

Edinburgh Tram Network

Progress Report No. 14

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CONTENTS

1.	CRITICAL ISSUES	4
2.	EXECUTIVE SUMMARY	6
2.1.	General summary	6
2.2.	Overall Progress on Activities this Period	6
2.3.	Forecast Progress on Activities for the next Period	7
2.4.	Key Issues	7
2.5.	Deliverables issued in the Period	7
3.	CONSENTS AND APPROVALS	8
3.1.	Activities	8
3.2.	Key Issues	8
3.3.	Forecast	8
4.	HEALTH AND SAFETY	9
4.1.	General	9
4.2.	Activities this period	9
4.3.	Deliverables for next period	9
5.	STAKEHOLDER MANAGEMENT / PR	10
5.1.	General	10
5.2.	Activities	10
5.3.	Deliverables	10
5.4.	Key Issues	10
6.	DESIGN	10
6.1.	General Status in the period	10
6.2.	Activities	12
7.	PROCUREMENT	27
7.1.	General	27
7.2.	Activities	28
7.3.	Deliverables	28
7.4.	Issues	28
8.	PROGRAMME	28
8.1.	General summary of Progress	28
8.2.	Actual Activities this Period	28
8.3.	Planned Activities this Period	28
8.4.	Planned versus Actual in the Period	28
8.5.	Planned Activities next Period	28
9.	RESOURCES / MANPOWER	29
10.	FINANCIAL SUMMARY & CHANGE ORDERS	29
10.1.	Change Notices	29
10.2.	Change Requests submitted by SDS	30
11.	INFORMATION REQUIRED	31
	APPENDICES	32
	Appendix A: KEY MILESTONES	33
	Appendix B: PROJECT PROGRESS SUMMARY	34
	Appendix C: LABOUR HISTOGRAMS / MANPOWER HISTOGRAMS	35
	Appendix D: CHANGE CONTROL REGISTER	36
	Appendix E: CURRENT CAPEX COST ESTIMATE SUMMARY TABLE	37
	Appendix F: SUBMITAL PROGRAMME AND DELIVERABLES MATRIX	38
	Appendix G: HEALTH AND SAFETY STATISTICS	39
	Appendix H: RFI STATUS REPORT	40

1. CRITICAL ISSUES

Commercial

1. Agreement of Outstanding Changes
2. Agreement of extension of time
3. Agreement of project programme

Design

Section 1

1. Design Approval Panels for Section 1B, 1C, and 1D
2. Formal resolution and acceptance of Charrette layouts and concepts.
3. Utilities solution along Constitution Street
4. Impacts of Charrette requirements in Utilities design.
5. Leith Walk substation Planning inputs to resolve DAP RED.
6. Ocean Drive stop change due to new construction

Section 3

7. Roseburn Corridor - securing drainage outfalls. Still determining the drainage concept as a result
8. West Harbour Road solution/concept
9. Outstanding RFI's – Drainage information (Granton)/ WEL development data/ Roseburn maintenance
10. Granton Area – committed development traffic flows
11. Roseburn Corridor - Completion of noise mitigation design
12. Craigeith underbridge and Coltbridge Viaduct - Charrettes
13. Ferry Road Junction – modelling/ capacity with bus interchange

Section 5

14. Structures Charrette - need CEC to set date and agree agenda. Holding up structures design in section 5A and 5B.
15. Balgreen Road - need resolution between SDS/**tie**/Network Rail over solution to be taken forward. Holding up section 5A track and structure designs and Balgreen Road tramstop.
16. CEC Flood scheme at Murrayfield, need instruction from **tie**/CEC about whether to include flood wall in embankment design. Holding up section 5A structure design.
17. Discussions ongoing with SRU over nature of works at stadium entrance. **tie** to finalise and sign agreement with SRU.
18. South Gyle tramstop – paper prepared reviewing tramstop location. Need CEC decision on tramstop location.

Section 7

19. RBS bunds affecting archaeological trenching at Gogarburn. Will need to excavate bunds – need **tie** to agree with RBS.
20. Eastfield Avenue bridge replacement - need decision from **tie**/EARL. Holding up track alignment design at Airport.

21. Airport tramstop – need resolution between **tie**/BAA/EARL. Holding up tramstop and track design at Airport.
22. Land access at New Ingliston for survey work and archaeology, **tie**/SDS to resolve payment to landowner. Holding up vertical alignment for section 7A.
23. Still await confirmation of EARL change notice.

Depot

24. Details of Tram length and door access positions Numbers of persons operating within Depot and shift pattern.
25. Parking spaces and Traffic modelling at Gogar Roundabout Confirmation on use of Tram Dryer associated with wash plant.
26. Final design solution to Retaining structure to A8 Position of Flight Path restriction (possible change). Confirmation of Wire height.
27. Availability (cost) of dual 11KV power supply

2. EXECUTIVE SUMMARY

2.1. General summary

This period SDS have been assisting with the production of the second issue of Tender support documentation for the Infraco Contract. SDS have produced a second additional suite of documentation and drawings which is forming part of Tender Issue 2 on 31 October 2006.

SDS have been verbally advised that the revised baseline programme is unacceptable to tie and that further review and update will be required. The design programme had been prepared on the basis of the schedule of dates issued to SDS on 28th September 2006 to suit the tie procurement process. SDS awaits formal clarification of the extent of this rework. A clarification meeting is arranged for Tuesday 31st October 2006.

Closure has been achieved on the scope and value of the Charrette changes between tie and SDS. Further meetings are planned to review the outstanding change control procedures to achieve closure.

2.2. Overall Progress on Activities this Period

SDS have continued to develop the Detailed Design and overall progress is currently 17%.

SDS have continued to work with tie to resolve outstanding Preliminary Design submission approvals issues. Progress on resolution of the Records of Review (ROR) and Design Approval Panel (DAP) comments received by SDS on the Preliminary Design are varied. Initial meetings have been held. TSS are in the process of validating all SDS comments in response to ROR and DAP comments. Closure discussions with tie have proved successful and have resulted in resubmission of SCC documentation and drawings. Interaction between tie and SDS system wide teams have resulted in documentation being agreed for the System Architecture Specification and Baseline 1 Requirements Specification. Progress with resolution of other discipline ROR and DAP comments has been limited and initial meetings unsuccessful due to failure of the TSS team to review SDS Closure comments. This is delaying the incorporation of closure comments in the SDS Detailed Design and urgent resolution of this is required.

SDS still receive comments on the Preliminary Design during this period. These comments are under review by SDS.

SDS have progressed Detailed Design in all areas including Charrette and Planning Summit locations. Official status of Planning Summit outcomes is still awaited.

SDS still await Design Approval Panel meetings be arranged for Section 1 to review the design and gain comments from tie and CEC on the design solutions. Confirmation of the dates for the structures DAP have been received and are planned for 12th to 14th November inclusive. Further to attendance of PB Placemakers to Edinburgh, SDS has prepared artistic impressions of various solutions for Edinburgh Park Viaduct in order to progress the design at the structure Charrettes. These are also being reviewed for the likely impact on scheme CAPEX.

SDS completed and delivered the Preliminary Design estimate for the utilities diversions on 10th October 2006.

GI and SI Surveys are ongoing and the ground investigation surveys and archaeological surveys are 78% complete. Land access has been problematic and resolution of access to NIL has been negotiated. Also gaining approval for Norwest Holst to access Network Rail is proving problematic.

Information received to date from the SI and GI surveys has been included in the Tender Issue 2 to Infracos on 31st October 2006.

SDS have delivered the traffic modelling report to **tie** and CEC. SDS are now working on the update of the traffic modelling to reflect Charrette Changes.

SDS have prepared a TRAMCO supplier report following factory inspection last period to verify that the factory capabilities of each bidder are acceptable and appropriate.

SDS have been working with **tie** in undertaking the second round of public consultations this period and engaged with the public at the Tram design consultation event on 26 October 2006. The event was a success with 344 members of the public in attendance. SDS stake holder management team and technical support team provided design information to the public.

2.3. Forecast Progress on Activities for the next Period

A range of technical meetings have taken place with the newly appointed MUDFA contractor and it has been agreed that SDS will work with **tie** to ensure that a clear action plan is developed to deliver designs to the MUDFA contractor to meet their construction programme.

2.4. Key Issues

SDS still await Design Approval Panel meetings be arranged for Section 1 to review the design and gain comments from **tie** and CEC on the design solutions, this will enable SDS to proceed with the Detailed Design.

Resolution is urgently required for the solution to be adopted for Balgreen Road Bridge. Currently Network Rail are refusing to approve the SDS AIP document on the basis that they do not want the tram to cross the existing structure. SDS have produced a report on the various solutions for the NR access issues but have not received formal response.

The Murrayfield CEC/SRU flood scheme issue also requires clarification from CEC in order that SDS can progress the design of the training pitches.

The traffic modelling progress has been significantly delayed due to the delayed input from the wider area model into the SDS lower level models. Despite this SDS managed to deliver the report on 20th October 2006.

SDS still awaits a CEC decision on how they wish to deal with the existing Greenways (red line parking restrictions). Without a clear decision from the client, there is an unacceptable risk that design work would be abortive. As you are aware, Dundas and Wilson submitted a paper on 21st August 2006 outlining the options available to CEC. No comments or response has been received by SDS.

2.5. Deliverables issued in the Period

SDS will continue to undertake the GI and SI survey works through to completion in line with the survey programme.

