

Edinburgh Tram Network

Progress Report No.18

Doc Ref: ULE90130-SW-REP-00396 V1

February 2007

28 February 2007



*Parsons Brinckerhoff Ltd
Edinburgh Tram Network
SDS Provider
CityPoint
1st Floor
65 Haymarket Terrace
Edinburgh, EH12 5HD*

*Telephone: 44(0) 131 623 8600
Facsimile: 44(0) 131 623 8601
Email: edinburghtram@pbworld.com*

02 March 2007

CEC01684866_0001

AUTHORISATION PAGE

Title: Progress Report No. 18				
Approvals	Name	Position	Signed	Date
Author	Jason Chandler	Project Manager		02 March 07
Reviewer	Jes Hansen	Project Controls Manager		02 March 07
Approver	S Reynolds	Project Director		02 March 07

Revision History

Ver No	Date	Description	Prepared By
1	02 March 07	Final Version	Claire Paterson

Distribution

Ver No	Date	Name	Role	Company
1	02 March 07	Ailsa McGregor	Contract Representative	tie

CONTENTS

1.	EXECUTIVE SUMMARY	4
1.1.	General summary	4
2.	PROGRAMME	5
2.1.	General summary of Progress	5
2.2.	Planned versus Actual in the Period	5
2.3.	Planned Activities next Period	5
3.	CRITICAL ISSUES	5
4.	CONSENTS AND APPROVALS	8
4.1.	Activities	8
4.2.	Key Issues	8
4.3.	Forecast	8
5.	DESIGN	8
5.1.	General Status in the period	8
5.2.	Activities	9
6.	CHANGE NOTICES	26
6.1.	Change Notices received by SDS as of the 22nd December 2006	26
6.2.	Change Requests submitted by SDS as of 22 nd December 2006	Error! Bookmark not defined.
7.	HEALTH AND SAFETY	26
7.1.	General	26
7.2.	Activities this period	27
7.3.	Deliverables for next period	27
8.	RESOURCES / MANPOWER	27
9.	INFORMATION REQUIRED	27
	APPENDICES	29
	Appendix A: KEY MILESTONES	30
	Appendix B: PROJECT PROGRESS SUMMARY	31
	Appendix C: LABOUR HISTOGRAMS / MANPOWER HISTOGRAMS	32
	Appendix D: CHANGE CONTROL REGISTER	33
	Appendix E: CURRENT CAPEX COST ESTIMATE SUMMARY TABLE	34
	Appendix F: SUBMITAL PROGRAMME AND DELIVERABLES MATRIX	35
	Appendix G: RFI STATUS REPORT	36

1. EXECUTIVE SUMMARY

1.1. General summary

The overall progress for whole Project is xx% complete. Progress for the Detailed Design stage is xx% complete.

2. PROGRAMME

2.1. General summary of Progress

2.2. Planned versus Actual in the Period

2.3. Planned Activities next Period

3. CRITICAL ISSUES

Commercial

Design

Section 1

- Issues Arising from Design Approval Panels for Constitution Street and revised TEL requirements.
- **tie** response to resolution of RED issues letters provided by SDS.
- Forth Ports coordination and way forward with issues / comments in Section 1A.
- Section 1A Bridges – Change notice and betterment issues.
- Utilities solution along Constitution Street
- Location of Leith Walk substation.
- Change of concept for Cathedral Substation site.
- Impacts of charette requirements and comment in Utilities design.
- Impacts of comments on charettes to traffic modelling.
- Impacts of charette ways forward on existing third party agreements.
- Building Fixings programme and way forward.
- St. Andrew Square coordination with Capital Streets and MUDFA

Section 1

The main focus of activities in Line Section 1 has focused on the resolution of RED issues. The Roads Design Working Group meetings on 08 and 22 February presented several of the outstanding RED issues in Section 1. SDS believes that most of the outstanding technical RED issues raised by CEC for Section 1 now have a way forward. There is one remaining RED resulting from TEL (item 1 below). SDS is developing an information packet for submittal to **tie** to resolve this issue. However, SDS continues to await formal response and signoff of the RED issues from **tie** indicated below (and as submitted to **tie** under letter ULE90130-LET-01-00058:

- Along Constitution Street TEL have introduced a request / requirement to not preclude two-way bus provision on Constitution Street and through the stop.
- Along Leith Walk, CEC have indicated that there is insufficient parking / loading and pavement widths provided. (discussed at 30 January meeting)
- At Picardy Place, CEC have indicated that they require more detail on the design and operations, and several revisions to the kerb layouts are required. (discussed at 30 January meeting)
- At St. Andrew Square, CEC have changed their preference to a layout that differs from the one directed to SDS in the Planning Summit meetings. SDS received CEC letter from **tie** on 12 January. SDS provided response to **tie** on side platform issues on 29 January (ULE90130-01-LET-00091)
- On Princes Street, CEC have expressed that the loss of pavements on the north side of the street is unacceptable. The available solution is in direct conflict with the

requirements of the Tram Design Manual for linearity along Princes Street. SDS await confirmation from **tie** that it is acceptable to deviate from the Tram Design Manual to accommodate this request by CEC.

- At Shandwick Place, CEC and TEL have introduced a new requirement for bus passing trams at the stop that was not previously noted in the Preliminary Design comments or in the charette requirements. (discussed at 30 January meeting)

The issues noted above will have a direct impact on all of the utilities designs in these areas. Of specific concern is Constitution Street, where there is already limited space, and additional space constraints will only compound the complexity and cost of the solution. TEL has also changed their requirements since making the original comments, and are now looking to provide provision for buses along Constitution Street for buses at the opening of the tram system, which is in conflict with previous guidance provided. Additionally, the comments received will also fundamentally impact the traffic modelling inputs.

On 16 February, SDS met with **tie**, CEC and Forth Ports to go through the emerging designs. At this meeting, Forth Ports introduced several issues that are in conflict with the Forth Ports agreement (i.e. Ocean Terminal) or where they wish to perform works in advance that were not previously identified (Lindsay Road connector). **tie** and CEC appear to be willing to accept the Forth Ports requests. SDS is awaiting additional information from Forth Ports and the associated change notice from **tie**. At a recent coordination meeting on 04 December, Forth Ports indicated that they have concerns with the designs, specifically in the area of Lindsay Road, where Forth Ports have a project planned to change the road layout. As SDS are designing based on the information currently available, and in accordance with the Forth Ports agreement. Forth Ports, to date, has not provided any detailed information to SDS in order to allow a detailed check on the compatibility of the two projects. Additionally, there are works within the Forth Ports area that require works to be undertaken outside the Limits of Deviation. SDS need formal clarification from **tie** that this is acceptable and have queried through RFI. The response received on 25 January did not provide the required confirmation. The most critical items that fall out of this work is the bridges along Ocean Drive, where CEC comments on the PD require that standard footpaths are provided on both sides of these bridges to bring them to an adoptable standard. SDS submitted a letter to **tie** on 16 January (ULE90130-01-LET-00081). As SDS did not anticipate this work initially (it was not shown within the Parliamentary Plans) and is required to be completed as part of construction by others, there is an issue of betterment to be addressed. Additionally, as outlined in the Forth Ports agreement, these works were to be undertaken by Forth Ports. This will also require additional investigations on site to accomplish. SDS is awaiting formal direction from **tie** associated with the betterment issues associated with the two bridges in Section 1A.

SDS continues to await response from SUCs on the proposals in the Constitution Street area for all utilities. This issue may impact areas outside the LODs and has required SDS to split Section 1A into 2 areas with respect to the utilities design.

