraco within 4 hours, tie may procure that the relevant work is carried out and the costs of so doing shall be recovered from the Infraco.</i>
2	Medium urgency. <i>No immediate threat to persons or property, but circumstances require rectification within 24 hours.</i>	Remedial action requires to be completed within 24 hours. <i>If the Infraco does not complete the required response within 24 hours, tie may procure that the relevant work is carried out and the costs of so doing shall be recovered from the Infraco.</i>
3	Issue requires rectification, <i>but no immediate threat to persons or property and the circumstances do not otherwise require immediate rectification.</i>	Timescales for rectification to be agreed between the Infraco and tie. <i>In the event that the Infraco does not comply with the agreed timescales, tie may procure that the relevant work is carried out and the costs of so doing shall be recovered from the Infraco.</i>

Table 3-1: Notification Hierarchy

3.2.31 Network Rail Asset Protection Agreement [See separate comment about the need for Operations and Maintenance Agreements with Network Rail and the commercial and risk implications of these]

In accordance with this Agreement, the Infraco will be required to comply with all obligations set out within the Asset Protection Agreement.

The Infraco shall ensure that the requirements of the Network Rail GRIP [define?] process are implemented on the works for which they are responsible whilst working in accordance with all relevant Network Rail Group Standards.

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The contract requirements for Network Rail with regard to Health and Safety included within the Network Rail document NR/SP/OHS/008. The project specific requirements are identified within the Safety Clause Menu against the requirements of Network Rail document NR/SP/OHS/008 and indicate with 'ticks' in the contractor column of Section 51 to 59 inclusive of the Safety Clause Menu and any other requirements that the Infraco is proposing by virtue of his method of undertaking the Works. The Safety Clause Menu shall be signed off by the Infraco to confirm their proposals.

The project shall be undertaken as Third Party Works as identified within the Network Rail document (RT/LS/P/043).

3.2.32 Services in Connection with the Operator

The Infraco will be responsible for interfacing with the Operator throughout the Agreement. Interface responsibilities [of whom? Operator, Infraco or both?] Technically, this interface is with tie, not the Operator as the Operator is not party to this agreement. Please discuss]-will include, but not be limited to, the following [All of the following are subject to the DPOFA renegotiations]:

- providing support to obtain operational approvals and consents in respect of the Edinburgh Tram Network;
- ~~providing technical support on public transport integration~~[No. this will be TEL];
- providing technical support on systems integration; and
- providing technical support on the development of operational plans and management systems; and
- provide technical support with regard to operational interfaces with CEC traffic management systems. To include phasing sequence drawings of key junctions
- Prepare and submit plans for driver training and the training of other operational staff
- Prepare and submit plans for ~~maintenance and~~[No. this is the Infrastructure Maintenance Agreement] operations
- Provide ~~documentation~~ /[don't think so. Please discuss] provide support required for the testing and commissioning shadow running and reliability testing.
- Support in the Pprovision of snagging list and associated worksitems ?
- Provide a pictorial "map of the road" to include such detail as: OLE poles – key structures – road intersections – crossovers – tramstops – electrical sections and isolator locations – interchanges – location of sub stations. [All of this was in the non-functional specs at one stage. Please check that it still is!]

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3.3 Provision of Temporary Offices and Vehicles for the Use of tie [All this looks like overkill to me – we seem more concerned about who pays for toilet paper than other much more meaningful items. This section has not been reviewed.]

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3.3.1 General Requirements

The Infraco will be responsible for the provision, servicing, maintenance and removal of the specified **tie** office accommodation and transport for the use by **tie** officers and staff

The Infraco shall provide and maintain fully serviced office accommodation and furnishings throughout the duration of the Infraco Works, in accordance with the following requirements:

- Office accommodation to accommodate 10 desks (Infraco supply) each with at least one secure lockable drawer, a swivel cloth upholstered chair. Each desk located within a minimum working space of 5.5 m²;
- Three separate offices with a minimum working space of 16m²
- 2 meeting rooms suitable for sitting up to 20 and 8 people respectively
- Male and female toilets. Minimum area 3m² each
- Changing/Locker rooms
- Kitchen Minimum area 6m²
- Drying room. Minimum area 6 m²
- Male & Female shower room. Minimum area 3m²
- Parking for up to 15 cars.

The Infraco shall prepare and submit an office layout based on the accommodation description set out below for approval by **tie**

The Infraco shall integrate this accommodation with the Infraco's own accommodation and, subject to proposals which are acceptable to **tie**, the meeting rooms and welfare facilities may be shared by the Infraco.

3.3.2 Fittings and Furnishings

The Infraco shall also provide the following as minimum requirements:

General office

- 7 x 4 drawer lockable metal filing cabinets
- 6 wall mounted notice board 1m high 1.5m wide
- 9 waste paper baskets
- 10 telephones connected to 2 lines
- 1 Fax machine connected to a separate dedicated line

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- 1 high output combined printer and photocopier capable of producing A4 and A3 black and white copies
- 10 connections to internet via broadband, all able to connect at same time
- 1 plan layout table 1 x 2 m;
- 1 A0 Drawing Board and drafting equipment
- 10 desk lamps
- 12 letter tray/ filing baskets
- 2 m of book shelves at 6 of the desks
- 6 large white boards.

Meeting Rooms

- Suitably sized tables and the requisite number of chairs in each room
- 3 flip charts and flip chart paper as required and 1 large wall mounted white board in each room

Private Offices

Each to be provided with a lockable secure desk, a swivel cloth upholstered chair, a filing unit and a table with four chairs

Each office to be provided with a broadband Internet connections.