3. CONSENTS AND APPROVALS

3.1. Activities

- Reviewed the Detailed Design Programme in respect of Approvals and Consents –filter of relevant dates, timescales and milestones for elemental and other submissions.
- Provided a batching and numbering proposal for Section Design Managers (SDMs) in a Technical Advice Note setting out issues and potential solutions as part of an indicative schedule.
- Provided information regarding the Monthly Meeting Cycle and the integration of Approvals and Consents into the design process.
- Provision of a process diagram for the submission and approval of Prior Approvals to CEC
- Monitoring the Approvals and Consents Management Plan and tracker.
- Supporting, liaising and working with SDMs and Design Team Leaders on planning matters and key issues.
- Supporting and commenting on the three proposed test applications for Prior Approvals
- Preparing a template for Design Statements for SDMs
- Servicing and attending the Tram Design Working Group.
- Continuing to liaise and progress approvals issues with City of Edinburgh Council Planners
- Meeting with SDS Project Manager and Design Manager on the Strategy for Obtaining Prior Approvals
- Convened Integration Meeting with CEC to address Planning, Transport and urban design issues
- Attending weekly Section Design Manager liaison meetings to assist in co-ordination between SDMs and DTLs
- Attended TDWG and input into Detailed Design Programme vis-à-vis numbers and batching
- Input into Risk Assessment Analysis
- Meeting on Planning Drawings with Structures, Roads and Environment
- Ongoing work in relation to Design Appraisal criteria
- Convened a Buildings Fixings Workshop involving key stakeholders
- Liaison with D&W
- Batching and Numbers Technical Note circulated to SDMs, Design Leader and Project Manager
- Production of a template on Design Statements for SDMs
- Finalisation of Prior Approvals Flow Diagram
- Production of guidance in relation to planning drawings – form and content
- Building Fixings Report and Workshop Proceedings
- Initial draft of Design Appraisal Checklist

3.2. Key Issues

- Resolution of programme and approach to Prior Approvals Submissions with SDMs and SDS Project Manager
- Progress with the production and detail of Planning Drawings
- Assisting SDMs to ensure forthcoming test applications and Design Statements are acceptable to CEC
- Ensuring approvals and consents issues are at the forefront of Detailed Design
- Approvals and Consent input to Tram Design Working Group presentations required
- Need to meet with CEC planners to finalise numbers batching and process

3.3. Forecast

- Lead for SDS on Programme and Approvals and Consents

- Continue coordinating planning consents submission requirements amongst the SDS team.
- Drive the agenda of the Tram Design Working Group.
- Regular liaison and consultation with CEC.
- Attend team meetings.

4. HEALTH AND SAFETY

4.1. General

CDM Health and Safety activities are being developed as appropriate.

There are ongoing reviews of Method Statements and Risk Assessments for non-intrusive and intrusive surveys.

There is progressive delivery of **tie** and SDS's Edinburgh Tram Induction packages to all members of the SDS team – thirty-five personnel were inducted (**tie**/PB) within the period.

Safety Hazards/Risks are being input in to the Project Risk Register.

The Safety Management Plan comments have now been closed out. This plan will be continually developed and updated during the Detailed Design phase.

Site investigations works are currently ongoing. Monitoring of site activities to ensure adherence to site health and safety plans and method statements has commenced. To date there have been no accidents or safety related incidents reported from the ongoing Ground Investigation surveys.

There have been a series of CDM meetings between **tie** and SDS. The key focus of these discussions has been to gain an understanding of the key Health & Safety risks encountered during the design and the residual risk that construction contractors will need to be aware of. Meetings to date have involved the Utilities and Structures disciplines, with others to follow. The discussions served to provide a clearer understanding of the Planning Supervisors requirements regarding the information for residual risks.

Discussions continue to be ongoing with Network Rail regarding the safety implications of the various options being proposed for the Balgreen Road access.

4.2. Activities this period

- CDM meetings commenced to discuss key Health and Safety risks.
- Method Statements for various survey works accepted.

4.3. Deliverables for next period

- Finalise the Network Rail GI Health & Safety Plan – dependent on Network Rail's acceptance of the **tie** 3rd Party Safety Strategy Plan.
- Develop method statements for submission to Network Rail for acceptance to allow survey works at First ScotRail's Haymarket depot.
- Submit Method Statement addendum for ground Investigation work in the designated RED area at Gogarburn.
- Submit Traffic Management Plan for A8 works to **tie** for acceptance.
- Leith Walk Confined space working on Network Rail Land approval and acceptance.
- Monitor through site health and safety inspections the onsite activities of the GI contractors to ensure adherence to the approved construction health and safety plan and method statements.

- Continue discussions with Network Rail regarding the safety implications for tram and heavy rail for the Balgreen Road options.

5. STAKEHOLDER MANAGEMENT / PR

5.1. General

The second round of consultation meetings, presenting the Preliminary Design commenced on 25th September. Additional meetings will need to take place in order to consult on noise mitigation measures and drainage solutions for the Roseburn Corridor. These are due to be held in December. Further consultations with key stakeholders in support of the Approvals process are due to take place from October onwards.

5.2. Activities

In addition to the scheduled meetings, the following stakeholders have been visited and briefed on the consultation and the design processes.

Meetings held:

- Haymarket to Murrayfield 2nd round consultation meeting 25/09/06
- Cycling Group consultation meeting 27/09/06
- Balbirnie Place 2nd round consultation meeting 10/10/06
- Roseburn Maltings 2nd round consultation meeting 16/10/06
- Craighleith to Crewe Toll 2nd round consultation meeting 17/10/06
- Roseburn to Craighleith 2nd round consultation meeting 18/10/06
- Emergency Services consultation meeting 19/10/06

Planned meetings:

- Roseburn wider community meeting 26/10/06
- Granton 2nd round consultation meeting W/C 20/11/06
- Granton wider community W/C 20/11/06
- Airport wider community meeting W/C 06/11/06
- Shandwick Place to St Andrew Square W/C 13/11/06

5.3. Deliverables

N/A

5.4. Key Issues

The tie External Relations Manager leaves the company on 10th November. This will leave a considerable knowledge gap in the client's communications team, with Mike Connelly being engaged in more high-level activities rather than the day-to-day management of the frontagers. Outstanding activities and a handover session will be attended by the SDS stakeholder team.

6. DESIGN

6.1. General Status in the period

- A significant amount of resource has been involved in the production of the ItN Infracore documentation; this has had an effect on the progress of Detailed Design, which will be assessed.
- Progress has been made on Charrette areas in terms of development of layouts, post PD phase.

- The Detailed Design Programme was delivered to tie on 5th October 2006; feedback has been provided in a subsequent meeting but acceptance is still awaited. Notwithstanding this, it was agreed that the programme be presented to CEC and the TDWG, this was done on 12th October and 18th October.

Section 1

The main focus of activities in Line Section 1 has focused on development of the charrette options. Outstanding issues associated with the Charrettes include formal resolution on St. Andrew Square from CEC. SDS have provided an options paper to CEC requesting formal direction on the concept to be advanced. tie have directed SDS to progress with one alternative for ItN and SDS will carry this through into Detailed Design. However, on-going discussions with CEC indicate that in their opinion, the decision has not yet been made. For the other Charrettes, SDS has clear indication of the preferred concepts, and is to provide additional details to ensure that critical issues as outlined in the Charrettes are covered, which is more than originally required at the PD submissions. The impact of the Charrette layouts on the utility designs at Foot of the Walk and St. Andrew Square needs to be addressed immediately due to the magnitude of the change. Foot of the Walk needs to be addressed in conjunction with the on-going spatial planning issues that exist on Constitution Street for the services.

SDS have yet to have Design Approval Panels for Sections 1B, 1C, 1D. Consequently, all work being done outside of Charrette areas is at risk. SDS have received comments from CEC for these areas, and are considering them moving forward. It is now critical that the inputs from the traffic modelling be incorporated into the designs to validate the junction designs for PD, and to respond to the comments received from CEC and stakeholders.

Layout in front of Ocean Terminal has been adjusted to accommodate requirements of Forth Ports, and also to accommodate the requirements outlined in using Ocean Terminal as the system terminus initially. SDS requires clear direction if this is to be the case, as it will have several impacts on the comments received from CEC and will potentially eliminate several issues without the extension to Newhaven initially.

The layout of the stop and p-way at the Ocean Drive stop will require adjustment. SDS are considering the possibilities. New development has been constructed adjacent to the stop, and SDS have completed surveys to locate the new building and associated amenities. The result is that SDS have found a conflict in the platform location and the access points constructed as part of the new development.

Section 3A (Roseburn Corridor)

An interim track alignment solution has been completed to allow progression of the retaining wall design. A presentation and site walkout with TDWG is arranged for 1st November. Actual examples of similar walls in Edinburgh will be presented.

There are various opinions spread between tie, Transdev, SDS, HMRI, CEC and Road Safety Auditors on the issue of cycleway demarcation and we are currently in the process of resolving these.

The drainage design solution in Roseburn depends primarily on obtaining consent for outfall locations. So far, approval of the concept has not been achieved, with consultation with SEPA ongoing. Scottish Water discussions are on hold pending outcome of discussions with SEPA. Three drainage concepts have been investigated so far. The latest requires permission from SEPA to outfall to the Water of Leith in entirety, using a pumped water main throughout the corridor.

Section 3B (Pilton)

There is consensus on the layout of Ferry Road Junction from CEC, subject to modelling and obtaining a departure from standards for a 17m long pedestrian crossing.

There appears to be an issue with the figures used in the modelling, as CEC may be expecting committed development flows to be used in the modelling through the Granton Area.