SDS requires input from CEC on the resolution of locating the Leith Walk substation within the property. The RED received cannot be resolved without those inputs if the substation is to be located within the building footprint. SDS has provided five alternatives to CEC for consideration and is awaiting feedback as to the preferred alternative.

On 06 February, SDS received confirmation from CEC that they require a change to the Preliminary Design concept, requiring a complete re-layout of the site. This has delayed the commencement of the Informal Consultations, and was advised to **tie** on 08 February 2007 (ULE90130-01-LET-00122).

SDS has participated in several coordination meetings with CEC for the Capital Streets project at St. Andrew Square. There appears to be a desire amongst **tie** and CEC to rework the contract where this work will be performed. SDS awaits instruction from **tie** on how this will be moved forward.

SDS is working through the Building Fixings approval process. CEC have asked SDS to evaluate several alternative locations for building fixings. Additionally, the current programme for approvals and consents will require SDS to provide 2 designs (fixing and pole) for these locations in order to be able to minimise the risks associated with the stakeholder approvals.

SDS has proposed a way forward to help mitigate risk to the designers and expedite movement into Detailed Design under letter on 08 December 2006 (ULE90130-SW-LET-00400). Formal response from **tie** is required.

Section 3

2.

Section 5

- Balgreen Road - need resolution between SDS/**tie**/Network Rail over solution to be taken forward. Issues presented to HMRI on 26/02/07. Letter issued to **tie** on 12/02/07 requesting instruction over the alignment to take forward. Delaying design and Approvals of section 5A track and structure designs and Balgreen Road tramstop/substation.
- Edinburgh Park Station Bridge – confirmation that an acceptable preliminary design has been achieved is still awaited from CEC and **tie**. Meeting with CEC held on 23/02/07 but was inconclusive as the City Design Champion was absent. Detailed design will not commence until this is resolved.
- Edinburgh Park Station Bridge OLE configuration – SDS have issued a letter to **tie** 19/01/07 with request for 'Red' to be removed
- Carrick Knowe Bridge – **tie** / CEC to resolve inclusion of footpath / cycleway following comments made at meeting held on 23/02/07. Bridge currently being designed without footpath, as per SDS letter dated 5/02/07.
- **tie** to finalise and sign legal agreement with SRU. Revised Accommodation works and SRU Cross Sections have been re-issued to **tie** and SRU as requested on 29/01/07.
- CEC Flood scheme at Murrayfield, SDS require instruction from **tie** about whether to include flood wall in embankment design. Holding up section 5A structure design.
- South Gyle Stop relocation – letter sent to **tie** for confirmation that Red can now be lifted 19/01/07.

Section 7

- Eastfield Avenue bridge replacement – SDS require formal revised Change Notice 018 to enable estimating and design work to commence. Holding up structures design at Airport.
- Gogar Badger Sett – **tie** are in liaison with RBS to confirm whether an artificial sett can be built on their land. This agreement needs to be formalised via letter from RBS. Impact on SDS design programme and Advanced Works programme.
- RBS Section 75 agreement – RBS architects to confirm Design Brief for Stop. Impact on programme for Stop design – letter sent to **tie** 10/01/07 requiring confirmation from **tie** that proposed revised programme is acceptable.
- Culvert no.3 design requirements for flood compensatory storage – design is in delay. Further modelling to be carried out to advance Approvals with CEC as there is insufficient land within the limits of the NIL agreement for Compensatory Flood Storage.
- Newbridge Branch future provision design – letter sent to **tie** for confirmation that Red can now be lifted 14/12/06.

Depot

4. CONSENTS AND APPROVALS

4.1. Activities

- Review of prior approvals submissions and contributing planning guidance on the accompanying design statements;
- Monitoring of the prior approvals programme and submissions and the Tracker to assist with reporting and re-programming;
- Fortnightly meetings with CEC Planning Officers to resolve issues related to pilot Prior Approvals submissions;
- Assisting in the work of the Tram Design Working Group (TDWG) and implementing the programme & assisting with presentations when requested by the Design Delivery Manager;
- Advising the Stakeholder Managers on consultation, Agreements and Undertakings;
- Supporting, liaising and working with Section Design Managers (SDMs) and Design Team Leaders (DTLs) on planning matters;
- Attendance at weekly Section Design Manager meetings to assist in co-ordination between SDMs and DTLs;
- Advising on the implementation and co-ordination of the LHMP.
- Ongoing review of planning risks.

4.2. Key Issues

- Issues of detailed planning versus procurement continues to be an issue that requires resolution with CEC through ongoing liaison and meetings;
- Urgent need to agree on standard tram stops and features as part of Prior Approvals submissions in advance of the INFRACO contract.
- There is a need for the Approvals Tracker to advise reprogramming and co-ordination so that slippage can be re-prioritised and risk minimised;
- A greater emphasis is likely to be placed on Urban Design and this will require additional SDS resources to service the planning statements;
- Building fixings strategy is not yet adopted by tie – also issues regarding legal support for the implementation of preferred designs poses a problem for SDS in terms of approvals from CEC;
- Meeting to review the final production of Planning Drawings remains outstanding.

4.3. Forecast

- Continued co-ordination of planning submissions from the SDS team and assistance in integrating DTL activities.
- Ongoing support for the Tram Design Working Group programme.
- Regular cycle of liaison and consultation with CEC.
- Attendance at the weekly SDM meetings to resolve outstanding design issues and review the Approvals Tracker.
- Ongoing IDC meetings.

5. DESIGN

5.1. General Status in the period

Section 1

Section 3A (Roseburn Corridor)

Section 3B (Pilton)**Section 3C (Granton)****Sections 5 and 7 (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. The outstanding items are South Gyle stop, Edinburgh Park Station Bridge and Newbridge Branch which still have 'Red' status – see above.

Obtaining an agreement from Network Rail over the Balgreen Road access road is critical for the design work.

Obtaining an agreement with CEC over Culvert 3 design and flood mitigation remains critical.

5.2. Activities**5.2.1. 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:

- Trackwork & System Wide
- Production of final Typical Tramway Cross Sections and associated Tramway Category Plans.
- Wheel-rail interface study
- Continue development of trackforms.
- Continue trackwork specification.
- Continuation of track-structures design coordination - assessment of trackforms, requirements for rail movement joints and derailment containment.

Track Alignment

- Continuation of design development of 'Charette' changes, subject to decisions by tie and CEC following review and the PD DAP for Sections 1A, 1B, 1C, 1D.
- Detailed design of curves at junction of North St Andrew Street and Queen Street/York Place for the purpose of establishing the most critical part of the alignment on the whole route. Needed to enable the tram vehicle tenderers/selected supplier to confirm that their vehicle(s) are capable of negotiating the critical cant gradients or to advise otherwise (see issue 1 below).
- 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.
- Commence IDC of final track alignment design in Section 5B.

Works completed during the period:**Trackwork & System Wide**

- Production of final track alignment criteria and issue to tie.
- Addressing of tie comments on Guard Rail drawing and re-issue of the same to tie.

Track Alignment

- Re-design of Section 1A: revise alignment to incorporate PD comments [on roads design] and handover of same to Roads Design Team.
- Issue of Section 3A track alignment design drawings to tie for approval.
- Revision of track alignment in Section 3B to match roads vertical alignment and handover of same to Roads Design Team.
- Revision of track alignment in Section 3C to incorporate road traffic modelling changes and handover of same to Roads Design Team.
- Issue of Section 5A vertical track alignment design drawings to tie for approval.
- Revision of track alignment in Section 5B to match roads vertical alignment and handover of same to Roads Design Team.
- IDC of final track alignment design in Section 7A.
- Issue of Section 7A track alignment design drawings to tie for approval.

