

Edinburgh Tram Network

SDS Progress Report -

Period 3-3

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1 TOP ISSUES

1. Outstanding Instruction for Extended Construction and Design Support for next period (3-4)
2. Tram Stop Informatives closeout
3. Resolution to Outstanding SDS Changes
4. Receipt of outstanding information to complete design
5. Revised Forth Ports Agreement and Closeout of Issues Arising
6. Extended Construction Support Resourcing
7. Picardy Place Closeout for TAA
8. CEC Requirements for Picardy Place and Elder Street
9. Depot Design Completion
10. Section 3 TAA Closeouts
11. Technical approval for OLE bases in Section 1 requires tie letter to CEC and CEC signoff.
12. Grosvenor Street revisions and OLE instruction.
13. NIL OLE interface
14. tie issue of letter to CEC to allow sign-off of OLE Foundation designs by TAA.

2 COMMERCIAL

2.1 General

This report covers Period 23rd May 10 to 20th June 10. The progress is detailed for the time period of 23rd May '10 to 4th June '10, during which actual events occurred. There are several critical issues outstanding on the project. These are presented per the drawings in Appendix A.

2.1.1 Applications for Payment

The certification of the Applications for Payment is up to date, with the only significant discrepancy being on the valuation for a few change orders, which are relevant to interpretation of percentage completes or Pre Novation changes. There is minimal outstanding payment in ECS and ATR's and these are now worked through on a periodic basis, which is a welcomed progression from previous periods. There are however approximately 7no. ATR approvals outstanding and SDS are eager to resolve these this period.

The Extended Construction and Design Support organisation charts are not instructed for the next period (3-4). SDS require more notice of what is approved, as the last 2 periods time has been approved AFTER the start of that period. This is not in line with the Novation Agreement and requires resolution.

2.1.2 Change Control

Approximately £3.1 million worth of Change Instruction has been instructed to SDS to date. This is a progression in terms of the change process, and SDS is keen to work on this success to 'unlock' other outstanding changes, including the Development workshop changes, and new changes that are instructed.

SDS, BSC and tie met on the 12th August '09 to discuss the 'Pre Novation' changes, and as an outcome of this meeting SDS have withdrawn 4no. changes. tie is due to reply to the other 2 changes, to confirm if they can be instructed. SDS continues to chase tie to resolve these 2 changes, and have been assured that this will be closed out ASAP.

BSC have instructed changes to the SDS Design as part of the CDC agreement.

- DCR numbers: 036, 103, 127, 132, 141, 151, 167, 170, 180, 185, 191, 198, 200, 202, 203.
- 75% Payment of original agreed estimate value. If additional value is agreed between BSC / tie, this additional amount will be paid to SDS for DCR numbers: 101, 102, 163, 169, 172, 181, 193, 201, 204, 205, 209, 211, 212, 213, 214, 216, 219, 220, and 227.

SDS will support BSC in achieving resolution with tie for the above changes.

SDS still awaits Change Order for DCR0036 (BSC to confirm scope).

2.1.3 ATR's

7no. ATR's (ATR0106, 135, 137, 140, 142, 151 & ATR0156) remain unapproved at this time.

2.2 Summary of Changes

- Changes Identified; 263
- Change Notification Received; 167
- Change Estimates Submitted; 161
- Changes Withdrawn/Closed; 120
- Change Instructions Received; 120

2.3 Programme

Version 58 of the programme was issued to BSC at the beginning of the period. Several queries and issues were raised by BSC which have been responded to by SDS.

Version 59 of the programme will be released next reporting period.

3 APPROVALS

3.1 General

SDS is progressing to obtaining the final planning and technical approvals to complete the design.

From a total of 259 planning and technical approvals:

- 78% are approved (203).
- 6% are pending approval (17).
- 16% are to be submitted (39).

Current status (today) is:

87% Planning Approvals granted.

72% Technical Approvals granted.

The remaining outstanding approvals are either: 1) to be approved imminently, 2) have been subject to re-prioritisation and long standing changes, or 3) are new with recent changes instructed. Some of the approvals have been identified as obsolete and are no longer included in the numbers (hence affecting the overall numbers month to month. This will continue to be reviewed as the changes are moved forward and it is understood if formal re-approval is required. However, this will not be known until either the work is further progressed or clarification is received by SDS on various topics.

In order to complete to CEC:

- Roads Approvals and Prioritisation – Section 1C2 and the entirety of Section 3 need to be reviewed and approved by CEC. SDS understands that this is being completed in line with a prioritisation list.
- Instruct known changes.
- Freeze on any future changes to allow current scope to progress to completion.

It should also be noted that some of the changes now instructed by BSC may no longer be required as indicated by **tie** in recent change meetings (i.e. Roseburn Delta Cycleway). This and similar issues need to be formally closed out so SDS understand the actual requirements.

The CEC/**tie**/BSC/SDS Approvals Task Force meets monthly. It has not met recently, and needs to be reinstated to serve as a catalyst for troubleshooting the Approval issues.

It is critical that a focus is maintained on the outstanding items so as not to lose sight of the outstanding requirements. CEC have also now begun to issue various formal letters related to the submittals made to them. SDS has responded to these with any additional information as appropriate, however, as advised in a recent meeting, this appears to be a change in approach by CEC over recent weeks.

Various changes being instructed as part of the approvals process will also require updates to the planning approvals. These items have been included in this report upon receipt of the formal instructions. Variations to the planning approvals due to technical comments / Siemens designs are also not included; however recent meetings between SDS and BSC have identified an agreement in principle on how to move forward with overlapping requirements. SDS looks forward to the formalisation of this discussion by BSC.

The Approvals Look Ahead and Approvals Trackers are emailed to BSC on a weekly basis for SDS scope of works. This will begin to be provided on an as-needed basis moving forward.

3.2 Systemwide

3.2.1 Outstanding:

- Scottish Water Approval/Consents. Formal process now agreed and SDS has received the majority of the formal approvals. Section 3 approvals and Section 1C1/2 outstanding for reasons out with SDS control. Recent communication from SW indicates that Section 3A and 3B are now being progressed. SDS has written to BSC on this issue.