Section 3C (Granton)

Development of Granton Square tramstop location and track layout has been ongoing. We are still determining the concept along West Harbour Road, due to the number of accesses on both sides. The preferred solution will likely require closing of roads/private accesses including at the Pickfords Depot and possibly including Oxcraft Street. Feasible alternative accesses are possible. Agreement will be required with the tenants.

The alternative to altering the access arrangements is a fully signalised solution, although this design is not yet proven and due to the number of consecutive signals is undesirable both in terms of traffic flow and street clutter.

Section Haymarket - Airport

Design is progressing in most areas in accordance with the programme. A number of the items which were put on hold following the Design Approval Panel meetings have now been cleared, including the Russell Road substation location. Development work has been carried out for the other outstanding items, of which the main concern is agreeing a date and agenda for a structure Charrette. Other areas of concern which could cause delay are the airport interface and archaeology at Gogarburn. Obtaining an agreement from Network Rail over the Balgreen Road access road is also critical for the design work.

6.2. Activities

6.2.1. Track

Follow up from Previous Reports:

- Track alignment design between Balgreen Road and Water of Leith Bridge, and development of options for optional turnback and siding facility at Balgreen Road stop, awaiting decision on access requirements for Network Rail.

Activities during the period:

- Continuation of development of Charrette changes in track alignment.
- Continuation of track-structures design coordination - assessment of track alignment design status (in advance of completion of Detailed Design) in terms of robustness for use by structures design team for commencement of Detailed Design of structures.
- Continuation of track-structures design coordination - assessment of trackforms, requirements for rail movement joints and derailment containment.
- Responses to Records of Review of Preliminary Design.
- Review of project risks.

Works completed during the period:

- Issue of track alignment data to Structures Design Team to enable start of detailed design of Haymarket Station Viaduct.
- Development of alignment design on Roseburn Corridor to coordinate with structural design, foot/cycleway design, retaining wall design and 'pinch points' wrt LOD.
- Issue of track alignment data to Structures Design Team to enable start of detailed design of structures in Roseburn Corridor.
- Revision of track alignment in Section 5C to incorporate comments on Preliminary Design and handover of the same to the Roads Design Team.
- Development of alternative track alignment at Ocean Drive to allow for transgression of LOD by third party (new apartment block development) and for possible future connection to depot at Leith.
- Development of alternative track alignment at Ocean Terminal to allow for possible termination of Network at Ocean Terminal, with provision for future extension to Newhaven.

- Assessment of feasibility of alternative track alignment to accommodate possible revised location of South Gyle stop.
- Assessment of feasibility of alternative track alignment to accommodate levels of roads in future NEL development, Edinburgh Park, immediately north of Edinburgh Park Station Bridge.
- Revision of track alignment in Section 2A to incorporate comments on Preliminary Design and handover of the same to the Roads Design Team.
- Issue of track alignment data to Structures Design Team to enable start of Detailed Design of all structures (with exception of A8 retaining wall) in Section 5C.
- Issue of track alignment data to Structures Design Team to enable start of Detailed Design of Golgar Culvert Nos 1, 2 and 3 and EARL Underbridge in Section 7A.
- Production of special versions of track alignment drawings, incorporating Charrette changes, for InfraCo ItN package.

Work planned for the next period:

- Continuation of design development of Charrette changes.
- Subject to receipt of decision on access requirements for Network Rail, design of track alignment between Balgreen Road and Water of Leith Bridge, and development of options for optional turnback and siding facility at Balgreen Road stop.
- Continuation of track-structures design coordination - assessment of track alignment design status (in advance of completion of detailed design) in terms of robustness for use by Structures Design Team for commencement of Detailed Design of structures.
- Continuation of track-structures design coordination - assessment of trackforms, requirements for rail movement joints and derailment containment.
- Wheel-rail interface study.
- Development of trackforms.
- Trackwork specification.
- Rail movements joint schedule.
- Commence assessment to determine final selection of rail sections.
- Commence assessment to determine rail grades.
- Commence production of guard rail drawings.

Work to be completed during the next period:

- Responses to Records of Review of Preliminary Design.
- Revision of track alignment in Section 1A to incorporate comments on Preliminary Design and handover of the same to the Roads Design Team.
- Revision of track alignment in Section 5A to incorporate comments on Preliminary Design and handover of the same to the Roads Design Team.
- Revision of track alignment in Section 3A to incorporate comments on Preliminary Design and handover of the same to the Roads Design Team.
- Review of project risks.

Issues:

- None to report

Information Required in the Next Period:

- Decision on access requirements for Network Rail between Balgreen Road stop and Water of Leith bridge.

6.2.2. Tram Systems**Follow up from Previous Reports:**

- None to report

Activities during the period:

- Support to **tie** Tramco procurement, evaluating bids from prospective tram suppliers
- Preparations for revision of Tram Requirements Specification and Tram Interface Specification

Works completed during the period:

Works completed during the period

- Investigation into sidestepping a hearing on the core TROs has to date been unsuccessful therefore we must assume there will be a hearing for all TRO issues

Work planned for the next period

- Amendment of the initial draft TRO is dependent on the progress of the roads design
- Revise programme to reflect proposed date of completed modelled roads design
- Greenways being progressed by CEC
- Agreement to be reached with CEC on the definition of Core and Consequential Orders agreement on core measures on route seems almost there
- CEC to confirm their position on changes to the Greenways
- Resolve the election issue and reflect this in the programme.

Work to be completed during the next period

- Amendment of the initial draft TRO dependent on the progress of the roads design
- Have a realistic TRO programme developed that reflects the proposed roads design programme and the election
- CEC to confirm their position on changes to the Greenways

Issues

- Awaiting resolution on CEC issues including changes to Greenway treatment/enforcement
- No definitive TRO design can be concluded until the roads design and modelling have been concluded to an agreed standard with CEC where they are content to permit the TRO to progress to formal consultation

Information required in the next period:

- Confirmation on progress with approved modelled roads design

6.2.12. Transport Modelling**Activities during the period:**

- First draft of report on junction analysis work based on layouts submitted as Preliminary Design (PD1).
- Continue tram run-time calculation including double cycling exercise

Works completed during the period:

- Completion and submission of draft report on junction analysis work (using LINSIG) based on PD1 layouts

Work planned for the next period:

- Report on tram journey time and TRANSYT analysis
- Subject to availability of traffic flows where applicable, investigate and analyse revised layouts proposed as Charrettes.

Work to be completed during the next period:

- Draft of TRANSYT model report and tram run-time calculation report.

Issues:

- Requirement for and programming of modelling associated with the MUDFA and INFRACO contracts to be defined and agreed.

Information required in the next period:

- None to report

6.2.13. Utilities**Follow up from Previous Reports:**

- Internal consultation (design development)
- External consultation (client)
- External consultation (Utility companies)
- Consultation with MUDFA Contractor (design development)

- Evaluation visits to prospective tram suppliers

Work planned for the next period:

- Revision of Tram Requirements Specification, Tram Interface Specification.
- Interviews with prospective tram suppliers.

Work to be completed during the next period:

- None

Issues:

- None

Information required in the next period:

- Formal comments on Tram Requirements Specification, Tram Interface Specification. Change notices for **tie** tram requirements.

6.2.3. Systems Controls and Communications**Follow up from Previous Reports:**

The three items requiring **tie** action last period were:-

- Closure of SCC PD client comments
- **tie** comments on SCC OPS
- **tie** buy-in to the PB SCC Detail Design OPS

None of these were totally closed and progress is described in items below:

Activities during the period:

- SCC resubmission of PD deliverables in line with **tie**'s latest requirements
- Re-visit to Programme and resources
- SCC closures of PD ROR comments and responses
- SCC development of Drawing Register and proposed quantities / samples
- SCC Detailed Design OPS and review meeting with **tie** (P Alliot)
- SCC production of selected drawing samples for client review
- SCC / Safety Assurance meetings to review charts and plan way forward

Works completed during the period:

- SCC resubmitted their PD "Plus" Technical Specification & associated drawings prior to the 30th September 06 as agreed with SDS and PB Project Management Teams.

Work planned for the next period:

- Formal acceptance of SCC Preliminary Design submission leading to status being changed from Red to Green.
- Formal meeting to discuss PB Detailed Design OPS and differences in perceived scope following on from J Christoffersen / P Alliot meeting on 12th Oct 06.
- Complete Signalling and Communications "sample" drawings where possible
- Continue with Radio Propagation Modelling works
- Progress meetings with key discipline interfaces

Work to be completed during the next period:

- Complete Signalling and Communications "sample" drawings where possible
- Agreement on PB Detailed Design OPS and / or actions to reach formal agreement on way forward – outstanding from previous period and now in hands of PB / **tie** PMs.

Issues:

- As per previous period :
- The SCC Detailed Design OPS describes the level of detail SCC will produce for the various sub-systems relating to "black-box" level and any areas where PB will go beyond this level of detail. This level of detail also aligns to the current SCC budget, Engineering Plans put in place and resources programmed to deliver this element of works. It also reflects the fact that the level of detail developed should not preclude any potential suppliers from offering their proven solution.

- Discussion is required with **tie** regarding aspirations to develop designs to a greater level of detail so as to provide "approved for construction" level drawings (connectors, wiring looms etc.), as previously stated by SDS the solutions and products could be different dependant upon which Infraco (and associated SCC sub-contractor) is successful.