Work planned for the next period:

Trackwork & System Wide

- Continue wheel-rail interface study.
- Continue development of trackforms.
- Continue trackwork specification.
- Continuation of track-structures design coordination - assessment of trackforms, requirements for rail movement joints and derailment containment.

Track Alignment

- Continuation of design development of 'Charette' changes, subject to decisions by tie and CEC following review and the PD DAP for Sections 1A, 1B, 1C, 1D.
- Detailed design of curves at junction of North St Andrew Street and Queen Street/York Place for the purpose of establishing the most critical part of the alignment on the whole route. Needed to enable the tram vehicle tenderers/selected supplier to confirm that their vehicle(s) are capable of negotiating the critical cant gradients or to advise otherwise (see issue 1 below).
- 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.
- Continue design of Section 6 (depot) Dependent on confirmation of position and level of depot.
- 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.

Work to be completed during the next period:

Trackwork & System Wide

- Issue final Typical Tramway Cross Sections and associated Tramway Category Plans to tie for approval.

Track Alignment

- Address comments by tie on Section 1A issue for approval and incorporate as appropriate in re-design of 1A. Dependent on receiving comments from tie.
- Re-design of Section 1A: revision of track alignment to match roads vertical alignment and handover of same to Roads Design Team. Dependent on progress with roads design (see issue 2 below).
- Revision of track alignment in Section 1B to incorporate PD comments and handover of same to Roads Design Team. Dependent on progress with roads design (see issue 2 below).
- Revision of track alignment in Section 1D to incorporate PD comments and handover of same to Roads Design Team. Dependent on progress with roads design (see issue 2 below).
- Address comments by tie on Section 2A issue for approval and re-submit to tie. Dependent on receiving comments from tie.
- Revise alignment in Section 2A if required to allow for the new boundary with the Network

Rail Haymarket station Platform 0 infrastructure. Dependent on receipt of instruction and information (see below) for fence line around new NR Haymarket station Platform 0 infrastructure.

- Address comments by tie on Section 3A issue for approval and re-submit to tie. Dependent on receiving comments from tie.
- Address comments by tie on Section 5A issue for approval and re-submit to tie. Dependent on receiving comments from tie.
- IDC of final track alignment design in Section 5B.
- Issue of Section 5B track alignment design drawings to tie for approval.
- Address comments by tie on Section 5C issue for approval and re-submit to tie. Dependent on receiving comments from tie.
- Address comments by tie on Section 7A issue for approval and re-submit to tie. Dependent on receiving comments from tie.

Issues

- A major consideration for the project remains the ability of the tram vehicle to negotiate the areas of critical track alignment (cant gradient) on the Network. This needs to be addressed: specifically the tram vehicle tenderers/supplier must demonstrate that the issue is fully understood and that the vehicle is capable of negotiating the critical alignment.
- Continuation of alignment design in Sections 1A, 1B, 1C and 1D will be subject to progress with the roads design in accordance with the revised programme (V11) for Section 1 roads and track alignment design.

Information Required in the Next Period:

- Decision on access requirements for Network Rail between Balgreen Road stop and Water of Leith bridge.
- Survey and Network Rail as-built drawings for fence line around new NR Haymarket station Platform 0 infrastructure.
- Advice on progress with the tram vehicle procurement process, in particular when the short-listed tenderers or selected supplier will be in a position to demonstrate their understanding of the critical track alignment criterion (cant gradient), and to confirm (or advise otherwise) that their vehicle complies with this criterion.

5.2.2. Tram Systems

Follow up from Previous Reports:

- Technical evaluation of bids from tram suppliers completed

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 (ongoing-waiting change instructions from tie)

Work planned for the next period:

- Revision of Tram Requirements Specification, Tram Interface Specification.
- Evaluation of final Tramco bids

Information required in the next period:

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

5.2.3. Systems Controls and Communications

Follow up from Previous Reports:

The following item requires actions from tie

- Closure of SCC PD client comments (for last 5 periods)
- Formal feedback on Propagation Modelling

- SCC RFIs need progressing

Activities during the period:

- Revisited – Typical overview displays
- Progressed Radio issues
- Progressed CCTV
- Progressed PA
- Progressed Integrated Equipment Cubicle issues with tie
- Planed ODN activities and actions commenced
- Input to various IDCs
- Ongoing cable route liaisons
- Progressed sub-station interface items

Works completed during the period:

- Resolved Mass
- Tram space issues
- Revised modelling brought about by Castle site

Work planned for the next period:

- Revisit – Typical overview displays since client's view have changed
- Progress TPDS Design Text
- Progress Radio designs
- Progress CCTV
- Progress PA
- Progress SCADA
- Progress ODN issues
- Continue to chase inputs to SCC design
- Review SCC hazard log and actions resulting
- Review SIL Methodology Document

Issues:

- Formal feedback on Propagation Modelling required from tie as it may NOT have been declared as a formal deliverable.
- Client is now raising that there may be a requirement for hand portable coverage inside the Tram – currently outside SDS scope.
- Still need formal responses to RFIs submitted on:-
- Roseburn Corridor Pumps (ULE90130-03-RFI-00029)
- CCTV Interoperability with CMF (ULE90130-SW-RFI-00060)
- CEC radio sites (ULE90130-01-RFI-00059)
- Radio Communications Inside Tram (ULE90130-SW-RFI-00083)
- Monitoring of CCTV by Central Monitoring Facility ULE90130-SW-RFI-00090
- Induction loop coverage of platforms
- SCC are designing for a "Line of Sight" Tram Signalling System (Tram Position Detections System) which has a low Safety Integrity Level (SIL).
- SDS need to ensure that implications of speed limits across points within off-street sections are well understood both within SDS and tie, and modelling works undertaken. Impact of changing to a higher SIL Signalling system is beyond current SCC scope.
- Delays in Track and Roads outputs will impact upon SCC timescales

Information required in the next period:

- Closure of SCC PD client comments
- tie buy-in to the PB Propagation Modelling report and proposed sites
- Responses to all RFIs

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

- Revised alignment information received for Section 3A, 5A, 7C.

- Received TIE letter of confirmation to proceed with Preliminary Design with Edinburgh Park Station Bridge, Coltbridge Viaduct, Craighleith Drive and Carricknowe Underbridge.
- Currently participating in further preliminary design for Edinburgh Park Station Bridge, Coltbridge Viaduct and Carricknowe Underbridge despite the receipt of the formal letter from tie to proceed into detailed design.

Activities during the period:

- Revision of drawings and documents in accordance with Technical Approval Authority comments (CEC and Network Rail) to obtain approval in principle for design submissions.
- Update structures drawings to latest track form details and revised alignment.
- Progressing structural design of several structures in accordance with project programme.
- Assisted with badger mitigation proposals in the Roseburn Corridor.

Works completed during the period:

- HMRI discussion document issued to HMRI for comment.
- Completion of final Condition Survey and subsequent issue of report for Leith Walk Railway bridge
- Received signed AIP documents from CEC and issued to tie for record purposes.
- Participated in informal consultation with TAA on several structures.
- Participated in informal consultation with CEC Planning for several structures within the Roseburn corridor.

Work planned for the next period:

- Continue detailed design for structures.
- Undertake IDC (inter disciplinary check) for Structures in accordance with design programme.
- Seek acceptance/approval of Preliminary Design for Edinburgh Park Station Bridge, Coltbridge Viaduct and Carricknowe Underbridge from CEC Planning.

Work to be completed during the next period:

- Detailed design in accordance with project programme.
- Resolution of outstanding issues with Technical Approval authority to obtain closure of outstanding AIP documents.