3.2.2 Progress

a) General

- DCR0036 works for reconstituted Planing VE is approximately 0% complete. Scope to be confirmed by **tie**/BSC and instructed.
- DCR0083 works to provide TRO informal consultation plans complete.
- DCR0101 works for wider area modelling approximately 90% complete.
- DCR0144 for Stage E drawings approximately 0% complete. SDS has issued letters to BSC identifying the current status of the issue raised by CEC and proposed resolution. This requires early resolution of the on-going tram stop issues.
- DCR0214 works for provision of 110v power supply approximately 0% complete. SDS understands that BSC (Siemens) are continuing to discuss the requirements with **tie**. SDS has issued an RFI on this issue and confirmation of requirements.
- DCR0212 works for Tramstop Development Workshop approximately 90% complete.
- DCR0213 works for Substation Development Workshop approximately 70% complete
- DCR0216 works for Drainage Development Workshop approximately 80% complete.

b) TRO

- DCR0014 works to provide additional copies of TRO drawings complete.
- DCR0083 works to provide TRO informal consultation plans complete.
- DCR0215 works for additional changes to TRO drawings complete.
- Statutory Consultation completed. Draft comments received from CEC from Statutory Consultees. Meeting with BSC / SDS / **tie** held 17 November 09 to discuss issues raised. SDS to provide responses to comments once formally received from BSC.
- SDS submitted revised schedules and drawing based on informal comments from **tie**.
- SDS submitted 2 supporting documents for TRO process as a result of discussions with **tie**.
- A meeting was held between BSC / SDS / **tie** to resolve the outstanding change orders for TRO. SDS to provide formal position on outstanding changes.
- **tie** to confirm level of assistance they require moving forward.
- BSC forwarded letter to SDS containing **tie** letter with six queries which require response / assistance. **tie** confirmed via email that this was the total of queries to be received by BSC.

c) Traffic Modelling

- DCR0086 works for incorporating TAL 5/05 complete.
- All traffic modelling reports submitted to BSC and CEC
- Pre-presentation discussion with BSC on 11 March 10.
- Presentation to **tie** / CEC on 18 March 10.
- SDS received comments from CEC outlining CEC issues with modelling. SDS in process of reviewing and developing responses. SDS to advise BSC of meeting requirement once comments are reviewed.
- SDS has requested a meeting with CEC to go through in detail the queries raised. SDS is awaiting confirmation of their availability.

d) Track and Trackform

- DCR0125 works for trackform ground improvement and vibration mitigation approximately 90% complete.
- DCR0206 works for DKE check against CAF tram complete. Report issued. Further work to confirm that required mitigations remove any clearance issues will be required culminating in issue of close out report. SDS has provided data on Operational Speed Limits to BSC to enable CAF to investigate potential for reduced DKE requirements.
- SDS has been instructed to undertake additional analysis to review ballasted areas.

- SDS undertaking revisions to tram stop design to accommodate revised dimensions for CAF. BSC to issue instruction.

e) Roads Design

- DCR0126 works for roads construction details methodology complete.
- Appendix 7/1 designs for Princes Street submitted and approved by CEC. CEC have signed off original appendix 7/1. Updated appendix to be provided to replace original 7/1.
- Meeting held with CEC to go through comments received. SDS reviewing comments and preparing responses.
- DCR0140 works for Roads construction analysis of results approximately 50% complete. Full testing requirements awaited.

f) OLE and OLE Foundations

- DCR0130 works for Section 1 generic pole foundation designs 90% complete.
- DCR0127 for Building Fixing Owner agreements is approximately 90% complete.
- DCR0152 works for OLE pole foundations in Section 1A approximately 80% complete.
- DCR0153 works for OLE pole foundations in Section 1B approximately 80% complete.
- DCR0154 works for OLE pole foundations in Section 1C approximately 80% complete.
- DCR0155 works for OLE pole foundations in Section 1D approximately 80% complete.
- DCR0176 works for Line 2 OLE layout and foundation drawings approximately 95% complete.
- DCR0177 works to amend OLE system documents approximately 60% complete.
- DCR0178 works to amend building fixing locations approximately 0% complete.
- DCR0179 works to provide alternative lighting design to accommodate relevant aspects of BSC OLE design approximately 90% complete.
- DCR0180 works for development workshop approximately 0% complete.
- DCR0227 works for OLE technical and planning alignment approximately 90% complete.

g) Ducting

- DCR0156 works for updating cable route and ducting layouts for Section 1B complete.
- DCR0171 works for Siemens cable pulling pits complete.

h) Office Move

- DCR0195 works for office move complete.

3.3 Section 1

3.3.1 Outstanding – Planning

- 1/01e – Hawthornevale Cycleway – withdrawn by **tie**.
- 1/18 – Cathedral Lane Substation Redesign Full Planning – Instruction required.
- 1/18a – Cathedral Lane Substation Redesign Building Warrant – Instruction required.

3.3.2 Outstanding - Technical

- 1A - DCR0202 (Forth Ports Drainage) – advised by CEC that this is a required approval. Instruction received. **tie** has informally advised that Forth Ports drainage has now been adopted by CEC. Formal verification required. Approximately 90% complete.
- 1A2 – DCR0232 - Tower Place Bridge revisions – design underway.
- 1A3 – DCR0175 (Revised Road 8 Drainage) - with CEC for approval.
- 1A4 – DCR0141 (Roads) – design on hold by **tie**.
- 1A4 – DCR0147 (Roads) – with CEC for approval
- 1A4 – DCR0225 (Roads) – high-low level connection at Lindsay Road Retaining Wall – awaiting instruction.
- 1A4 – DCR0225 (Structures) – high-low level connection at Lindsay Road Retaining Wall – awaiting instruction
- 1C1 Drainage with designers awaiting confirmation of design.
- 1C2, Roads with CEC. Being held due to prioritisation and CEC issues with modelling.
- 1C3 – DCR0215 (Frederick Street) – with CEC for approval.
- 1A4 – solution to resolving level difference identified in field works on Lindsay Road has been submitted to CEC. Awaiting approval.

3.3.3 Subsection 1A1 – Dock Gates to Foot of the Walk

a) Roads, Street Lighting, Landscaping, Drainage 1A1

- DCR0098 works to eliminate tree build outs work complete.
- DCR0136 works for new demarcation request by CEC complete.
- IFC already issued.