Information required in the next period:

- Closure of SCC PD client comments
- **tie** comments on SCC OPS
- **tie** acceptance of SCC Detail Design OPS

6.2.4.Halcrow Structures / Bridges**Follow up from Previous Reports**

- The Structures Team is currently working on resolving "red" issues with CEC and **tie** through the forthcoming structures workshop, details to be confirmed.

Activities during the period:

- Ongoing involvement in resolution of Preliminary Design "Red" issues
- Responded to unofficial DAP comments and **tie** generated comments
- Preparation of HMRI submission regarding various structures
- Participated in the site visit to the Roseburn Corridor with HMRI
- Continuing discussions with CEC Structures to achieve AIP sign off.
- Completed Preliminary Design and issued revised AIP for Russell Road Bridge with a portal frame option.
- Revised and issued AIP for Gogar Burn Retaining Walls design following revised alignment information.
- Undertaking Detailed Design of Roseburn Corridor Retaining Walls design following receipt of revised alignment information.
- Preparing method statement for outstanding inspection of Leith Walk Railway Bridge
- Completed roped access inspection of Coltbridge Viaduct
- Completed trial pits along Roseburn Corridor
- Completed assessment of existing beams on Tower Place bridge
- Assisting in the development of the OLE design at structure locations.

Works completed during the period:

- Submission of response to unofficial DAP comments and **tie** comments

Work planned for the next period:

- Continue Detailed Design
- Attend Structures Charrette, when date is finalised

Work to be completed during the next period:

- None

Issues:

- Structures Charrette is urgently required to move on design and discuss CEC "Reds".

Information required in the next period:

- Structures Charrette – see above

6.2.5.PB Structures**Follow up from Previous Reports:**

- In respect of Ground Investigation, draft engineering logs have started to be received and are being reviewed as they are received.

Activities during the period:

- Murrayfield Tramstop Retaining Wall - Continuing the Preliminary Design of supporting structure to Murrayfield Tramstop
- Roseburn Street Viaduct - Continued with analysis of superstructure and preliminary steelwork setting out. Discussions on approval held with SRU.

- Murrayfield Stadium Retaining Wall - Comments from **tie** and CEC on draft Approval in Principle documents addressed. Approval in Principle document resubmitted to CEC for approval. Comments on Form A document received from Network Rail. Discussions on approval held with SRU.
- Murrayfield Underpass - Work restarted on design due to decision to continue with culvert type structure.
- Murrayfield Training Pitches Retaining Wall - Comments from **tie** and CEC on draft Approval in Principle documents addressed. Approval in Principle document resubmitted to CEC for approval. Comments on Form A document received from Network Rail. Discussions on approval held with SRU.
- Water of Leith Bridge - Letter received in response to options report produced subsequent to Design Approval Panel.
- South Gyle Access Bridge - Comments from **tie** and CEC on draft Approval in Principle documents addressed. Approval in Principle document resubmitted to CEC for approval. Commenced Detail Design of structure on analysis of bridge deck. Commenced drawing work.
- Bankhead Drive Retaining Wall - Comments from **tie** and CEC on draft Approval in Principle documents addressed. Approval in Principle document resubmitted to CEC for approval. Continued with analysis and detailed design of retaining structure till hold point. Awaiting information before can be restarted.
- Gyle Tramstop Retaining Wall - Draft Approval in Principle document submitted to **tie** and CEC for comment.
- A8 Underpass - Comments from **tie** and CEC on draft Approval in Principle documents addressed. Approval in Principle document resubmitted to CEC for approval. Initial work on analysis of structure commenced.
- Gogar Burn Bridge - Continued with analysis and detailed structural design of superstructure till hold point.
- EARL Overbridge - Continued with analysis and detailed structural design of superstructure till hold point.

Works completed during the period:

- Murrayfield Stadium Retaining Wall - Approval in Principle document reissued taking on board **tie** and CEC comments for formal approval.
- Murrayfield Training Pitches Retaining Wall - Approval in Principle document reissued taking on board **tie** and CEC comments for formal approval.
- Bankhead Drive Retaining Wall - Approval in Principle document reissued taking on board **tie** and CEC comments for formal approval.
- A8 Underpass - Approval in Principle document reissued taking on board **tie** and CEC comments for formal approval.
- Gogar Burn Bridge - Approval in Principle document reissued taking on board **tie** and CEC comments for formal approval.

Work planned for the next period:

- Murrayfield Tramstop Retaining Wall - Issue draft AIP document to **tie** and CEC for comment.
- Roseburn Street Viaduct - Continue Detail Design and drawings of deck structure. Obtain agreement from SRU with respect to pier layout at stadium entrance.
- Murrayfield Stadium Retaining Wall - Issue Form A document to Network Rail for approval.
- Murrayfield Underpass - Reissue AIP document to CEC for formal approval. Issue Form A document to Network Rail for comment. Obtain information on sewer through structure. Commence Detail design of structure.
- Murrayfield Training Pitches Retaining Wall - Issue Form A document to Network Rail for approval.
- Resolve flood wall issue.
- Water of Leith Bridge - Resolve "red" status of bridge from design Approval Panel through structures Charrette.

- Balgreen Road Area - Resolve status of bridge and adjacent wingwalls with respect to Network Rail concerns.
- South Gyle Access Bridge - Continue Detail Design and drawings of deck structure.
- A8 Underpass - Continue discussions with Service companies regarding diversions etc. Commence discussions on Traffic Management diversions for works.
- A8 Retaining Wall - Commence Detail design of Retaining Wall structure
- Depot Access Bridge - Resolve visibility issues. Commence Detail Design and drawings of deck structure.
- Gogar Burn Bridge - Continue Detail Design and drawings of deck structure
- EARL Overbridge - Continue Detail Design and drawings of deck structure

Work to be completed during the next period:

- Roseburn Street Viaduct - Approval in Principle document, reissued taking on board tie and CEC comments for formal approval.
- Murrayfield Underpass - Approval in Principle document, reissued taking on board tie and CEC comments for formal approval. Form A document to Network Rail for comment.
- Murrayfield Tramstop Retaining Wall - Approval in Principle document, issued for comment.

Issues:

- Delay to Ground Investigation means a number of the structures cannot commence Detail Design.
- Balgreen Road area still not resolved to enable progress of design of the bridge plus Baird drive wall.
- Design Approval Panel rejection of Water of Leith Underbridge
- Service diversions at A8 Underpass
- Traffic Management at A8 Underpass
- Improvements to A8 Retaining Wall design
- Response on CEC Murrayfield flood scheme
- Levels of sewer under Murrayfield Underpass
- Network Rail approvals
- Visibility issues at Depot Access bridge

Information required in the next period:

- Ground Investigation draft borehole logs
- Additional "gap" areas of topographical survey

6.2.6. Depot and Buildings

Activities during the period:

- Meeting with **tie** to confirm earlier briefing requirements has been held and changes have been introduced which have resulted in the Design development being put on hold until the following accommodation issues are resolved
- Confirmation of staff numbers to be accommodated
- Relocation of BAA runway to lift height restriction being investigated which may result in a redesign of Depot P-way
- Hazard Log update following last months review
- Consultations with the DNO electrical supplier commenced
- Up-dated Drawings for issue to Potential Contractors bidding the project completed including specification Documentation
- Agreement reached with **tie** on introduction of enclosed tram wash with dryer incorporated
- Progression of Detailed Design to access road
- Geotechnical Surveys underway
- Review of A8 retaining structure continues and Depot design held in part until impact on P-way is known

Works completed during the period:

- None

- External consultation (third parties)

Activities during the period:

- Continual consultations
- Interim IDC with structures
- Comments on MUDFA 'Partnering Room' strategy
- Identification of diversions to be deferred until Infracore
- Detail Design programming and resourcing
- Produce a Utilities activities status matrix
- Identification of work outside LOD
- Further meetings with MUDFA/tie/TSS

Works completed during the period:

- IDC responses
- EARL programming and resourcing
- Issue of design information for use by MUDFA Contractor
- Identification of trial pit requirements (Line 2)
- Detail Design programming and resourcing (for this period)
- Utility Diversion Strategy Paper

Work planned for next period:

- Continual consultations
- Detail Design programming and resourcing
- Interim IDC with structures
- Interim IDC with P'way
- Interim IDC with OLE foundation designers

Work to be completed during the next period:

- Detail Design programming and resourcing
- Interim IDC with structures

Issues:

- BT and Scottish Power feasibility studies may have an affect on programme.
- Charrette changes delaying progress on Line 1.
- Details of track slab construction required to determine extent of utility diversions.
- Detailed assessment of structures needed to determine scope for redesign to minimise utilities diversions.
- Client personnel displaying conflicting requirements from SDS.

Information required in the next period:

- Details of track slab construction. Standard OLE pole foundations and non-standard options

6.2.14. Site Investigations

Follow up from Previous Reports:

- Ground Investigation & Archaeological Investigation - New Ingliston Ltd will be approached week commencing 23rd October 2006 to gain full access to their lands from outwith the LOD
- Last month's action for resolution of Network Rail Contractor's Assurance Case with current GI contractor is resolved.
- Notifications to landowners SDS now no longer issuing notification letters.