Issues:

- Roseburn Terrace Bridge – Design for this structure is well advanced in accordance with the project programme. However, following detailed assessment of the structures impact on the existing substructures, we require an amendment to alignment to minimise the potential impact. Awaiting confirmation from SDM that it is possible. Furthermore, significant re-alignment of the track at the adjacent tramstop is proposed to improve runtime. It would significantly impact the delivery this item within programme. SDM instruction is awaited
- Coltbridge Viaduct – Having received TIE's recent letter instructing us to proceed to Detailed Design with the Preliminary Design, we are incorporating comments proposed by PB Placemakers. SDM shall submit a letter to tie with an updated AIP drawing to confirm our design. However, we are now engaged in further discussions with CEC planning to endeavour to achieve some form of acceptance of our design.
- Tower Place & Victoria Dock – Following receipt of an instruction to stop work by the relevant SDM we are not progressing the detailed design. We have, to date, provided the necessary cost information and technical support to the current change control and await further instruction.
- Haymarket Station Viaduct– Design for this structure is well advanced in accordance with the project programme. However, significant re-alignment of the track is proposed to allow an additional traffic lane within Haymarket Terrace. It would significantly impact the delivery of this item within programme and would result in significant abortive work. Three options for re-alignment of the steps have been provided to Ian Brown who is now tasked with presenting them to the various parties involved to confirm an acceptable arrangement. Consequently, the completed reinforcement details for this structure have not been passed to the checker on the instruction of the SDM. SDM instruction is awaited

regarding issue of these reinforcement details.

- Lindsay Road – Currently awaiting revised alignment which has been delayed due to Road/P-way interaction with Forth Ports.
- Saughton & Broomhouse – Significant delay in receiving a track cross section over these structures has delayed the IDC issue.
- Carricknowe Underbridge – Structure is proceeding based upon the revised skewed alignment to accommodate the 30 km/h alignment with no provision for the pedestrian footway as previously discussed. Please note, that as of 23.02.07 CEC (Duncan Fraser) acknowledged that they had instructed tie to include the additional footway within our design. No such instruction has been received. We await clear instruction. Furthermore, the outcome of the discussions with CEC planning may have a negative impact on the current design. Their requirements are still not clear. Further discussions with them are planned.
- Edinburgh Park Station Bridge – As noted above, we are involved in further preliminary design to endeavour to achieve acceptance from CEC Planning. Revised alignment now received, however, the revised alignment varies considerably from the PD alignment and all analysis work associated with the PD is now abortive.
- Gogarburn culverts – The AIP for these structures is currently being held by Alvin Barber of CEC Flood Prevention who is refusing to sign off the document. Consequently, we are unable to undertake the design of these structures. Imminent resolution of the flooding issue with CEC is required to maintain programme.
- Gogarburn retaining walls – EARL details have now been received together with revised alignment. Currently assessing the impact on our preliminary design and programme.
- Roseburn Corridor Retaining Wall - These structures are currently detailed with a 300mm offset from the DKE to the 3 m footway. The current Demarcation Report has increased this to 500 mm, this will result in significant rework of these structures plus all the bridges along the corridor. Clarification/instruction regarding any increase in separation is requested.
- OLE loadings – Outstanding loading information for the OLE bases is now critical. Several requests have been made, and despite promises of imminent delivery, no information has been provided. This information, when provided, may result in rework of the structural design of several structures with advanced design (e.g., Haymarket Viaduct).
- Issue of outstanding alignment information as noted in the '*Track - Structures coordination summary table*'.

Information required in the next period:

- See above.

5.2.5. PB Structures

Follow up from Previous Reports:

- In respect of Ground Investigation, draft factual GI report has now been received and is in the process of being reviewed. It should be noted though that this does not fully constitute all information received therefore whilst detail design can be commenced in most instances, it cannot be fully completed until the Interpretive Report is received. The GI for the area along the Network Rail embankment has now been commenced and the first batch of draft engineering logs received. Some concerns with respect to the adequacy of the GI have been expressed by the PB Structures team.
- Most areas of "gap" topographic survey now received. Very slow in receiving this information requested back in May 2006.
- Still awaiting formal sign off on a number of issues including RFI issued on Gyle Tramstop Retaining Wall. RFI response received on A8 Retaining Wall, although some concerns raised on content of response from tie.
- Structure investigation works procurement ongoing. Prices received from subcontractors and favoured contractor has lowest price.

Activities during the period:

- Murrayfield Tramstop Retaining Wall - Detail design continuing albeit without GI information.
- Roseburn Street Viaduct - Continuing with analysis and structural design of superstructure and preliminary steelwork setting out. Interaction of structure with accommodation works for Murrayfield Stadium drawn up which amended some issues with respect to pier locations. Discussions with Stats team on 132kV power cable in verge of Roseburn Street.
- Murrayfield Stadium Retaining Wall - Interaction of structure with accommodation works for Murrayfield Stadium drawn up. Detail design continuing albeit without GI information.
- Murrayfield Underpass - Awaiting response on Form A document issued to Network Rail for Approval. Detail design continuing albeit without GI information, definitive Statutory Authorities information and structure investigation information.
- Murrayfield Training Pitches Retaining Wall - Letter sent to tie re flood scheme decision. Structure on hold this period awaiting guidance from tie with respect to this. Structure also affected by track alignment due to Balgreen Road issue. Will not be able to draw this structure fully until alignment sorted.
- Water of Leith Bridge - AIP signed off by CEC. Work restarted on design due to planners feedback on structure design to date. Detail design commenced albeit without GI information and track alignment due to Balgreen Road issue. Will not be able to draw this structure fully until alignment sorted.
- South Gyle Access Bridge - Detail analysis and design of structure substantially completed. Detail design drawings work substantially completed for the bridge deck. Detail design drawings for substructure commenced. Category II check of structure ongoing. Issue with respect to embankment design at this structure and Bankhead Drive Retaining Wall.
- Bankhead Drive Retaining Wall - Detail design continuing albeit without GI information. Issue with respect to embankment design at this structure and South Gyle bridge.
- Gyle Tramstop Retaining Wall - AIP signed off by CEC. Detail design continuing albeit without GI information. Issue highlighted with LLAU at Gyle Tramstop and RFI submitted to tie. Response received on but response is unsatisfactory.
- A8 Underpass - Analysis of structure ongoing. Liaison with Statutory Authorities team continuing. Detail design commenced albeit without finalised GI information. Stats liaison is critical at this structure.
- A8 Retaining Wall - AIP signed off by CEC.
- Gogar Burn Bridge - Detail analysis and design of structure substantially completed. Detail design drawings work substantially completed for the bridge deck. Detail design drawings for substructure commenced. Category II check of structure ongoing. Issue with respect to embankment design at this structure.
- EARL Overbridge - Detail analysis and design of structure substantially completed. Detail design drawings work substantially completed for the bridge deck. Detail design drawings for substructure commenced. Category II check of structure commenced.

Works completed during the period:

- Structure Investigation Works - Tendering for sub-contractor for investigation works completed during period. Bureau Veritas with lowest compliant tender to be appointed.

Work planned for the next period:

- Murrayfield Tramstop Retaining Wall - Continue Detail Design and drawings
- Roseburn Street Viaduct - Continue Detail Design and drawings of deck structure and substructure.
- Murrayfield Stadium Retaining Wall - Continue Detail Design and drawings
- Murrayfield Underpass - Continue Detail design of structure and drawings. Commence Cat II check of structure.
- Murrayfield Training Pitches Retaining Wall - Resolve flood wall issue.
- Water of Leith Bridge - Continue Detail Design and drawings of deck structure. Commence Detail design of substructure.
- Balgreen Road Area - Resolve status of bridge and adjacent wingwalls with respect to Network Rail concerns.