- Closeout Report issued to CEC.
 - Closeout comments received. IFC re-issued based on closeout comments.
 - DCR0243 - CEC raised new issue about additional wider area signing. SDS sent letter to BSC. Change order required.
 - SDS completing detail design of private wall relocation to south of Port of Leith tram stop. Planning approval previously achieved.
 - CEC have identified an issue with turning vehicles at Laurie Street from Constitution Street. SDS designers investigating.
- b) Tram Stop – Bernard Street (Ch 102+240)
- IFC already issued.
- c) Tram Stop – Foot of the Walk (Ch102+700)
- IFC already issued.
- 3.3.4 Subsection 1A2 – Victoria Docks Entrance Bridge to Dock Gates
- a) Roads, Street Lighting, Landscaping, and Drainage
- DCR0096 works for splitting Prior Approval batch 1/02 complete.
 - DCR0103 works for OLE poles at Tower Place junction complete.
 - DCR0136 works for new demarcation request by CEC complete.
 - IFC already issued.
 - Closeout Report issued to CEC.
 - Closeout comments received. IFC re-issued based on closeout comments.
 - DCR0240 - Forth Ports raised new issued about adding additional access points near the casino. SDS sent letter to BSC. Change order required.
- b) Tram Stop – Port of Leith (Ch 101+780)
- IFC already issued.
- c) Victoria Dock Entrance Bridge – S16 (Ch 101+370)
- IFC already issued.
 - DCR0249 - Additional change to containment provision required. Instruction required.
- d) Tower Place Bridge - S17 (Ch101+470)
- IFC already issued.
 - DCR0232 - Change notice issued to review ramp, coping layouts, and Siemens OLE design. SDS evaluating change requirements.

3.3.5 Subsection 1A3– Ocean Terminal to Victoria Docks Entrance Bridge

a) Roads, Track, Street Lighting and Landscaping

- IFC to be issued by end of reporting period.
- Planning condition by CEC in conflict with CEC TAA approval. SDS working with CEC for resolution.
- Forth Ports - Final agreement between CEC and Forth Ports on the proposed bypass road (Road 8) pending.
- DCR0100 works for Road 8 works complete.
- SDS has requested copy of agreement with Scottish Government and designs for the movement of the access gate to the Scottish Government complex with Forth Port has indicated is being completed. SDS has completed review and assessment of required gate move in line with request by BSC and ATR approved.
- DCR0166 works for revised Road 8 requirements complete.
- DCR0175 works for alteration to Road 8 alignment complete.
- SDS issued drawing under ATR0102 showing potential road shift as requested by **tie**.
- IFC issued.

b) Drainage – Subsection 1A3 – Ocean Terminal to Port of Leith

- Approved by CEC and Scottish Water.
- Revised design prepared to align with concept on Forth Ports Employers Requirements.
- Issued to **tie** to obtain Forth Ports concurrence.
- SDS responded to letter points to assist BSC in response to **tie**.
- SDS revised drainage per agreement with **tie**. SDS provided revised design to **tie** for **tie** to obtain Forth Ports acceptance with respect to future provision. Confirmation received.
- Design submitted to CEC for approval. Draft response received from CEC via email and letter. SDS responded via email and letter. **tie** required to resolve various issues with CEC contained in CEC response. Second letter received by SDS and response provided. Design with CEC for approval.
- SDS provided detail finishes drawings for frontage of Ocean Terminal to **tie** (via BSC) for concurrence with CEC / FP with respect to revised Forth Ports agreement. No response received to date.

c) Tram Stop – Ocean Terminal (Ch 100+950)

- Approved by CEC. Comments addressed.
- IFC issued.

3.3.6 Subsection 1A4

a) Roads, Track, Street Lightning and Landscaping – Subsection 1A4 – Newhaven to Ocean Terminal

- IFC already issued (without pending changes noted below).
- DRC0131 works for feasibility study at ADM Milling complete.
- DCR0136 works for new demarcation request by CEC complete.
- DCR0141 works for new cycleway connection outside LOD approximately 0% complete. **tie** indicated at change meeting on 05 March that this change is no longer desired. Formal confirmation required from BSC.
- DCR0147 works for change due to traffic signal modification outside LOD requested by CEC – works 90% complete.
- DCR0225 - Change due to CEC request for connection of high and low level at Lindsay Road Retaining Wall. Instruction awaited.
- Closeout report issued to CEC (not including new changes noted above). CEC letter of 18 September 09 indicates refusal to confirm closeout without new changes being incorporated.
- DCR0244 issue with new radio mast. Change order required.
- Solution to resolving level difference identified in field works on Lindsay Road has been submitted to CEC. Awaiting approval.

b) Drainage – Subsection 1A4 Newhaven to Ocean Terminal

- Prior Approval granted.
- Forth Ports have completed construction of a new substation and access drive through this area. No as-built information available. DCR0111 works complete.

c) Tram Stop – Newhaven (Ch 100+080)

- IFC already issued.
- SDS providing additional details on arrestor bed as requested.

d) Lindsay Road Retaining Wall – W1 (Ch 100+170)

- IFC already issued.
- DCR0225 - Change due to CEC request for connection of high and low level at Lindsay Road Retaining Wall. Change order required.

e) Substation – Leith Sands – SS16 (Ch 100+570)

- DCR0111 works survey complete. Survey has indicated that Forth Ports have not constructed their infrastructure in location originally provided to SDS. SDS has advised of issues arising from new as-built condition by Forth Ports.
- DCR0203 - Change due to Forth Ports having completed construction of a new substation and access drive through this area. No as-built information available. Works for redesign of substation approximately 90% complete.

3.3.7 Subsection 1B

a) Roads, Track, Drainage, Street Lighting, Landscaping, and Drainage – Subsection 1B

- DCR0064 works for additional Balfour Street crossing complete.
- DCR0136 works for new demarcation request by CEC complete.
- IFC already issued.
- Closeout Report Issued to CEC. Acceptance received with comments.
- CEC provided letter noting closeout of Road Safety Audit and requirements.
- SDS working with BSC on closeout of drainage issues raised.
- DCR0227 works approximately 90% complete.

b) Tram Stop – Balfour Street (Ch 110+670)

- IFC already issued.

c) Substation – Leith Walk – SS11 (Ch110+380)

- IFC already issued.

d) Leith Walk Railway Bridge

- DCR0235 – Special trackform on bridge. SDS issued estimate. Change order required.