Activities during the period:

- Roseburn structures.
- Phase 3 continuing; Phase 4 instructed to Loy.
- Started on site
- Geoarchaeological boreholes.
- Metal detection at Gogar to Airport
- Trenching investigations at Gogar to Airport

- Tree identification survey
- Survey of street furniture, fencing, signage etc
- Ground Investigation ongoing since 23rd August 2006

Works completed during the period:

- Roseburn structures (see issues)
 - Topographic 75% completed
 - Phase 1 – initial reconnaissance survey over full scope area using fast-pass scanning techniques
 - Geoarchaeological boreholes. Metal detection
 - Ecological - Trees 75% completed
 - Site Clearance off street sections
 - All locations except –
 - Network Rail
 - Red list contaminated areas
 - A8
- Total – 148no. locations out of 170no. total = 87%

Work planned for the next period:

- Leith Walk Overbridge
- Phase 3 and Phase 4
- Phase 2 & 3
- Trenching – NIL and RBS areas
- BAA and A8
- Tree identification survey
- Bat survey in trees and structures

Work to be completed during the next period:

- Leith Walk Overbridge
- Phase 3 and Phase 4 (completion of all topo)
- Phase 2 & 3 (completion of all topo)
- Trenching – NIL and RBS areas (completion of all trenching)
- Ground Investigation - BAA and A8
- Tree identification survey

Issues:

- Coltbridge Viaduct survey finished with only 25% production. Engineers to assess whether this is sufficient, or whether a return visit is required.
- Delays in three areas due to method statement difficulties – BAA, A8, 'Red' List contaminated sites.
- Delays to one area due to negotiation of access – Forth Ports.
- Delays to one area due to contractor capability – Network Rail. Alternative contractor being procured.
- Clarification required of contractual obligation to issue notification letters.

Information required in the next period:

- None to report

6.2.15. Roads and Traffic Management**Follow up from Previous Reports**

- Roads are currently progressing the Charrette and Detailed Design. The first stage of this work involves final resolution of the "red" issues with CEC and tie through the RDWG and providing the p-way team with guidance on any track realignment requirements.

Activities during the period

- Detailed Design 1A, 2A, 5A, 5C
- St Andrew Square Charrette – Await approval on option to take forward.
- Picardy Place Charrette – In progress

- Leith Walk Charrette – In progress
- Haymarket Charrette – In progress
- TRO: Completing Preliminary Design TRO plans.
- TTRO: Completing traffic management. Coordinating with modelling team to assess plans.

Works completed during the period

- Nothing to report

Work planned for the next period

- Roads: Continue to advance detailed design, and continue to advance Preliminary Design for Charrette options.
- TRO: No anticipated work.
- TTRO: Continue with traffic management plans, and liaise with MUDFA contractor.

Work to be completed during the next period

- Nothing to report

Issues

- Roads: From a design perspective we are progressing the design using the unofficial **tie** comments. We are not expecting further comments on the PD. Incorporation of more comments on the PD will compromise our ability to deliver to the programme.
- TRO: Programme is being revised based on anticipated receipt of finalised design drawings.
- TTRO: Traffic management plans require modelling output to inform CEC. It is understood that SDS modellers are leading this

Information required in the next period

- Nothing to report

6.2.16. Environmental**Follow up from Previous Reports**

- Archaeological trenching works are almost complete in the Gogar area excluding the areas we could not access. The tree survey has started in Roseburn corridor. We have also been involved in the costing of invasive species treatment and badger sett construction for advanced works. The design for artificial set construction is progressing.

Activities during the period

- Tree Survey underway.
- Drafting Archaeological Strategy for Line 1.
- Archaeological trenching continuing in section 7.
- Completion of Metal Detection and Landscape Survey.
- Badger Mitigation strategy for Roseburn Corridor.
- Inputting to risk register
- Preparing Infracore submission material.
- Providing information for advanced works costing.
- Preparing scope of work for Bat Survey.

Works completed during the period

- No deliverables

Work planned for the next period

- SNH approval for line 2 badger mitigation.
- Commence and complete Metal Detection and Landscape Survey.
- Prepare scope of work for Bat Survey.
- Metal Detection and Landscape Survey reports.
- Artificial badger sett design.

Issues

- No access to NIL to undertake archaeological trenches.
- Unable to undertake trenches adjacent to Gogar church due to RBS landscaping.
- Urgent input from landscape architect required to take LHMP forward. Time critical.
- Awaiting confirmation from **tie** on location of artificial sett on NIL land outwit the LOD.

Information required in the next period:

- None

6.2.17. Landscaping

Follow up from Previous Reports:

- Preliminary meeting held to co-ordinate Landscape works with the Report being prepared for the Roseburn corridor Environmental and Habitat Management Plan

Activities during the period:

- Meeting on site with the Tree Survey team has established defined scope of information required to establish the Arboriculture 'Balance Sheet'
- Input into Preparation of Habitat Management Plan

Works completed during the period:

- None: ongoing

Work planned for the next period:

- Further Input into Roseburn Corridor Environmental and Habitat Management Plan
- Meet with CEC Arboriculturist to agree format for Arboricultural 'Balance Sheet'
- Accommodation works at Murrayfield to be priced as change order to initial contract

Work to be completed during the next period:

- Agree Basis for Boundary Works Schedule
- Agree with CEC Arboriculturist Tree reference list – work not completed last month due to CEC rep not being available. Date now agreed

Issues:

- Landscape designs will commence following completion of Civils/Roads/P-way designs

Information required in the next period:

- Working arrangements needed with CEC to satisfy the approvals process – process in hand

7. PROCUREMENT

7.1. General

Bruce Ennion, continuing in a full time role within the **tie** tram team, has been working closely with the **tie** Design Manager in their selection, annotation and revision of the SDS Design Documentation required by **tie** to accompany the Infraco ITN.

Bruce also continues to support the **tie** procurement team, inclusive of TSS, and contributes to their production of the Infraco documentation.

Tony Goodyear, recently returned from accompanying the **tie** Tram Procurement Manager on a number of visits to factories and premises of the four Tram Bidders in Europe, is now actively involved in the review and assessment of the Tramco Tenders returned to **tie** on 16/10/06.

Alan Dolan continues to attend and contribute to Infraco/Tramco procurement process on an as required basis.

Kim Dorrington continues in his role of PB Detail Design Manager whilst also providing support and reviewing the technical documentation to be supplied for the Infraco ITN.

7.2. Activities

Work activities in direct contractual support to tie by Bruce Ennion.

- Continued review of the **tie** Employers' Requirements which have recently been updated and reformatted by **tie**/TSS.
- As mentioned above, a review of the SDS documentation to select those documents which are to accompany the Infraco ITN.
- Following receipt of comments, updating and finalising a number of **tie** Policy Documents.
- Enhancing a Schedule of Technical Particulars for inclusion in the Infraco ITN.
- Enhancing a Schedule of Responsibilities covering the three parties associated with the operational Tram System – Infraco, Transdev and Tramco.
- Speed read and comments of Infraco ITN.

Work activities in technical support to tie

- Alteration to all technical specifications documentation and drawings for Infraco ITN.
- Visits to Tramco factories with **tie** to give technical support to **tie** on Technical tram issues.
- The commencement of the review of the Tramco ITN which was opened on 19th October 2006.

7.3. Deliverables

- The issue of the Infraco ITN on 3rd October 2006 with a target supplementary issue in week ending 20th October 2006.

7.4. Issues

- None to report.

8. PROGRAMME

8.1. General summary of Progress

SDS have not received acceptance or comments on the V4 baseline detailed design programme submission made on 5 October 2006.

Weekly SDS/**tie** planning meetings are now in progress.

8.2. Actual Activities this Period

SDS Infraco documentation has been submitted to **tie** on time with minimum disruption to the master programme owing to SDS utilising alternative resources where ever possible.

8.3. Planned Activities this Period

Please refer to Appendix F for actual and planned submission for this and the next period

8.4. Planned versus Actual in the Period

SDS are not in a position to provide actuals prior to the end of the month. Timesheets have not yet been completed, input & validated in the Oracle timesheet system. Timesheets can only record actual data and not forecast data.

8.5. Planned Activities next Period

Please refer to Appendix F for actual and planned submission for this and the next period

Please refer to Appendix A for key Milestones for the next period

9. RESOURCES / MANPOWER

Please refer to Appendix B for the actual and planned hours.

10. FINANCIAL SUMMARY & CHANGE ORDERS

10.1. Change Notices

Please find below a list of Change Notices received by SDS as of the 27th October 2006

Tie Ref.	Date Received	Title	Date Issued to Tie	Response Received Date	Status as of the 27 th October
CNS001	31-01-06	Phasing of the construction of the Edinburgh Tram Project	14-03-06		SDS has re-submitted an estimate to tie on the 15th May 06. Tie proposes 971k – against the estimate of 635 – the value is to be agreed.
CNS002 / 008	20-02-06	Office Lease	13-03-06	22-06-06	Change Order COS008 has been issued and the change is closed.
CNS003 & CNS004	27-02-06	TTRO and TRO legal support	03-04-06		SDS has formally responded to Change Notice CNS003 in letter issued 3rd April 2006, stating its position. Tie confirmed in change meeting No #3 that it will withdraw the change notices.
5	27-02-06	Removal of provisional additional work.	14-03-06	22-06-06	Change Order COS005 has been issued and the change is closed.
6	23-03-06	Inclusion of EARL utilities	05-05-06		SDS has formally provided a revised Change Estimate as requested by tie. A decision is very critical in order to progress the Design.
7	23-03-06	Decrease in utilities scope - line 2	05-05-06		SDS has formally provided an SDS Change Estimate to tie on the 5th May 06. SDS has not received a response to this yet. However, it is understood that the change is superseded by CNS006.
CNB 1	23-05-06	Interchange design and cost/benefit	04-07-06	12-10-06	Part of Charrette Changes approved by letter ref 40.11.04. Dated 12 October 2006. Tie to issued Change Order.
CNB 2	08-06-06	CCTV arrangements	04-07-06	12-10-06	It is understood from tie letters that this work will be included in the InfraCo Contract as contractor design. SDS has already progressed some of the design and request that the cost incurred is reimbursed by tie.
CNB 3	08-06-06	PI arrangements	04-07-06	12-10-06	Tie has requested a revised estimate from SDS. SDS to provide.
CNB 4	08-06-06	Back office systems	04-07-06	12-10-06	It is understood from tie letters that this work will be included in the InfraCo Contract as contractor design. SDS has already progressed some of the design and request that the cost incurred is reimbursed by tie.
CNB 5	08-06-06	Inspector/ conductors	04-07-06	12-10-06	It is understood from tie letters that this work will be included in the InfraCo Contract as contractor design. SDS has already progressed some of the design and request that the cost incurred is reimbursed by tie.