- South Gyle Access Bridge - Complete Detail Design and drawings of structure.
- Bankhead Drive Retaining Wall - Complete Detail Design and drawings of structure.
- Gyle Tramstop Retaining Wall - Continue Detail Design and drawings. Commence Cat II check of structure.
- A8 Underpass - Continue discussions with Service companies regarding diversions etc. Commence discussions on Traffic Management diversions for works. Continue Detail Design and drawings of structure.
- A8 Retaining Wall - Commence Detail design of Retaining Wall structure
- Depot Access Bridge - Revise and re-issue AIP to CEC and TSS Commence Detail Design and drawings of deck structure.
- Gogar Burn Bridge - Complete Detail Design and drawings of structure.
- EARL Overbridge - Complete Detail Design and drawings of structure.

Work to be completed during the next period:

- Murrayfield Stadium Retaining Wall - Form A document to be signed off by Network Rail.
- Murrayfield Underpass - Form A document, reissued taking on board Network Rail comments for formal approval.
- Murrayfield Training Pitches Retaining Wall - Form A document to be signed off by Network Rail.
- South Gyle Access Bridge - Complete Detail Design
- Bankhead Drive Retaining Wall - Complete Detail Design
- Depot Access Road Bridge - Approval in Principle document, reissued taking on board tie and CEC comments for formal approval.
- Gogar Burn Bridge - Complete Detail Design
- EARL Overbridge - Complete Detail Design

Issues:

- Delay to Ground Investigation interpretive report means a number of the structures cannot complete Detail Design.
- Balgreen Road area still not resolved to enable progress of design of the bridge plus Baird drive wall.
- Service diversions at A8 Underpass
- Traffic Management at A8 Underpass
- Response on CEC Murrayfield flood scheme
- Levels of sewer under Murrayfield Underpass
- Network Rail approvals
- Structure Investigation Results

Information required in the next period:

- Remaining Ground Investigation draft borehole logs plus Interpretive Report for GI
- Interpretive and lab testing details from Ground Investigation.
- Resolving of Balgreen Road NR issue.
- Revised response to RFI on Gyle Tramstop Retaining Wall
- Formal sign off of SRU agreement and accommodation works layout/interface with structures in that vicinity.
- Response on flood scheme at Murrayfield Training Pitches.

5.2.6. Depot and Buildings

Follow up from Previous Reports:

- Refer to report set out below. On HOLD pending Client instructions

Activities during the period:

- Letter sent to Client to confirm Staffing level figures prepared by Jim Harris; awaiting instruction. 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 ht. restriction being investigated which may result in a

- redesign of Depot P-way – *(as previous month)*
- Little progress due to lack of information - Confirmed Request for Length of tram to be accommodated
- Confirmed request for T/P wire height in Depot

Works completed during the period:

- Issues Report : Further Meetings with Client held on content. *(Awaiting instructions for third month).*

Work planned for the next period:

- Concerted start on the detailed design to retrieve programme. Based upon available information received to-date has been delayed due to lack of clarity in Client Brief
- Review Design requirements and Operational issues following submission of Tram bids. This as part of the evaluation process and to include any accommodation revisions and main workshop equipment layouts - Ongoing
- Start consultation process with CEC; on hold until issues related to the site are determined. Report being prepared to establish saving if site lifted 1.5-2.0 m. Wire clearances to be adjusted down within Depot area

Work to be completed during the next period:

- Detailed Design of Building Structures placed on hold pending outcome of meeting(s) with Client.
- Confirmation awaited on system staffing levels which will put in question space standards instructed to date. Outstanding from previous month
- Confirm with Scottish Water Site clearance of existing water and surface water routes and agree new service routes
- Establish T/P wire heights and track level within Depot complex
- Establish External ductwork distribution around site for domestic supplies

Issues:

- BAA flight path revisions needed to establish depth of site dig needed

Information required in the next period:

- tie Team to progress final sign off of all outstanding issues and give guidance on Tram length to be worked to in the detailed design process *(Still outstanding again this Month)*

5.2.7. Sub-Stations

Follow up from Previous Reports:

- Emphasis on design amendments to change Red status site for Tram Leith Walk 163 Sub to Green Submit Planning Prior Approval to Programme

Activities during the period:

- Depot Sub-Station Provisional layout agreed with Team. On hold awaiting final siting of Depot Building *(as last month)*
- Russel Road TPH Planning drawings submitted to CEC for Planning *(Planning comments received and acted upon)*
- South Groathill Ave Sub-Station Detailed Design submitted to CEC for Planning *(currently on hold)*
- North Leith Sands Sub-Station . Planning drawings prepared for submission
- Cathedral Lane Sub-Station Alternative layouts prepared for presentation to CEC. *(awaiting feedback)*
- Granton View sub-station *(on hold)* Will progress to programme
- Haymarket Terrace sub-station. *(Awaiting feedback from CEC Planners)*
- Status Under Review - Bankhead Drive Sub-station location reviewed and mast for radio added . GA dwg prepared awaiting response from Team prior to prep of information to CEC
- Granton Mains East Sub relocated and submitted to CEC. Approved to Green STATUS- will progress to programme

- This Sub-station is still RED status and URGENT action is needed to ensure CEC action. Leith Walk 163 Sub-station (*on hold*) .Three site location options made available to CEC to remove Red status.
- Jenners Depository Sub (*on hold awaiting Scot Rail resolution of site boundary/stop location*)
- Eastfield Road Sub P&R (*on hold pending P-way Design for phase3 (future)*)

Works completed during the period:

- Russell Road planning drawings updated
- GA alternatives completed Cathedral sub site.
- Leith Walk 163 Sub site options completed
- North Leith Sands Sub drawings for Planning
- Issued for Prior Approval
- Granton Mains East Planning Drawings prepared for Prior Approval
- Haymarket Terrace Sub Ductwork routes

Work planned for the next period:

- Progress to Detailed Design as programme
- Agreement on Planning application content for Cathedral Sub-station with CEC
- Obtain CEC approval to siting Leith Walk 163 Sub

Work to be completed during the next period:

- As Programme
- Agree Bankhead Drive location with CEC
- Agree location of Leith Walk Sub with CEC

Information required in the next period:

- Confirmation on Electrical HV supplies to Sub locations on system by Scottish Power - ongoing

5.2.8. Tram Stops**Follow up from Previous Reports:****Works completed during the period:****Issues:****5.2.9. OLE****Activities during the period:**

- See January 07 report, Previously reported and submitted

Activities during the period:

- A new programme of work for the completion and submission of OLE design work was prepared and submitted to the project on 05/02/07, for a starting date of 12/02/07 & completion on 04/05/07. The programme has been recently updated in line with V12 programme. This has extended the completion of OLE design work to a new date of 29/06/07. The new programme was linked to completion dates (from V11) for all interfacing information required for OLE work. The programme of work commenced on 12/02/07 working on section 7 and loading calculations for civil structures interfacing with OLE bases. It was also planned to commence preparation of technical specification plus the dynamic simulation study. The programme is now further updated for the latter two activities to commence in the next period.
- Further design development of Outline Design Drawings for section 7. - Upon availability of final track and roads alignment designs in this period the OLE outline design work for section 7 started on 12/02/07 and completed (as planned) on 23/02/07, awaiting completion of section 5 for a combined IDC process (line 2 IDC).
- OLE pole structure loadings for civil structures interfacing with OLE poles. - OLE pole loadings for 9 different structures along the route interfacing with OLE bases were

commenced on 12/02/07 and completed and issued to relevant civil engineering disciplines on 27/02/07. The civil structures were; Victoria Dock bridge, Tower Place bridge, Haymarket Station Viaduct, Coltbridge Terrace Bridge, Russell Road bridge, Roseburn Street Viaduct, South Gyle Access bridge, Gogaburn bridge & Earl bridge. This represented 55 OLE structure locations interfacing with the bridges in sections 1, 2, 5 & 7, as listed in the above.