3.3.8 Subsection 1C1 – Section 1B to north of Annandale Street

a) Roads, Track, Street Lightning, Landscaping, and Drainage – Subsection 1C1 – London Road

- IFC already issued.
- SW approved drainage via email. Design to be submitted to Business Stream and Scottish Water for formal approval with 1C2 due to interrelationship.
- Closeout Report issued to CEC.
- DCR0227 works approximately 90% complete.

b) Tram Stop – McDonald Road (Ch110+670)

- IFC already issued.
- Revised IFC issued reflecting shift in Tramstop due to levels issues arising.

3.3.9 Subsection 1C2 – North of Annandale Street to Broughton Street

a) Roads, Track, Street Lighting and Landscaping – Subsection 1C2 – London Road to Picardy Place

- TAA submittal with CEC for approval. SDS submitted supplemental information based on initial comments received from CEC via letter.
- Prior Approval granted.

- SW approved drainage via email. Design to be submitted to Business Stream and Scottish Water for formal approval with 1C1 due to interrelationship.
- DCR0106 issued for works outside LOD on Little King Street. Works 10% complete. Field visit identified issues with instruction provided to reverse direction of street. SDS provided email to CEC outlining issues and proposal. Informal response from CEC indicated no longer desirable to reverse direction of street. Formal CEC response required to confirm. Design on hold awaiting confirmation.
- DCR0172 works for Leith Walk underground structure approximately complete.
- DCR0173 change instruction issued to investigate Stage 1 and 2 works for developer request. Works 100% complete. SDS submitted advance letter on traffic modelling results 22 Dec 09. Results report issued to BSC. BSC to confirm if meeting with **tie** / CEC is required.
- DCR0221 - Change due to CEC revised requirements at north side of Picardy Place due to traffic modelling issues raised by CEC. Letter received from CEC on 18 September 09 indicating changes required to the area. Change notice received. Change estimate submitted. Discussions held with **tie** / BSC on method to perform work. SDS awaits clarification.
- DCR0227 works approximately 90% complete.

b) Substation – Cathedral Lane – SS12 (Ch120+400)

- Building Warrant granted.
- Full planning permission granted.
- IFC Issued.
- DCR0167 works for developer request to provide new building works approximately 20% complete. Survey completed.
- DCR0256 - BSC requested SDS to stop DCR0167 and progress with original design to incorporate Siemens requirements. Confirmed via email on 07 April 10 (S. Nesbitt). SDS to submit revised estimate for misalignment on this issue.

c) Tram Stop – Picardy Place (Ch120+600)

- TAA submittal with CEC for approval. Initial informal comments from CEC on submittal addressed
- Prior Approval granted.

3.3.10 Subsection 1C3 – Broughton Street to Section 1D

a) Roads, Track, Street Lighting and Landscaping – Subsection 1C3 – York Place

- IFC already issued.
- Closeout report issued to CEC. Acceptance received with comments.
- DCR0209 works for Crawley tunnel design 100% complete.
- DCR0219 works for new Frederick Street crossing approximately 90% complete. Meeting held with CEC on site to go through requirements. Design with CEC for approval. Letter received and SDS has discussed with CEC. Final approval awaited.

- Letter received from CEC on 18 September 09 indicating changes required to the Elder Street junction and removal of bus lane along York Place. Change order required.
- DCR0227 works approximately 90% complete.

b) Tram Stop – Princes Street (Ch121+950)

- IFC already issued.

c) Tram Stop – St Andrew Square (Ch121+150)

- IFC already issued.

3.3.11 Subsection 1D

a) Roads, Track, Drainage, Street Lighting and Landscaping – Subsection 1D

- DCR0011, 11a works for Shandwick Place preferential treatments complete.
- DCR0063 works for design alternative to Haymarket junction complete.
- DCR0075 works for Haymarket taxi stance complete.
- DCR0105 works for West End tram stop review complete
- DCR0149 works for Shandwick Place TRO signage complete.
- IFC already issued.
- Closeout Report issued to CEC. Acceptance received with comments.
- DCR0193 works for Haymarket street light approximately 20% complete.
- DCR0211 works for West Maitland tunnel design approximately 95% complete.
- CEC have indicated the potential that they may wish to change the concept at Torphichen Street. Clarification required and instruction as appropriate required.
- DCR0255 - Requirement to change kerb lines and traffic movements at Grosvenor Street. Resolution of TRO change orders required. SDS issued letter to BSC.
- SDS responding to issued raised by CEC for informatives closeout of walls.
- DCR0227 works approximately 90% complete.

b) Tram Stop – Shandwick Place (Ch130+710)

- DCR0011, 11a works for Shandwick Place preferential treatments complete.
- IFC already issued.

3.4 Section 2

3.4.1 Outstanding

- New wall at Balbirnie Place identified. Discussed with Planning at informal consultation. No technical approval required (Category 0).

3.4.2 Subsection 2A

a) Roads, Track, Street Lighting and Landscaping – Subsection 2A

- IFC already issued.
- Closeout Report issued to CEC.
- Revised street lighting Issued for Construction which deals with agreed Operational Design Review comment.
- Revised design for Phase 1A/1B separation (Roseburn Delta / cycleway) submitted to CEC Roads authority for TAA approval. Drawings subsequently withdrawn after discussion with tie on scope. Requires approval of Section 3A for IFC. New design works complete.
- DCR0227 works approximately 90% complete.

b) Drainage

- IFC already issued.

c) Substation – Russell Road – SS03 (Ch 200+790)

- IFC already issued

d) Russell Road Bridge – S20 (Ch 200+770)

- IFC already issued

e) Substation – Haymarket – SS02 (Ch 200+070)

- Prior Approval granted and Siemens now to complete the design and issue the IFC.

f) Tram Stop – Haymarket (Ch 200+070)

- IFC already issued.
- Revised design issued to CEC to deal with comments received on bus and tram shelter location and integration.

g) Haymarket Station Viaduct – S19 (Ch 200+020)

- DCR0113 works for internal retaining wall complete.
- IFC already issued.
- DCR0169 works for new cycle provision on steps 0% complete. **tie** have informally discussed with CEC and indicated via email to SDS that this change may not be required. **tie** to confirm change status with BSC. SDS instructed by BSC to complete

as required as part of CDC. SDS queried CEC via email on 10 March 10 for status of closeout. SDS understands that this change is no longer required. BSC to confirm.