Progress Report No. 14

CNB 6	08-06-06	Common ticketing	04-07-06	12-10-06	It is understood from tie letters that this work will be included in the InfraCo Contract as contractor design. SDS has already progressed some of the design and request that the cost incurred is reimbursed by tie.
CNB 7	23-05-06	Tramstop locations	04-07-06	12-10-06	Part of Charrette Changes approved by letter ref 40.11.04. Dated 12 October2006. tie to issued Change Order.
CNB 8	09-06-06	Princes St/ Leith Walk tramway alignment	04-07-06	12-10-06	Combined with Chnagne No 26
CNB 9	23-05-06	Branding	09-06-06	12-10-06	SDS believes that this change is withdrawn.
CNB 10	09-06-06	St Andrew Sq. alignment	04-07-06	12-10-06	Superseded by 10A.
CNB010A	19-07-06	St Andrew Sq. alignment	01-08-06	12-10-06	Part of Charrette Changes approved by letter ref 40.11.04. Dated 12 October2006. tie to issued Change Order.
CNB011	19-07-06	Shandwick Place stop	01-08-06	12-10-06	Superseded by CNS007 - Change No 18
CNB012	19-07-06	Princes St/ Leith Walk tramway alignment	01-08-06	12-10-06	Part of Charrette Changes approved by letter ref 40.11.04. Dated 12 October2006. tie to issued Change Order.
CNB013	19-07-06	Picardy Place tram road realignment	01-08-06	12-10-06	Part of Charrette Changes approved by letter ref 40.11.04. Dated 12 October2006. tie to issued Change Order.
CNB014	19-07-06	Leith Walk alignment confirmation	01-08-06	12-10-06	Part of Charrette Changes approved by letter ref 40.11.04. Dated 12 October2006. tie to issued Change Order.
CNB015	19-07-06	Foot of Leith Walk stop location	01-08-06	12-10-06	Part of Charrette Changes approved by letter ref 40.11.04. Dated 12 October2006. tie to issued Change Order.
CNS010	31-07-06	EARL- tram depot and stabling arrangements	18-08-06		Tie has requested named resources. SDS to provide
CNS011	31-07-06	EARL - bridge structure s33	18-08-06		Tie has requested named resources. SDS to provide
CNS013	31-08-06	EARL - ground investigation work	05-09-06		SDS to confirm value.
CNS009	05-07-06	Providing resource support to CEC			The change is understood to be cancelled.
CNS012	17-08-06	Risk register additional licence			Change estimate to be submitted
CNS017C	05-10-06	Revised Ocean Terminal Layout (OCT); Feasibility proposal for tram termination at OCT and future proofing to Newhaven;			
CNS019	16-10-06	Additional GI Scope for Granton to Newhaven Place			

10.2. Change Requests submitted by SDS

CRT001	15-05-06	New bridge over tramway at depot	16-05-06		SDS has formally submitted a Change Request the 16th May 06. SDS disagrees with tie's rejection of the change request and have responded accordingly.
CRT002	15-05-06	High level option at Baird Drive	16-05-06		SDS has formally submitted a Change Request the 16th May 06. SDS disagrees with tie's rejection of the change request and have responded accordingly.
CRT003	25-05-06	Procurement assistance to tie outside SDS scope.	25-05-06		Tie has certified 40k to Sep 06. tie to issued change order confirming the date to which the procurement support is required until.
CRT005/ CRT004	24-05-06	Modelling	15-08-06		

CRT004	24-05-06	Scope creep within CCTV system	30-05-06		Not part of SDS scope. No response received to CRT. SDS believes that this is now included in the InfraCo Design.
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Please refer to Appendix D for a copy of the External Change Tracking Log

11. INFORMATION REQUIRED

The table below indicates the overall position regarding Requests for Information (RFI's) submitted to **tie** for response:

Total RFI's Submitted	No RFI's Open	RFI's Closed	RFI's since report	Closed previous	New RFI's since previous report	Overdue		
						Under 1 week	1 to 4 weeks	Over 4 weeks
44	18	26	5		2	0	3	13

Please refer to Appendix H for a summary of Outstanding RFI's. **tie** should note that a large number are overdue by a significant amount of time, and we would ask that they take urgent action to rectify this situation.

We are continuing to formally advise **tie** on a 2-weekly basis of the RFI status.

APPENDICES

- Appendix A Key Milestones - Doc Ref ULE90130-SW-PRO-00010 V.4
- Appendix B Project Progress Summary - Doc Ref ULE90130-SW-PRO-00010 V.4
- Appendix C Labour Histograms / Manpower Histograms - Doc Ref ULE90130-SW
- Appendix D External Change Tracking Log - Doc Ref ULE90130-SW-SW-ADM-RRR-00001
- Appendix E Current CapEx Cost Estimate Summary Table - Doc Ref ULE90130-SW-PDF-00786
- Appendix F Submittal Programme and Deliverables Matrix - Doc Ref ULE90130-SW-SW-MAT-00009 V.13
- Appendix G Health and Safety Statistics - Doc Ref ULE90130-SW-PDF-00927
- Appendix H RFI Status Report - Doc Ref ULE90130-SW-RRR-00008 V.2