- OLE Technical Specification - Some initial work started during this period and it will be further continuing into the next period.

Work to completed during the next period:

- Undertaking dynamic simulation analysis. Upon award of the sub-consultancy contract
- Further development of Technical Specification. Upon contract award for dynamic simulation study
- Commencement of section 5 outline design development. Upon availability of final track/road/structure alignments
- Further loading calculations for OLE bases interfacing with civil structures. Upon availability of all interfacing information

Issues:

- Availability of completed and coordinated design of track alignment (horizontal & vertical) with civil structures for sections 5 & 7 (including Edinburgh Park viaduct, Balgreen Road, & Carrick Knowe under-bridge, A8 underpass).

Information required in the next period:

- Contract award (sub-consultancy) for dynamic simulation study. Currently over-due
- Completed Track/Roads alignments and civil structures for sections 5 & 7. Currently overdue

5.2.10. Traction Power

Follow up from Previous Reports:

- Following on from 'Issue 1' of January 2007 progress report, tasks A1820 to A1880 and SDS 67220 of the traction power programme have been re-aligned to task SDS52940 of simulations programme under SDS project manager instruction. As such the programme of TPS works on Edinburgh Tram will cease over the period 12 March 2007 to 15 August 2007 as principle detail design package of works excluding tasks noted above will be complete. IT SHOULD BE NOTED THAT PENDING OUTCOME OF CHANGE REQUEST NOTED IN ISSUE 2 BELOW THE TPS TEAM WILL STAND DOWN OVER THE PERIOD NOTED.

Activities during the period:

- Deliverable – (Activity ID: A13950/A13960) – Gogar Depot Energisation warning and interlocking scheme completed and issued to the client for external approval on 27/02/2007.
- Deliverable – (Activity ID: A3310/A3320) – DNO Configuration and Power Quality report completed and issued to the client for external review on 12/02/2007. (SEE INTERFACES WITH 'DNO' BELOW)
- Deliverable – (Activity ID: A13820/A13845) – DC protection philosophy and settings report completed and issued to the client for external review on 21/02/2007.
- Deliverable – (Activity ID: A13800) - All HV SLD's completed and issued to the client for external review on 02/02/2007. (Subsequently record of review comments have been received and drawings have been raised to IFEA status).
- The following documents have been updated to IFEA status subject to formal Record of Review comments received from the client:
 1. Traction Sub-Station DC Protection and Tripping Schematic (ULE90130-SW-SUB-00003, Rev 5)
 2. DC Feeding and Sectioning Diagram (Section 6),(ULE90130-SW-OLE-00009, Rev 5)

3. DC Feeding and Sectioning Diagram (Section 5 & 7), (ULE90130-SW-OLE-00008, Rev 5)
 4. DC Feeding and Sectioning Diagram (Section 1, 2 & 3) (ULE90130-SW-OLE-00007, Rev 5)
 5. Electrification Demarcation Diagram (ULE90130-SW-OLE-00010, Rev 3)
- Interfaces:
 - SCC – Outline specifications for HWMT system and interface demarcations agreed with SCC during period.
 - Traction Sub Station Design – TPS finalised proposals for Exemplar Traction Sub-Station layouts during period.
 - DNO – FOLLOWING ISSUE OF DNO POSITION PAPER (A13320) ABOVE, ALL PARTIES SDS, TIE AND SCOTTISH POWER AGREE THAT DESIGN WORK HAS GONE AS FAR AS IT CAN GO UNTIL INFRACO APPOINTED. DISCUSSIONS WILL NOW CEASE UNTIL INFRACO APPOINTED.
 - LVS – LV SLD (ULE90130-SW-TSU-00014, Rev 2) produced by TPS has been agreed as basis for auxiliary power supplies design at Traction Sub-Stations and will be developed through design.
 - The following documents have been updated to IFEA status following receipt of DRAFT record of review comments. SDS have provided responses and updated documents HOWEVER SDS HAVE REQUESTED FORMAL SUBMISSION OF THE ROR NOTED. DOCUMENTS WILL NOT BE SUBMITTED UNTIL RECEIVED.
 1. Traction Substation Equipment Specification (ULE90130-SW-SPN-SPN-00061, V6)
 2. OLE Earthing and Switching Paper (ULE90130-SW-REP-00368, V3)
 3. System Earthing Policy (ULE90130-SW-REP-00071, V3)
 4. Traction Sub-Station Systemwide Low Voltage SLD (ULE90130-SW-TSU-00014, Rev 2)
 5. Traction Sub-Station Site Specific AC/DC SLD's (ULE90130-SW-TSU-00001 to 00015, All Rev 2)
 - Meetings –
 1. Sub-Station Design Meeting attended by GE and DP– 01/02/2007.
 2. SDS Interface meeting held with Transdev on 19/02/2007 in Newcastle – GE, DP and LJB attended.
 3. DTL Meeting – Edinburgh – attended by GE on 21/02/2007.

Works completed during the period:

- Activity ID: A13960 – Report – Gogar Depot Energisation, Warning and Interlocking Scheme. (ULE90130-SW-REP-00385, V2)
- Activity ID: A3320 – Report – DNO Position Paper and Power Quality Report (ULE90130-SW-REP-00379, V2)
- Activity ID: A13800 – HV SLD for Traction Sub-Stations issued to tie for external review early in period. (ULE90130-SW-TSU-00001 to 00015, All Rev 1).
- Activity ID: A13850 – Report – Edinburgh Tram Scheme – DC Protection Philosophy and Settings Report (ULE90130-SW-REP-00388, V2)
- Miscellaneous design documents as noted in activities section above all raised to IFEA status in preparation for interim IDC A15240 and A15250 to be run in next period.

Work planned for the next period:

- Interim IDC for Systemwide Traction Power System design, (excluding final traction power report), will be run early in next period. IDC will have two parts, Design Drawings & Design Specifications and reports.
- Stray Current works will continue during period pending agreement of change request 135.0. (Currently on hold). Stray Current Code of Practice and corrosion control agreement will be finalised subject to change. Also testing and commissioning plan and risk management strategy will be developed.
- An interim systemwide traction power design submission will be issued to tie following interim IDC's noted above. (Please note this may be delayed if stray current change

request no. 135.0 remains outstanding).

Work to be completed during the next period:

- Activity ID: A15240 – Interim IDC – Systemwide Traction Power Design (Design Drawings) – Complete 07 Mar 07.
- Activity ID: A15260 – Interim Traction Power System Systemwide Detail Design Submission – Complete 16 Mar 07.
- Activity ID: A15250 – Interim IDC – Systemwide Traction Power Design (Design Drawings) – Complete 15 Mar 07.
- Activity ID: NEW – The following stray current documents will be updated or developed during period pending agreement of change request 135.0.
 1. ULE90130-SW-REP-00006, V3 (Revised in line with ROR comments and responses).
 2. ULE90130-SW-REP-00335, V2 (Revised in line with ROR comments and responses).
 3. NEW – Stray Current Risk Management Strategy. (Report to be developed).
 4. NEW – Stray Current Testing and Commissioning Plan (Report to be developed).