- DCR0250 – changes to internal retaining wall requested. Change order required.
- ATR0138 – SDS requested to obtain planning acceptance (variation) for contractor requested removal of cladding from internal walls. Submitted to CEC for acceptance.

h) Verity House Access road retaining wall

- IFC already issued.

i) Crew Relief Facility

- Building Warrant granted.
- IFC issued.
- SDS attended meeting with **tie** / BSC on 04 February 10 to go through **tie** requested changes. **tie** has now reverted back to approved design. SDS responded to additional queries from **tie** to BSC. ATR for this meeting approved.

j) Balbirnie Place Wall

- New wall identified. Discussed with planning at informal consultation. No technical approval required (Category 0).

3.5 Section 3

3.5.1 Outstanding – Planning: None

3.5.2 Outstanding - Technical:

- All 6 technical approvals that are with CEC for consideration are currently on hold due to the agreed prioritisation list between **tie** and CEC. SDS is in delay with respect to these items.
- Drainage information submitted to Scottish Water (SW). SW has recently contacted SDS looking for a meeting to discuss process. SDS provided clarification to **tie** email on this issue. SDS has written formally to BSC on this issue.

3.5.3 Subsection 3A

a) Roads, Track, Street Lighting and Landscaping – Subsection 3A

- Prior Approval achieved.
- Roads, Drainage and Street Lighting IFC is outstanding as TAA comments are outstanding. Section 3 has been de-prioritised by CEC therefore it is not know at present when comments are likely to be received. Letter sent to BSC 08 July 2008. **tie** responded 07 August 2008 (SDS received 27 August 2008) accepting there has been delay to IFC. **tie** stated expected IFC submission 09 August 208, which was not achieved. The de-prioritisation is apparently as **tie** to CEC agreement. SDS awaits approval and any comments.

- b) Drainage
- Submittal with SW for approval.
 - Section 3 has been de-prioritised by CEC therefore it is not know at present when comments are likely to be received. Letter sent to BSC 08 July 2008. **tie** responded 07 August 2008 (SDS received 27 August 2008) accepting there has been delay to IFC. **tie** stated expected IFC submission 09 August 2008, which was not achieved. The de-prioritisation is apparently as **tie** to CEC agreement. SDS awaits approval and any comments.
- c) Tram Stop – Crewe Toll for Western General (Ch 303+010)
- IFC already issued.
- d) Roseburn Corridor Retaining Structure H (Ch 302+600) (Ch 303+030)
- IFC already issued.
- e) Tram Stop – Telford Road (Ch 302+604)
- IFC already issued.
- f) Roseburn Corridor Retaining Structure G (Ch 302+300) (Ch 302+600)
- IFC already issued.
- g) Telford Road Bridge – S10 (Ch 302+220)
- IFC already issued.
- h) Groathill Road South Bridge – S09 (Ch 302+010)
- IFC already issued.
- i) Substation – Craigleith – SS13 (Ch 301+960)
- Prior Approval granted and Siemens now to complete the design and issue the IFC.
- j) Roseburn Corridor Retaining Structure F (Ch301+900) (Ch 302+300)
- IFC already issued.
- k) Tram Stop – Craigleith (Ch 301+860)
- IFC already issued.
- l) Queensferry Road Bridge – S07 (Ch 301+700)
- IFC already issued.
- m) Holiday Inn Access Bridge – S07 (Ch 301+630)
- IFC already issued.

- n) Roseburn Corridor Retaining Structure E (Ch 301+600) (Ch 301+900)
 - IFC already issued.
- o) Craigleith Drive Bridge – S06 (Ch 301+320)
 - IFC already issued.
- p) Roseburn Corridor Retaining Structure D (Ch 301+200) (Ch 301+600)
 - IFC already issued.
- q) Ravelston Dykes Bridge – S05 (Ch 300+960)
 - IFC already issued.
- r) Roseburn Corridor Retaining Structure C (Ch 300+900) (Ch 301+200)
 - IFC already issued.
- s) Tram Stop – Ravelston (Ch 300+860)
 - DCR0005 works for landscaping completed.
 - IFC already issued.
- t) St George's School Footbridge – S04 (Ch 300+650)
 - IFC already issued.
- u) St George's School Access Bridge – S03 (300+640)
 - IFC already issued.
- v) Roseburn Corridor Retaining Structure B (Ch 300+500) (Ch 300+900)
 - IFC already issued.
- w) Coltbridge Viaduct – S02 (Ch 300+470)
 - IFC already issued.
- x) Tram Stop – Roseburn (Ch 300+260)
 - IFC already issued.
- y) Roseburn Terrace Bridge – S01 (Ch 300+210)
 - IFC already issued.
- z) Roseburn Corridor Retaining Structure A (Ch 300+200) (Ch 300+500)
 - IFC already issued.

3.5.4 Subsection 3B

a) Roads, Track, Street Lighting and landscaping – Subsection 3B

- Roads, Drainage and Street Lighting IFC is outstanding as TAA comments are outstanding. Section 3 has been de-prioritised by CEC therefore it is not know at present when comments are likely to be received. Letter sent to BSC 08 July 2008. **tie** responded 07 August 2008 (SDS received 27 August 2008) accepting there has been delay to IFC. **tie** stated expected IFC submission 09 August 2008, which was not achieved. The de-prioritisation is apparently as **tie** to CEC agreement. SDS awaits approval and any comments.

b) Drainage – Subsection 3B

- Submittal with SW for approval.
- Section 3 has been de-prioritised by CEC therefore it is not know at present when comments are likely to be received. Letter sent to BSC 08 July 2008. **tie** responded 07 August 2008 (SDS received 27 August 2008) accepting there has been delay to IFC. **tie** stated expected IFC submission 09 August 2008, which was not achieved. The de-prioritisation is apparently as **tie** to CEC agreement. SDS awaits approval and any comments.

c) Tram Stop – Caroline Park (Ch 311+310)

- IFC already issued.

d) Substation – Granton Mains East – SS14 (Ch 310+950)

- Prior Approval granted and Siemens now to complete the design and issue the IFC.

e) Tram Stop – West Pilton (Ch 310+670)

- DCR0067 works for annotated drawings complete.
- IFC already issued.

f) Crewe Road Gardens Bridge – S12 (Ch 310+390)

- IFC already issued.