Kitchen

The kitchen shall be provided with the following as a minimum

- 1 x 4 ring cooker;
- 1 microwave cooker
- 1 electric kettle
- Fridge
- 40 mugs
- 20 sets of cutlery and plates
- supply of potable water from main supply
- kitchen sink with running hot and cold water
- power points for cookers and kettle
- 2 x water dispensers

Toilets

Each to be fitted with the requisite number of WCs and wash hand basins with running hot and cold water

Edinburgh Tram Network – Employer’s Requirement

Changing/Drying room

- Lockers c/w locks and keys for 30 people
- 4 chairs
- 30 coat pegs mounted on wall
- 1 boot pull.

General

- Sufficient fire extinguishers to meet fire regulations
- Sufficient electricity power points to service all rooms and desks
- Sufficient lighting and heating to meet the minimum requirements under the Workplace (Health, Safety and Welfare) Regulations 1992
- Windows complying, both in area and ability to open, with the Building Standards (Scotland) Regulations 1981. The windows shall be provided with blinds and fitted with security grilles/ shutters
- A security alarm system
- Access doors, fitted with five lever mortice locks and 6 sets of keys
- A hose connected to compressed air supply for cleaning boots, at entrance door to the office;
- Boot cleaning brushes at entrance door to the office
- Door mats.
- Shoe covers?
- Seat covers?

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Services

The Infraco shall provide, install and maintain [pay for?] all the services i.e. Gas, electric, water, drainage, telephone (two lines), broadband etc necessary to ensure effective occupation by **tie** of the accommodation for the duration of the Infraco Works

The Infraco shall provide install and maintain a printer/photocopier capable of producing A4 and A3 size black and white photocopies. The Infraco shall ensure that sufficient stocks of consumables (including paper and toner) are available at all times. Subject to acceptable proposals, the photocopier / fax may be shared by the Infraco and **tie**.

The Infraco shall provide tea, coffee, sugar fresh milk and a supply of drinking water for use by **tie** for the duration of the Infraco Works.

The Infraco shall arrange for the servicing and daily cleaning of the accommodation.

Toilet paper [well, that says it all], paper towels, soap, and detergents shall be provided by the Infraco as required.

Equipment

The Infraco shall provide the following equipment for the exclusive use of **tie** throughout the duration of the Infraco Works:

- 10 x 10m long steel tape measures
- 10 x 50m long tape measures
- 10 x high output hand-held torches
- 2 approved electronic utility tracers for tracing/locating cables and pipes;
- other consumables as may be required by **tie** (i.e. marker paint etc.).

The Infraco shall provide surveying/setting out services to **tie** as required, in connection with the Infraco Works.

Site Vehicles

The Infraco shall provide, licence, insure (Comprehensive for any qualified driver together with any authorised passengers and the carriage of goods or samples), service and maintain 4 nr, 4 wheeled road vehicles (suitable for the Edinburgh Tram Network) and visitor transport for the exclusive use of **tie**'s representative and staff to enable them to carry out their duties for the duration of this Agreement. The number and type shall be to the specific approval of **tie**'.

The vehicles shall be delivered and maintained by the Infraco in good, roadworthy condition.

The Infraco shall provide fuel, oil and maintenance in conformity with the vehicle manufacturers' recommendations and shall clean the vehicles inside and outside as required by **tie**.

A suitable replacement vehicle shall be provided by the Infraco in the event any vehicle being out of service for more than 24 hours.

The Infraco shall ensure that each vehicle shall be fitted with approved warning beacons and any other safety equipment as required for work on roads or within the boundaries of the Edinburgh International Airport.

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3.4 System Integration

The Infraco will be responsible for the integration of all services associated with the technical System Interfaces between the Infraco, the various Infraco suppliers and sub-contractors, the Tramco and their suppliers and sub-contractors, the Operator, Third Parties, [[Stakeholders]], other **tie** works (e.g. EARL) and other companies or parties directly or indirectly associated with the Infraco Works.

Detailed requirements and deliverables in respect of the System Integration responsibilities are included within these Employers Requirements. [Check they are]

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3.5 Simulation

The Infraco will undertake a computer based tram service simulation that will demonstrate that the implementation of the proposed design will achieve the required run times, reliability, punctuality and service frequencies [I am sure that this requirement is set out elsewhere in the documentation. Check and remove duplication].

Detailed requirements and deliverables in respect of Simulation are included within these Employers Requirements [It would be really helpful to signpost where they are!].

3.33.6 System Acceptance

The Infraco will be required to provide and execute the necessary services to achieve System Acceptance including testing & commissioning the test track and shadow running.

Detailed requirements and deliverables in respect of the System Acceptance responsibilities are included within these Employers Requirements.

3.43.7 Spares Parts, Tools & Test Equipment

The Infraco will be responsible for the provision, delivery offloading and placing into stores of the necessary Spares Parts, Tools & Test Equipment.

Detailed requirements and deliverables in respect of the Spares Parts, Tools and Test Equipment responsibilities are included within these Employers Requirements [signpost them].

3.53.8 Documentation

The Infraco will be responsible for the provision of various as built / constructed / manufactured drawings, manufacturers information, test certification and other documentation to be provided prior to or on completion of Agreement.

Detailed requirements and deliverables in respect of the Documentation responsibilities are included within these Employers Requirements [signpost them].

3.63.9 Training

The Infraco will be responsible for all necessary training associated with the operation and maintenance of the Edinburgh Tram Network. Detailed requirements and deliverables in respect of the Training responsibilities are included within these Employer's Requirements [signpost where].

3.73.10 Infrastructure Maintenance

The Infraco will be responsible for all necessary preventative and corrective maintenance associated with the Infraco works. Detailed requirements and deliverables in respect of the Infrastructure Maintenance responsibilities are included in the Maintenance Services Agreement [once we have got the Infrastructure Maintenance Agreement to a fit state to issue].

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