Issues:

- Change Control Form – (Register Reference 135) - A change control form was submitted to the project on 28/11/2007 to conduct additional stray current works. This change remains outstanding and is stopping further work on stray current related issues. IT IS IMPORTANT TO NOTE THAT THIS WILL PREVENT AN INTERIM IDC (Activity ID: A15250) BEING RUN AS IT SHOULD CONTAIN STRAY CURRENT PAPERS.
- As several tasks of the traction power programme (A1820 to A1880, SDS67220. See follow up section above) have now shifted to August '07 the overall period of traction power team involvement on Edinburgh Tram is now extended past the original proposed timescales on the project (28 Feb 2007). However the principle programme of works is approaching completion excluding A1820 to A1880. As such principle design work will be suspended during the period 12 March 07 to 15 August 07. To maintain a presence on the project during this period for attendance at DTL team meetings and for system interfacing and integration purposes it will be necessary to submit a change control to the project. This will be actioned early march '07.

5.2.11. TTRO's and TRO's

Activities during the Period

Works completed during the period

Work planned for the next period

Work to be completed during the next period

Issues

Information required in the next period:

5.2.12. Transport Modelling

Activities during the period:

- Recalibration and revalidation of VISUM and VISSIM models taking account of tie's/CECs and SDS's comments
- Continue to recode models to take account of design changes, models to be changed include VISUM, VISSIM, LINSIG, Transyt and tram journey time model

Works completed during the period:

- Additional traffic counts undertaken at junctions to be signalised under recent design changes

Work planned for the next period:

- Continued Recalibration and revalidation of VISUM and VISSIM models taking account of tie's/CECs and SDS's comments

- Continue to recode models to take account of design changes, models to be changed include VISUM, VISSIM, LINSIG, Transyt and tram journey time model

Works to be completed during the next period:

- Continued Recalibration and revalidation of VISUM and VISSIM models taking account of tie's/CECs and SDS's comments
- Continue to recode models to take account of design changes, models to be changed include VISUM, VISSIM, LINSIG, Transyt and tram journey time model

5.2.13. Utilities***Follow up from previous report:***

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

Activities during the period:

- Continual consultations on Design Development
- Detail Design programming and resourcing
- Tie meetings to discuss input into Work Orders
- Meetings with tie to address technical queries.
- Work on SUC Approval drawings for Sections 1A1, 5A, 5B, and 5C.

Works completed during the period:

- Section 1B issued for SUC approval (A11440)

Work planned for next period:

- Issue to SUCs for approvals for Sections 1A1, 2A, 5A, 5B, 5C.
- Continual consultations on Design Development
- Issue to tie for approval of trial area in Section 1A.
- Consultation with MUDFA Contractor (design development)
- External consultation (client and SUCs).
- External consultation (third parties inc. Network Rail and BAA).

Work to be completed during the next period:

- Issue to SUCs for approvals for Sections 1A1, 2A, 5A, 5B, 5C.
- Construction Issue for trial area in Section 1A.

Issues:

- SGN, BT and Scottish Power feasibility studies may have an affect on programme.
- Late availability of GPR and trial trench information will delay final utility design (and affect structures designs).
- Lack of progress in obtaining Scottish Water MH information delaying design development.
- Scottish Water (clean). Now requiring SDS to provide full details of valving/isolating. Has affect on resourcing and programme.

Information required in the next period:

- Standard OLE pole foundations and non-standard options.
- Results of site investigations (GPR and trial trenching) are required to develop the utilities designs.
- SW MH information.

5.2.14. Site Investigations

Activities during the period:

- Utilities GPR - Survey work undertaken in Section 5 at Gogar
- Utilities trial pits
- Ground investigation - Network Rail locations
- Topographic - Various locations sections 1, 3 & 5 plus general tree survey
- Archaeological
- Voids
- Network Rail
- Structures condition - Leith Walk
- Ecological - Bat surveys. Tree surveys. Otter surveys.
- Noise & Vibration - Final locations
- Site Clearance - Roads section

Works completed during the period:

- Utilities GPR - Line 2 works at Section 5, Gogar
- Ground investigation - All Network Rail locations
- Topographic - Various locations sections 1, 3 & 5
- Voids - Determined that no more work is required.
- Structures condition - Leith Walk
- Ecological - Bat surveys. Tree surveys. Otter surveys.
- Noise & Vibration - Final locations
- Site Clearance - Roads section

Work planned for the next period:

- Utilities GPR - Line 2 at BAA
- Utilities trial pits - C4 applications status
- Ground investigation - A8, Haymarket
- Topographic - Tree surveys. Method statement approvals for Network Rail areas.
- Structures condition - Method statement approvals for Network Rail bridge structures

Work to be completed during the next period:

- Utilities GPR - Line 2 at BAA
- Utilities trial pits - C4 applications status
- Ground investigation - A8, Haymarket
- Topographic - Tree surveys. Method statement approvals for Network Rail areas.
- Structures condition - Method statement approvals for Network Rail bridge structures

Issues:

- Change requests to tie have been rejected, but need further discussion with tie
- GPR surveys for Tram at BAA are continuing without EARL, until the EARL scope is clarified.
- Require tie to clarify SDS role in respect of Network Rail Infrastructure Works.

5.2.15. Roads

Follow up from Previous Reports

- Roads are continuing to progress the design of the first pass vertical alignment for Section 1A design. As well, we await direction on DAP comments from TIE, including those from stakeholders, in order to progress the resolution of 'red' comments in Sections 1B, 1C, and 1D and into detailed design.
- Roads await a response to the Halcrow letter regarding the width of the Roseburn Cycle Path and Demarcation. Direction is required with regard to maintenance of the Roseburn corridor (CEC or Operator), and an Emergency Access Strategy is required from SDS for the Roseburn Corridor to inform the roads design

Activities during the period

- 1A - progressing the design of the first pass vertical alignment
- 1B – progressing resolution of Red issues
- 1C - progressing resolution of Red issues
- 1D - progressing resolution of Red issues
- 1B, 1C, 1D Preliminary Design DAP - We await DAP comments from TIE including stakeholders for Sections 1B, 1C and 1D, including charette designs for Leith Walk, Picardy Place (with London Road roundabout), St Andrew Square, Princess Street, and Haymarket.
- 2A – Submitted to tie (RSA2, Site clearance, and Pavement to follow)
- 3A – IDC issued but onwards design and delivery is on hold as Roads await a response to the Halcrow letter regarding the width of the Roseburn Cycle Path and Demarcation.
- 3B – Detailed Design in progress
- 3C – Detailed Design in progress
- 5A – IDC issued. Issue has been delayed as a result of the following:
 - Viaduct Structure (headroom)
 - Scotrail Depot Survey (topo)
 - Russell Road Retaining Wall
 - Railway Security RFI
- 5B – Detailed Design in progress
- 5C - Submitted to tie (RSA2, Site clearance, and Pavement to follow)
- 6 – Detailed Design in progress
- 7 – IDC Issued. (Topo required at Hilton car park is holding up design)

Works completed during the period

- 2A - Submitted to tie (RSA2, Site clearance, and Pavement to follow)
- 5C - Submitted to tie (RSA2, Site clearance, and Pavement to follow)

Work planned for the next period

- Resolve Preliminary Design DAP 'red' comments – Await DAP Comments
- Start Detailed Design on Section 1B,1C,1D
- Continue delivery of Detailed Design – Sections 1A, and 2 to 7