3.5.5 Subsection 3C

a) Roads, Track, Street Lighting and Landscaping – Subsection 3C

- Roads, Drainage and Street Lighting IFC is outstanding as TAA comments are outstanding. Section 3 has been deprioritised by CEC therefore it is not know at present when comments are likely to be received. Letter sent to BSC 08 July 2008. **tie** responded 07 August 2008 (SDS received 27 August 2008) accepting there has been delay to IFC. **tie** stated expected IFC submission 09 August 2008, which was not achieved. The de-prioritisation is as **tie** to CEC agreement. SDS awaits approval and any comments.

b) Drainage – Subsection 3C

- Submittal with SW for approval.

- Section 3 has been de-prioritised by CEC therefore it is not know at present when comments are likely to be received. Letter sent to BSC 08 July 2008. **tie** responded 07 August 2008 (SDS received 27 August 2008) accepting there has been delay to IFC. **tie** stated expected IFC submission 09 August 2008, which was not achieved. The de-prioritisation is apparently as **tie** to CEC agreement. SDS awaits approval and any comments.
- c) Tram Stop – Saltire Square (Ch 320+370)
- IFC already issued.
- d) Tram Stop – Granton (Ch 321+120)
- IFC already issued.
- e) Substation – Granton Road – SS15 (Ch 400+020)
- Prior Approval granted and Siemens now to complete the design and issue the IFC.

3.6 Section 5

3.6.1 Outstanding - Planning:

Approvals:

- 5/07d – Murrayfield Accommodation Works (Advertising Consent). Change order has been received. Consultation with CEC underway.
- 5/23 – Roseburn Street Bridge – new prior approval required to accommodate change in design. Informal consultation underway, CEC requested additional changes at pre-submittal meeting on 08 February. BSC to advise on way forward.
- 5/24 – Gogar Interchange. Prior approval submitted and pending consideration.
- 5/30 - Tram Stop Gogarburn. Change Order received. Design progressing. Approximately 70% complete. Informal consultation held with CEC Planning.

Building Warrants:

- 5/05c - JB McLean – revised application submitted, pending consideration.
- 5/07c – Murrayfield Accommodation Works. Application submitted and pending consideration.
- 5/24a – Building Warrant for Gogar Interchange – Informal consultation started with CEC.
- Potential demolition warrants required at properties 96 and 101. Instruction required for SDS to progress. Clarification required on scope.

3.6.2 Outstanding - Technical:

- Revised Roseburn Street Bridge and retaining structures – revised designs have been issued to CEC for review and approval.
- Turning Head Lighting – submitted to NWR if required.
- W18 OLE interface – To be submitted if new approval is required.
- S21E OLE interface – To be submitted if new approval is required.

- S22A OLE interface – To be submitted if new approval is required.
- S23 OLE interface – To be submitted if new approval is required.
- S24 OLE interface – To be submitted if new approval is required.
- S25 OLE interface – To be submitted if new approval is required.
- S26 OLE interface – To be submitted if new approval is required.
- Gogar Interchange Retaining Wall – CEC – design underway
- Gogar Interchange Retaining Wall – NWR – design underway
- DCR0132 – RBS / Gogarburn Tram Stop – design underway
- New wall identified west of Carrick Knowe Bridge.

3.6.3 Subsection 5A

a) Roads, Track, Street Lighting and Landscaping – Subsection 5A

- DCR0201 works for Network Rail Turning head lighting submitted to NWR for acceptance.
- IFC already issued.
- Closeout Report issued to CEC.
- Revised design for Roseburn Street Bridge VE submitted for approval.

b) Drainage – Subsection 5A

- IFC already issued.
- Revised design for Roseburn Street Bridge VE submitted for approval.

c) Balgreen Road Tram Bridge – S22 (Ch 511+400)

- IFC already issued

d) Balgreen Road Network Rail Access Bridge (Ch 511+410)

- IFC issued.
- DCR0016 works for amended technical design complete.
- Design issued to Network Rail and CEC. Form B approval received from NWR.
- Minor comments received from CEC via email. SDS has addressed.

e) Baird Drive Retaining Wall – W8 (Ch 511+190)

- IFC already issued

f) Water of Leith Bridge – S21E (Ch 511+060)

- IFC already issued.
- Revised IFC issued based on DCR0076 works for sewer / pile conflict.

g) Murrayfield Training Pitches Retaining Wall (Ch 510+870) (Ch 511-060)

- IFC already issued

- h) Murrayfield Stadium Underpass – S21C (Ch 510+860)
- IFC already issued
- i) Murrayfield Stadium retaining Wall – S21B (Ch 510+650) (Ch 510-870)
- DCR0018 works for patterned finish complete.
 - DCR0157 works for additional GI complete.
 - IFC already issued
- j) Roseburn Street Bridge – S21A (Ch 510+580)
- DCR0024A works for preliminary VE redesign complete.
 - DCR0024 works for detailed VE redesign approximately 75% complete.
 - New TAA and Prior Approval required.
 - Several pieces of information were outstanding a number of weeks, as outlined in various correspondence between SDS, BSC, and **tie**. Design now progressing with information recently provided.
 - Bridge and retaining structures issued to CEC for technical approvals.
 - Informal consultation started with planning. Meeting held 06 November 09 - comments received and under consideration. **tie** have confirmed that design is to remain as proposed as part of VE and be submitted to CEC regardless of CEC comments at informal consultation. Pre-submittal meeting held 08 February 10, and CEC are looking for additional revisions. SDS evaluating requests and to advise. Meeting held 11 May 2010 to discuss issues.
 - Meeting held on 03 June 2010 with CEC TAA and Planning to resolve final agreed details and mutually acceptable requirements.
- k) Murrayfield Tramstop Retaining Wall – W18 (Ch 510-450)
- Change Order received.
 - SDS progressing design.
- l) Tram Stop – Murrayfield (Ch 510-470)
- DCR0019 works stop design change complete.
 - IFC issued.
- m) Russell Road Retaining Wall 1 – W3 (Ch 510-200)
- IFC already issued.
 - DCR0257 – change order required for unforeseen ground conditions.
- n) Russell Road Retaining Wall 2 – W4 (Ch 510-150)
- IFC already issued

o) SRU / Murrayfield Accommodation Works (DCR0114 / DCR0194)

- Coordination with SRU on-going.
- Planning application submitted. Approval granted.
- Detailed points raised by planning for fence type and gate position being addressed with detailed design. Sample provided and agreed.
- Building warrant package with CEC for approval.
- Design approximately 90% complete.