Appendix A: KEY MILESTONES

Appendix B: PROJECT PROGRESS SUMMARY

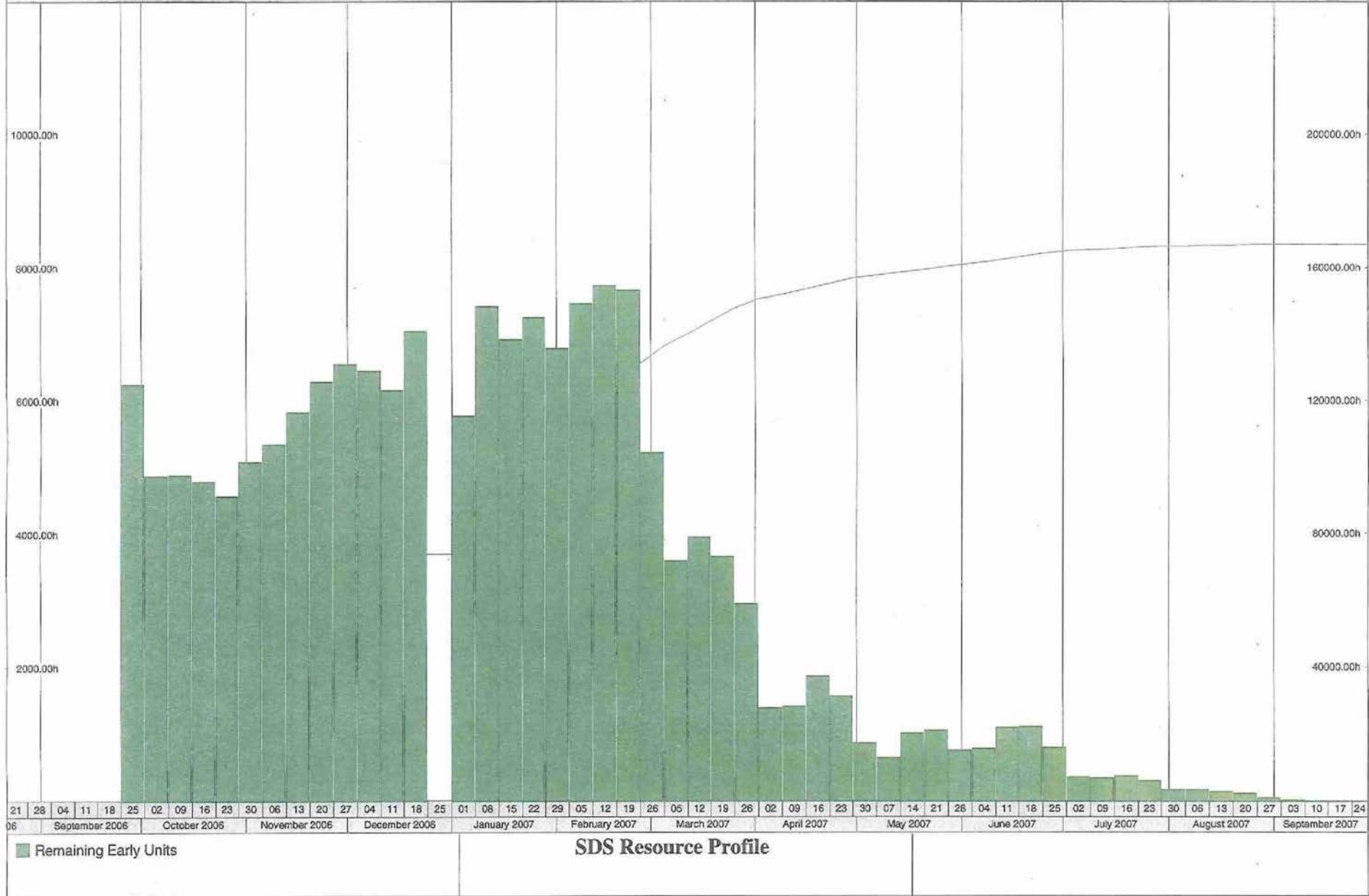
**ULE90130 SDS Edinburgh
Tram**

**SDS Detailed Design
Programme**

Activity ID	Budgeted Labor Units	Schedule % Complete	Performance % Complete	Actual Labor Units	Planned Labour Units	Earned Value Labor Units
Total	185244.32h	27.95%	16.72%	55189.45h	37163.72	27516.03h
TJ Track	5843.50h	28%	18.14%	2449.75h	1644.15	1022.56h
ST Street Lighting	1435.00h	10.94%	12.14%	565.50h	154.84	172.65h
ME Planning Drawings Management	3131.25h	12.61%	0%	0.00h	394.70	0.00h
IW Landscaping	1564.00h	0%	0%	0.00h	172.22	0.00h
AC Boundary & Accomodation	1875.00h	0%	0%	0.00h	0.00	0.00h
CO Cordoroy	960.00h	0%	0%	0.00h	256.44	256.44h
MO System Modelling	795.00h	0%	0%	24.00h	0.00	0.00h
JC Systems & Comms	4595.59h	25.81%	19.11%	1099.75h	1164.93	846.82h
QU Quill Stakeholder Management	1328.00h	27.4%	27.4%	432.00h	363.84	363.84h
PW Power	2612.00h	16.46%	11%	172.50h	379.74	303.80h
EMC EMC	465.00h	27.27%	0%	0.00h	126.82	0.00h
PROC Procurement Support	660.00h	46.09%	47.58%	371.05h	314.03	314.03h
MAN Management	36976.00h	34.79%	20.97%	10881.22h	12610.69	12353.15h
SE Systems Engineering	5199.00h	35.54%	35.54%	1455.00h	818.89	818.89h
NO Noise & Vibration	300.00h	0%	0%	0.00h	90.36	90.36h
FJ OLE	3120.45h	14.93%	11.28%	683.75h	395.65	258.47h
PM Structures	24737.50h	31.61%	16.5%	3850.93h	7867.53	3966.81h
DP Utilites	5266.44h	33.09%	24.39%	919.00h	1820.30	1250.40h
TA Track Auxillary	546.00h	35.54%	35.54%	208.50h	194.06	194.06h
C Configuration Mangement	321.50h	26.71%	26.71%	125.50h	85.88	85.88h
IB Architecture	24329.58h	14.78%	4.87%	1322.50h	3142.05	895.77h
Architecture	1781.25h	26.71%	38.57%	1025.00h	475.81	687.03h
Depot	8629.83h	29.11%	0.08%	69.00h	2376.08	7.65h
Tram Stops	11100.00h	0%	0.45%	94.50h	0.00	86.25h
Sub Stations	2818.50h	10.91%	3.76%	134.00h	290.15	114.84h
H Halerow	59183.51h	8.62%	7.37%	30628.50h	5166.61	4322.10h
Environmental	414.00h	100%	50%	90.00h	300.72	100.00h
Management	6935.00h	35.54%	35.54%	17362.00h	2464.85	2464.85h
TRO's	1261.00h	72.4%	61.3%	854.00h	913.00	773.00h
TTRO's	2440.00h	41.8%	23.24%	500.00h	1020.00	567.00h
Roads	24449.51h	0%	0%	7234.50h	0.01	0.01h
Utilites	2750.00h	0%	0%	0.00h	273.03	260.00h
Structures	20934.00h	1.01%	0.82%	4588.00h	195.01	157.24h

(P3e Direct Output)

Appendix C: LABOUR HISTOGRAMS / MANPOWER HISTOGRAMS



Appendix D: CHANGE CONTROL REGISTER

The Change No. (if Applicable)	Topic	Change Description	Originator	Change Request No.	Issue Date	Status	Change Notice No.	Issue Date	Date Received	Date Due	Excludes items which are not in the submittal rolling submittal	Change Estimate No.	Issue Date	Status	Change Order Number	Issue Date	Status	Comments
CS001	System & Control	GDV Arrangements	TEL	N/A	N/A	N/A	CRB002	06-Jun-06	03-Jun-06	26-Jun-06	Complete	CE5002	04-Jul-06	Complete				First issued to be 16th June
CS003	System & Control	PI Arrangements	TEL	N/A	N/A	N/A	CRB003	07-Jun-06	03-Jun-06	26-Jun-06	Complete	CE5003	04-Jul-06	Complete				First issued to be 16th June
CS004	System & Control	Back Office Systems	TEL	N/A	N/A	N/A	CRB004	07-Jun-06	03-Jun-06	26-Jun-06	Complete	CE5004	04-Jul-06	Complete				First issued to be 16th June
CS005	System & Control	Wspicker Conductors	TEL	N/A	N/A	N/A	CRB005	08-Jun-06	03-Jun-06	26-Jun-06	Complete	CE5005	04-Jul-06	Complete				First issued to be 16th June
CS006	System & Control	Control Tackling	TEL	N/A	N/A	N/A	CRB006	08-Jun-06	03-Jun-06	26-Jun-06	Complete	CE5006	04-Jul-06	Complete				First issued to be 16th June. Second issue 4th July. Third Revised estimate
CS007	Track Layout	Stop Locations	TEL	N/A	N/A	N/A	CRB007	19-May-06	23-May-06	10-Jun-06	Complete	CE5007	10-Oct-06	Complete				First issued to be 16th June. Second issue 4th July. Third Revised estimate - now combined with CE5014
CS008	Track Layout	Platform Street & Lethwith Tramway Alignment	TEL	N/A	N/A	N/A	CRB008	09-Jun-06	09-Jun-06	27-Jun-06	Complete	CE5008	10-Oct-06	Complete				Withdrawn by the 250906, as duplicate of work undertaken by EARL
CS009	Track Layout	Braking	TEL	N/A	N/A	N/A	CRB009	10-May-06	23-May-06	10-Jun-06	Complete	CE5009	09-Jun-06	Complete	N/A	N/A	N/A	Superseded by CE5010A
CS010	Track Alignment	St Andrew Square Alignment	TEL	N/A	N/A	N/A	CRB010	07-Jun-06	03-Jun-06	27-Jun-06	Complete	CE5010	04-Jul-06	Complete	N/A	N/A	N/A	First Issue 1st August
	Stop Location	Sharnock Place Stop Location	TEL	N/A	N/A	N/A	CRB011	03-Jul-06	19-Jul-06	06-Aug-06	Complete	CE5011	01-Aug-06	Complete				CapEx Cost to be issued to us
CS012	Track Alignment	Platform Street & Lethwith Tramway Alignment	TEL	N/A	N/A	N/A	CRB012	03-Jul-06	19-Jul-06	06-Aug-06	Complete	CE5012	10-Oct-06	Complete				First Issue 1st August
CS013	Track Alignment	Penny Piece Tram Road Realignment	TEL	N/A	N/A	N/A	CRB013	03-Jul-06	19-Jul-06	06-Aug-06	Complete	CE5013	10-Oct-06	Complete				First Issue 1st August
CS014	Track Alignment	Lethwith Work Alignment coordination	TEL	N/A	N/A	N/A	CRB014	03-Jul-06	19-Jul-06	06-Aug-06	Complete	CE5014	10-Oct-06	Complete				First issued to be 16th June. Second issue 4th July. Third Revised estimate - now combined with CE5008
CS015	Stop Location	Feet of Lethwith Stop Location	TEL	N/A	N/A	N/A	CRB015	03-Jul-06	19-Jul-06	06-Aug-06	Complete	CE5015	10-Oct-06	Complete				First Issue 1st August
CS016	Structure	Stabling Arrangements	EA	N/A	N/A	N/A	CNS016	28-Jul-06	31-Jul-06	18-Aug-06	Complete	CE5016	10-Aug-06	Complete				
CS017	Structure	EARL - Bridge Structure 533	EA	N/A	N/A	N/A	CNS017	28-Jul-06	31-Jul-06	18-Aug-06	Complete	CE5017	10-Aug-06	Complete				
CS018	Ground Investigation	EARL Ground Investigation Work	EA	N/A	N/A	N/A	CNS018	31-Aug-06	31/08/2006	18-Sep-06	Complete	CE5018	05-Sep-06	Complete				
	Noise	Noise Survey - JCAS	A. Dolan	01-CRT-00005	05-Sep-06	Complete												
	Noise	Noise Survey - NULAP	A. Dolan	02-CRT-00006	02-Sep-06	Complete												
	Train Alignment	New Edinburgh Ltd Proposed Development Levels	K. Shudell	03-CRT-00007	25-Oct-06	Complete												
	Utilities	Scottish Copal - Iony Dee & Parkside Design coordination	K. Shudell	05-CRT-00003	25-Oct-06	Complete												
	Geop/Barr	Geop/Barr Partnership report	K. Shudell	05-CRT-00004	25-Oct-06	Complete												