Work to be completed during the next period

- 3A – Depending on receipt of satisfactory response to Halcrow letter regarding the width of the Roseburn Cycle Path and Demarcation.
- 5A - Issue has been delayed as a result of the following:
 - Viaduct Structure (Headroom)
 - Scotrail Depot Survey (Topo)
 - Russell Road Retaining Wall
 - Railway Security RFI
- 7 – Depending on receipt of Topo required at Hilton Car Park

Issues**Section 1**

- We await direction on DAP comments from tie, including those from stakeholders, in order to progress the resolution of 'red' comments in sections 1B, 1C, and 1D. From a design perspective we are progressing the design using the unofficial comments.
- Various Design Changes (see Change Notices) are delaying Roads in Section 1
- Section 3
- Issue to tie of the Section 3A Design is on hold - Roads await response to the Halcrow letter regarding the width of the Roseburn Cycle Path and Demarcation. Direction is required with regard to maintenance of the Roseburn corridor (CEC or Operator). Emergency Access Strategy is required from PB for the Roseburn Corridor, and direction as to any road or access which may have to be designed as an outcome.
- Coordination of the multidisciplinary Roseburn Corridor cross section is required.
- Section 2-7
- 5A – Partial Design now submitted for IDC, however, issue has been delayed as a result of the following:

Viaduct Structure (Headroom)
Scotrail Depot Survey (Topo)
Russell Road Retaining Wall
Railway Security RFI

- 7 – Require Topo survey at Hilton Car Park

Information required in the next period

- As Above

5.2.16. Traffic Management

Follow up from Previous Reports

- No update this period

Activities during the period

- None this period

Works completed during the period

- TRO: Review preparation of layouts and schedules based on programme for Roads Horizontal Design Freezes
- TTRO: Traffic Management Plans for utilities advanced works completed and submitted.

Work planned for the next period

- TRO: Programme is being revised based on anticipated receipt of finalised roads alignment design drawings.
- TTRO: Make changes as a result of charettes where instructed and available.

Work to be completed during the next period

- None to report

Issues

- TRO: Programme is being revised based on anticipated receipt of finalised roads alignment design drawings.
- TTRO: Traffic management plans require modelling output to inform CEC.

Information required in the next period

- Approval of TTRO Traffic Management Plans
- Modelling output to confirm TTRO Traffic Management Plans

5.2.17. Environmental

Follow up from Previous Reports:

- We have updated the Environmental Management Plan for the detailed design phase of the project. Two surveys, the bat survey and otter holt monitoring survey, are both being carried out. We have received the contaminated land factual reports from the contractor and will review them next period.

Activities during the period

- Environmental Management Plan (EMP)
- IDCs
- Archaeological strategy for line 1
- Badger Mitigation Plan/ Landscape and Habitat Management Plan
- Protected Species Mitigation Plan

Works completed during the period

- Environmental Management Plan
- Bat Survey Report
- Otter Holt Monitoring Survey Report

- Contamination Interpretative Report

Work planned for the next period

- Archaeological trenching at RBS bunds.

5.2.18. Landscaping**Follow up from Previous Reports:**

- Work ongoing with support Landscape for the Roseburn corridor Environmental and Habitat Management Plan

Activities during the period:

- Landscape input to Planning drawings prepared for Planning applications and preliminary site info for sites as follows:
- Sections 2A, 5C, part 3A / North Sub stations Leith Sands and Bankhead Drive

Works completed during the period:

- Section 2A, 5C
- Preliminary issue 3A
- Review existing planting Shandwick Place

Work planned for the next period:

- Additional Input into Roseburn Corridor Environmental and Habitat Management Plan

Completion Section 3A

- Commence Sections 1A, 5A, 7
- Further works to Stop and sub-station locations

Work to be completed during the next period:

- Agree Basis for Boundary Works Schedule not completed during previous period
- Completion Section 3A

Issues:

- Landscape designs will commence following completion of Civils/Roads/P-way designs
- Awaiting input from TREE SURVEY to further agreements with CEC Arboralist

Information required in the next period:

- Working arrangements needed with CEC to satisfy the approvals process – process progressing (*ref tree survey*)
- Completed section designs from Design Team

6. CHANGE NOTICES**6.1. Change Notices received by SDS as of the 28th February 2007**

Please refer to Appendix D for a copy of the External Change Tracking Log

7. HEALTH AND SAFETY**7.1. General**

- There were two of minor accidents that occurred within the office environment during the period. Control measures to eliminate the hazards that contributed to one of the accidents are being discussed. To date there have been no accidents or safety related incidents reported from the surveys.

- There are ongoing reviews of Method Statements and Risk Assessments for non-intrusive and intrusive surveys. At present topographical and sand monitoring survey works for otters are ongoing.
- There is progressive delivery of tie's and SDS's Edinburgh Tram Induction packages to all members of the SDS team.
- The Ground Investigation works undertaken during the possessions on Network Rail infrastructure have been successfully completed. There were no reports of any accidents or incidents reported or recorded during the works.
- The bridge coring work method statements have still to be submitted. This work will also be covered under the approved and accepted Health and Safety Plan.
- Other survey works are progressing in line with the programme.

7.2. Activities this period

- The inspection of Leith walk Rail Bridge which involves confined space working is complete
- Successful completion of GI works on NR infrastructure during the weekend possessions

7.3. Deliverables for next period

- 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.
- CDM meeting to discuss safety issues relating to the roads design.
- Submit Method Statements to tie and NR for Ground Investigation Red List working
- Submit Method Statement to tie and NR for Ground Investigation (Non Red List)
- Submit Method Statement to tie and NR for topographical survey in Haymarket Depot
- Bat survey too take place risk assessment approved.
- Prepare and submit Method Statement to BAA for survey
- MS for street lighting, bridge coring works to be accepted and approved.

8. RESOURCES / MANPOWER

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

9. INFORMATION REQUIRED

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

Total No RFI's Submitted	RFI's Open	RFI's Closed	RFI's Closed since previous report	New RFI's since previous report	Overdue		
					Under 1 week	1 to 4 weeks	Over 4 weeks
120	31	89	24	2	0	4	25

Please refer to Appendix G for a summary of Outstanding RFI's. SDS are pleased to note that the rate of RFI responses received from tie continues to remain high, at a similar rate of response to last month. We would, however, also like to state our continuing concern at the number of RFI's that have now been overdue for more than 4 weeks. Particularly, it is critical we receive responses to ULE90130-SW-RFI-00082 and ULE90130-SW-RFI-00084 urgently as the lack of response to these RFI's to date is now delaying development of the Noise Mitigation Design and the Dynamic Simulation Report respectively.

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.9
- Appendix B Project Progress Summary - Doc Ref ULE90130-SW-PRO-00010 V.9
- Appendix C Labour Histograms / Manpower Histograms - Doc Ref ULE90130-SW-PRO-00010 V.9
- Appendix D Change Control Register - Doc Ref ULE90130-SW-CRT-00008 V.2
- Appendix E CapEx Change Register - Doc Ref ULE90130-SW-RRR.00051
- Appendix F Submittal Programme and Deliverables Matrix - Doc Ref ULE90130-SW-SW-MAT-00009 V.15
- Appendix G RFI Status Report - Doc Ref ULE90130-SW-RRR-00008 V.3

Appendix A: KEY MILESTONES

Appendix B: PROJECT PROGRESS SUMMARY

Appendix C: LABOUR HISTOGRAMS / MANPOWER HISTOGRAMS

Appendix D: CHANGE CONTROL REGISTER

Appendix E: CURRENT CAPEX COST ESTIMATE SUMMARY TABLE

Appendix F: SUBMITAL PROGRAMME AND DELIVERABLES MATRIX

Appendix G: RFI STATUS REPORT