3.6.4 Subsection 5B

a) Roads, Track, Drainage, Street Lighting and Landscaping – Subsection 5B

- DCR0090 works for environmentally friendly lighting complete.
- DCR0092 works for cycleway design at Edinburgh Park station complete.
- IFC already issued
- Closeout Report issued to CEC. Acceptance received with comments.
- DCR0168 works for revisions to WEBS trackform approximately 20% complete.
- DCR0185 works for WEBS GI approximately 0% complete.

b) Drainage

- IFC already issued

c) Tram Stop – Edinburgh Park Central (Ch 524+530)

- IFC already issued

d) Edinburgh Park Station Bridge – S27 (Ch 524+010)

- DCR0027 – awaiting scope clarification from BSC for VE works.
- DCR0150 works for U12 Beams complete.
- IFC already issued

e) Tram Stop – Edinburgh Park Station (Ch 523+740)

- IFC already issued

f) Tram Stop – Bankhead (Ch 522+960)

- IFC already issued

g) Bankhead Drive Retaining Wall – W11 (Ch 522+800)

- IFC already issued

h) South Gyle Access Bridge – S26 (Ch 522+750)

- IFC already issued

- Pending change at South Gyle Access Bridge. Partial instruction received.
 - DCR0133 works for preliminary design of option 4 complete.
 - SW has indicated that they have not previously accepted principle of instruction provided by **tie. tie** to confirm.
 - Additional works are required based on tie selected alternative. SDS to identify in Preliminary Design report. Change order required for additional works.
 - Preliminary Design Report submitted.
 - Sewer design issued to SW for approval in accordance with discussions with **tie**.
 - SDS awaiting formal confirmation of any design change required.
- i) Substation – Bankhead Drive – SS22 (Ch 522+580)
- Prior Approval already Granted, Siemens to complete the design and issue IFC.
- j) Tram Stop – Saughton (Ch 521+690)
- IFC already issued
- k) Carrick Knowe Underbridge – S23 (Ch 521+030)
- IFC already issued.
 - DCR0084 works for beam design complete.
 - DCR0190 works for beam design complete.
 - Revised IFCs issued.
 - New wall identified west of Carrick Knowe Bridge. In discussion with CEC Planning and TAA on details.
- l) Substation – Jenners Depository (Balgreen) – SS21 (Ch 520+060)
- Prior Approval already Granted, Siemens to complete the design and issue IFC.
- m) Tram Stop – Balgreen (Ch 520+050)
- IFC already issued
- n) Utilities
- DCR0258 (Busgate MP Gas Main) – change notice received.

3.6.5 Subsection 5C

- a) Roads, Track, Drainage, Street Lighting and Landscaping – Subsection 5C
- DCR0070 works for hedge north of tramway complete.
 - DCR0107 works for Gyle stop cycleway widening complete.
 - DCR0108 works for Gogar Roundabout lighting complete.
 - IFC already issued

- Closeout Report issued to CEC.
 - DCR0104 change instruction received to upgrade Lochside Avenue junction. Updated TAA progressing, submittal imminent. Further CEC clarification on lighting requirements to be confirmed as part of potential VE opportunity. Design approved by CEC. SDS addressing comments received, Approximately 95% complete.
 - DCR0102 works for operator comments approximately 0% complete.
- b) Drainage
- IFC already issued
- c) Tram stop – Gogarburn (Ch 531+860)
- DCR0170 works for RBS Tramstop existing utility works approximately 0% complete.
 - DCR0132 works for RBS tram stop future proofing. Confirmation of scope received. Approximately 75% complete.
- d) Depot Access bridge – S32 (Ch531+230)
- IFC already issued.
- e) A8 Underpass – S28 (Ch 531+000)
- DCR0028 – awaiting scope clarification from BSC for VE works.
 - DCR0116 works for underpass piling options complete.
 - IFC already issued.
 - DCR0139 works complete.
- f) Tram Stop – Gyle Centre (Ch 530+770)
- IFC already issued.
- g) Gyle Stop Retaining Wall – W19 (Ch 530+750)
- IFC already issued.
- h) Tram Stop – Gogar Interchange
- DCR0082 change instruction for new tram stop issued. Works approximately 60% complete.
 - Coordination with Network Rail designer on-going
 - Informal Consultation complete with CEC.
 - Clarification on delivery of landscaping on south side of A8 required from **tie**.
 - Written confirmation from **tie** / BSC of new design approach to be provided.
 - NWR confirmation of mast position to be confirmed.
 - SDS received clarification on location of retaining wall due to relocation of sewer pipe by others.
 - Prior Approval with CEC pending decision.

- CEC querying location of radio mast as agreed between SDS, BSC, and tie.

3.7 Section 6

3.7.1 Outstanding:

- Confirmation being sought on requirements due to revised earthworks (north and south batters)
- DCR0026 – awaiting scope clarification from BSC for VE works.

3.7.2 Subsection 6A

a) Roads, Street Lighting & Landscaping – Subsection 6 – Depot

- DCR0145 works for turning head complete.
- DCR0148 works for street lighting complete.
- IFC already issued.
- Closeout report submitted to CEC.
- CEC have raised issue related to departure on depot access road. SDS met with CEC on 14 January 10 and 12 February 10 to discuss issue and resolution. Additional information requested and provided to CEC in line with discussions for agreeable solution.
- Revised IFC submitted which contains agreed resolution.

b) Drainage – Subsection 6 – Depot

- Design received formal approval from SW.
- Revised IFC submitted.

c) Depot Earthworks

- IFC already issued.
- DCR0160 works for modifications to north batter complete.
- DCR0184 works for stability of north batter drainage complete.
- DCR0204 works for BAA drainage complete.
- Revised IFC for north batter drainage design issued.

d) Depot Internal Retaining Walls

- IFC already issued.
- On-going discussion between tie and BSC regarding use of soil nail slope.

e) Depot Ductwork – External Services

- IFC already issued.
- SDS progressing with revised design based on Siemens requirements provided.

f) Depot General Layout

- IFC already issued.
- DCR0163 works for operational design review of depot approximately 0% complete.
- DCR0181 works for additional design approximately 75% complete.