Appendix E: CURRENT CAPEX COST ESTIMATE SUMMARY TABLE

EDINBURGH TRAM NETWORK

OPTION: AIRPORT TO NEWHAVEN PLUS ROSEBURN TO GRANTON SQUARE

CURRENT COST STATUS

Date: Sep-06

Infraco

REF	WBS CODE	DESCRIPTION	FEASIBILITY UPDATE JUN '05	COST MODEL/COST CHECK FEB '06	Prelim Design Sept '06 (SDS Est Rev 8 Issue 2)
	B1	Track and Formation	57,705	64,330	56,876
	B2	Tram Stops	8,980	8,860	3,493
	B3	Depot	15,688	17,040	16,021
	B4	Highways	24,791	59,130	13,801
	B5	Buildings			1,347
	B6	Structures	23,110		20,652
	C1	Supervisory and Comms + Onboard Comms	7,455		10,821
	C2	Comms			
	C3	Tram Stop and Park & Ride Equipment			
	C4	Depot Equipment			
	D	E & P	19,328	49,330	19,583
		Prelims & Contractors Design	47,931		25,836
		Traffic Management			2,153
		Training / Spares			350
		Network Rail		5,800	
		Network Effect	1,000	1,000	
		Efficiency Saving	-10,000	-10,000	
		Errors in SDS Sheet			
			195,988	195,490	170,933

REQUIREMENTS DEFINITION APR '06 (SDS Est Rev 5)	PERIOD MOVEMENT
56,998	-122
3,385	108
14,372	1,649
24,509	-10,708
1,928	-581
37,439	-16,787
7,207	3,614
	0
	0
	0
19,894	-311
29,832	-3,996
1,225	928
350	0
	0
	0
	0
	0
	0
197,139	-26,206

COMMENTS
Reduction due primarily due to better understanding of the actual trackform types to be adopted. Therefore more certainty of cost.
Originally priced based on exemplar stop drawings. Actual arrangements now known.
Actual Depot building costs has reduced. Increase due to excavation costs of depot site being moved from Structures into this section.
Reduction due to prelim design giving more detail of works involved. Risk item should however be raised as volume quantities are based on assumptions not cross-sections. No cross-sections available at time of
Result of 1 Substation being deleted.
Reduction due to prelim design giving more detail of works involved. Risk item should be raised as the designs of most of the structures are not fully
Item increased after comparison checks were carried out against comparable projects.
Result of 1 Substation being deleted.
Reduction is a function of the reduced capital works above.

Appendix F: SUBMITAL PROGRAMME AND DELIVERABLES MATRIX

September 2006										October 2006										November 2006									
Section	Rev	Title	Document Type	No. of Dec'ngs	Planned	Forecast	Actual	Section	Rev	Title	Document Type	No. of Dec'ngs	Planned	Forecast	Actual	Section	Rev	Title	Document Type	No. of Dec'ngs	Planned	Forecast	Actual						
								DCG - ART (Section 7A)	FA	First Issue of DC to BUC's	DW3	0				DCG - ART (Section 7A)	FA	Issue Addressed Report Listing For	DW3	0			24-Nov-06						
								DCG - ART (Section 7A)	FA	REPORTS to Director & Members	RFP	1				DCG - ART (Section 7A)	FA	Issue Addressed Report Listing For	RFP	1			24-Nov-06						
								Original Single	FA	for DAT II	DW3	50				Original Single	FA	for DAT II	DW3	50			13-Nov-05						

Appendix G: HEALTH AND SAFETY STATISTICS

Table 1: RIDDOR Reportable Accidents

Employee Category	Period													FY06 Cumulative
	1	2	3	4	5	6	7	8	9	10	11	12	13	
PB Employee	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PB Associate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-contractor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Period Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2: Minor Accidents & Near Misses

Employee Category	Period													FY06 Cumulative
	1	2	3	4	5	6	7	8	9	10	11	12	13	
PB Employee	0	0	0	0	0	0	0	0	0	1	1	0	0	0
PB Associate	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Sub-contractor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Period Totals	0	1	0	0	0	0	0	0	0	1	1	0	0	0

Table 3: RIDDOR Reportable Dangerous Occurrences

Employee Category	Period													FY06 Cumulative
	1	2	3	4	5	6	7	8	9	10	11	12	13	
PB Employee	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PB Associate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-contractor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Period Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 4: RIDDOR Reportable Occupational Diseases

Employee Category	Period													FY06 Cumulative
	1	2	3	4	5	6	7	8	9	10	11	12	13	
PB Employee	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PB Associate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-contractor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Period Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 5: Lost Time (Hours)

Employee Category	Period													FY06 Cumulative
	1	2	3	4	5	6	7	8	9	10	11	12	13	
PB Employee	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PB Associate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-contractor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Period Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0

The above data were correct at: 29-Sep-06

Billy Johnston
Edinburgh Tram HSEQ Manager

ACCIDENT FREQUENCY RATES (AFR)

$$AFR = \frac{\text{Reportable Accidents}^*}{\text{Manhours}} \times 100000$$

ACCIDENT INCIDENCE RATES (AIR)

$$AIR = \frac{\text{Reportable Accidents}^*}{\text{No of Employees}} \times 100000$$

* RIDDOR Reportable Injuries, Diseases and Dangerous Occurrences

Period	1	2	3	4	5	6	7	8	9	10	11	12	13	Cumulative
AFR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
AIR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00

HEALTH & SAFETY AUDITS & INSPECTIONS

Period	1	2	3	4	5	6	7	8	9	10	11	12	13
Scheduled													
Undertaken													
Unscheduled													

Legend			
	PB	✓	Yes
	tie	x	No
	HSE		
	EHO		

PB & SUB-CONTRACTOR EMPLOYEES HEALTH & SAFETY INDUCTION

Period	1	2	3	4	5	6	7	8	9	10	11	12	13	Total
tie Induction	0	6	4	9	41	11	18	14	8	5	45	35		196
PB Induction	0	6	4	9	41	11	18	14	8	5	45	35		196

PERIOD DATES

Period	1	2	3	4	5	6	7	8	9	10	11	12	13
Period End Date	25-Nov-05	23-Dec-05	20-Jan-06	17-Feb-06	17-Mar-06	14-Apr-06	12-May-06	09-Jun-06	07-Jul-06	04-Aug-06	01-Sep-06	29-Sep-06	27-Oct-06

The above data were correct at: 29-Sep-06

Billy Johnston
Edinburgh Tram HSQ Manager

Appendix H: RFI STATUS REPORT

TIE RFI Status Report -

19/10/2006

Summary of RFIs Outstanding

RFI Number (Hummingbird Reference)	Description	Originator	Date Issued to Recipient	7 day notice due	7 day notice Received	Reply req'd by date	Days From Issue	Days Overdue	Comments
ULE90130-SW-SW-RFI - 00006	Request for Ground Investigation Reports	Simon Nelis	08/12/2005	15/12/2005		14/12/2005	315	309	
ULE90130-SW-SW-RFI - 00025	Clarification of Chainages on Line 2 STAG Drawings	Andy Kelland	08/12/2005	15/12/2005		14/12/2005	315	309	
ULE90130-SW-SW-RFI - 00029	Survey Data Control - Edinburgh Tram Link	Russell Cohen	09/02/2006	16/02/2006		14/02/2006	252	247	
ULE90130-SW-SW-RFI - 00030	Caledonian Ale House - Demolition	Russell Cohen	15/02/2006	22/02/2006		22/02/2006	246	239	
ULE90130-SW-RFI - 00001	Historical Drawings of Existing Balgreen Road Bridge	Colin Walker	09/03/2006	16/03/2006		16/03/2006	224	217	
ULE90130-SW-RFI - 00003	Development of Environmental Mitigation in the Roseburn Corridor	Louise Hill	16/03/2006	23/03/2006		23/03/2006	217	210	
ULE90130-07-RFI - 00003	Integrated Transport Hub at Airport	Mungo Stacy	16/05/2006	23/05/2006		21/05/2006	156	151	
ULE90130-03-RFI - 00001	Relocation of Footway on Coltbridge	Colin Walker	08/05/2006	15/05/2006		15/05/2006	164	157	
ULE90130-SW-RFI - 00014	Road Works Beyond LoDs	Russell Cohen	04/08/2006	11/08/2006		08/05/2006	76	164	
ULE90130-SW-RFI - 00018	Side Agreements & Undertakings	Kevin Perry	27/06/2006	04/07/2006		04/07/2006	114	107	
ULE90130-SW-RFI - 00028	Run Time Simulation Scope	Andy Kelland	10/07/2006	17/07/2006		10/07/2006	101	101	
ULE90130-01-RFI - 00004	Bridges in Line Section 1A - Health and Safety File (As-built Drawings)	Colin Walker	27/07/2006	03/08/2006		15/08/2006	84	65	
ULE90130-03-RFI - 00002	LOD/Land available adjacent to Crewe Toll Stop	Paul Wilson	24/08/2006	31/08/2006		30/08/2006	56	50	
ULE90130-SW-RFI - 00054	Original Runtime Models	Michael Blundred	14/09/2006	21/09/2006		29/09/2006	35	20	
ULE90130-05-RFI - 00003	WEBS Condition survey and design info	Kate Shudall	21/09/2006	28/09/2006		06/10/2006	28	13	
ULE90130-01-RFI - 00005	Forth Ports Agreement Clarification	Scott Ney	25/09/2006	02/10/2006		29/09/2006	24	20	
ULE90130-05-RFI - 00005	Roseburn Street Demolition A&U	Mungo Stacy	06/10/2006	13/10/2006		31/10/2006	13		
ULE90130-03-RFI - 00004	Editable Version of LHMP	Louise Hill	10/10/2006	17/10/2006		23/10/2006	9		