- DCR0220 for Compressed air supply complete.
- g) Depot Building Foundations
- IFC already issued.
- h) Depot Main Building
- IFC already issued.
- i) Ground Floor Slab and Pits
- IFC already issued.
 - Revisions to IFC undertaken to account for Siemens design element details provided.
 - DCR0188 works for pit for manual bogie turntable approximately 60% complete.
- j) Depot Building Steel Superstructure
- IFC already issued.
 - Reviews of contractor drawings on-going.
- k) Track – Subsection 6 – Depot
- DCR0151 works for west turnout revision complete.
 - IFC already issued.
- l) Depot Halt
- IFC already issued.
- m) OLE in Depot
- IFC already issued.
 - SDS received letter confirming Siemens pole layout. Foundation layout drawings to incorporating Siemens design have been issued IFC.
- n) Substation – Gogar Depot – SS01
- IFC already issued.

3.8 Section 7

3.8.1 Outstanding - Planning:

Approvals:

- 7/25a – NIL Future Proofing Crossing 2 (DCR0134) – design development underway.
- 7/28a – NIL Future Proofing Crossing 1 (DCR0134) – design development underway.
- 7/29a – Airport Kiosk (Full Planning Permission). Change order has been received.

Building Warrants:

- 7/29b – Airport Kiosk. Change order has been received.

3.8.2 Subsection 7A

a) Roads, Track, Drainage, Street Lighting and Landscaping

- IFC already issued
- Closeout Report issued to CEC.
- DCR0134 works for NIL future proofing approximately 85% complete. Track alignment completed and provided to NIL for acceptance. Coordination meeting held with NIL on 19 November 09. Additional clarifications provided to NIL and **tie** as requested via email. SDS requested movement of OLE poles to deal with accepted crossing positions. BSC to verify. SDS provided revised designs to BSC / **tie** for confirmation with NIL. Comments received and SDS responded.
- Revised earthworks and landscaping layout required due to topo issues arising and design update a Gogar. Amendment to Prior Approval required.
- Revised track vertical alignment issued.
- Revised earthworks and drainage design issued.
- Design progressing on earthworks solution at Gogar Landfill.
- DCR0191 works for Gogar Landfill utility diversion approximately 0% complete.
- DCR0198 works for BAA dualling future proofing approximately 0% complete.
- DCR0200 works for BAA new Burnside Road alignment approximately 20% complete.
- DCR0205 works for CCRC interfaces with slope and drainage approximately 0% complete.

b) Species Mitigation Plan

- Issued as approved by SNH

c) Tram Stop – Edinburgh Airport (Ch 712+560)

- IFC Issued (less pending changes).
- DCR0095 change order for Airport Kiosk received. Design progressing.
- DCR0135 works for interface with CCRC scheme complete.
- Informal consultation meeting scheduled with CEC on 01 December 09.
- DCR0146 works for Airport Canopy approximately 65% complete.
- CEC have raised objection to detail. SDS instructed to hold submittal of Planning Application (email from **tie** to BSC on 13 Jan 09) and provide information instead for further consultation. Information submitted to CEC as requested.
- Additional meeting held with **tie** / BAA

d) Gogar Burn Retaining Wall Two – W14 (Ch 712+220) (Ch 712+570) –

- DCR0015 works redesign of wall complete.
- DCR0091 works amending wall finish complete.
- IFC already issued.
- Issue identified with burn migration. Change instruction required.

- Issue identified with BAA acceptance to be resolved with redesign.
 - Formal letter received from BSC.
- e) Gogar Burn Retaining Wall One – W14 (Ch 712+100) (Ch 712+190)
- DCR0091 works amending wall finish complete.
 - IFC already issued
 - Issue identified with burn migration. Change instruction required.
 - Issue identified with BAA acceptance to be resolved with redesign.
 - Formal letter received from BSC.
- f) Gogarburn Culvert Three – S34 (Ch712+030)
- IFC already issued
- g) Gogarburn Culvert Two – S31 (711+830)
- IFC already issued
- h) Tram Stop – Ingliston Park & Ride (Ch 711+740)
- IFC already issued
- i) Substation – Tram Eastfield Road (Ch 711-630)
- Prior Approval granted. Siemens to issue IFC upon completion of their design.
- j) Gogarburn Culvert One – S30 (Ch 711+420)
- IFC already issued
- k) Gogarburn Bridge – S29 (Ch 710+400)
- DCR0069 works complete.
 - IFC already issued

4 ISSUE FOR CONSTRUCTION PROGRESS SUMMARY

As of 12 June 2010, the Issue for Construction packages status is as follows:

From a total of 114 IFC Packages, 108 (95%) have been delivered.

The remaining packages outstanding are being finalised, and have been subject to changes and/or delays due to resolution of comments. It should be noted that several IFC drawings already submitted will require to be updated in line with the emerging changes.

5 UTILITIES

5.1 Utilities

5.1.1 Section 1A

- Under instruction from tie SDS have supplied an additional resource to work on resolving Section 1A utilities issues.
- Section 1A (1-5) IFC drawings have been issued to **tie** (Excluding SW foul for Plate 2 only which require further information, tie undertaking survey).
- Section 1A (6-10) IFC drawings have been issued to **tie**.
- Section 1A (11-12) IFC drawings have been issued to **tie**.
- Section 1A (13-20) IFC drawings have been issued to **tie**.
- Change Order issued to SDS for re-design of Baltic Street, tie/SDS held first design meeting at which tie highlighted that they require additional diversions to be design and that an additional change request would be submitted. Trial pit work undertaken by tie and information forwarded to SDS for revised change estimate. SDS submitted revised estimate and requested to amend estimate with further additional scope. SDS received change instruction and commenced design. SDS has issued the IFA drawings to tie.
- SDS asked to review Clancy Docwra design proposal and accept on TQ, highlighted that some utilities may wish for new IFC's. tie asked SDS to continue with TQ strategy.

5.1.2 Section 1B

- IFC drawings have been issued to **tie**.
- The IDC has been carried out and issued to **tie** showing the conflicts between the Utilities IFC infrastructure design and the Approved infrastructure design.

5.1.3 Section 1C

- IFC drawings have been issued to **tie**
- 1C (Picardy Place) **tie** have requested that SDS compare the IFC design with the roads and track layout issued to CEC for approval, The IDC has been carried out and issued to **tie** showing the conflicts between the designs.
- The redesign of the Mound Gas design has been issued IFC.
- SDS have produced revised IFA drawings for Broughton St to North St Andrews St showing the remaining works to completion as agreed by tie. SDS chasing SUC approvals, currently issues with Thus and SW. IFA's updated with TQ since original issue in order to gain approvals and re-issuing currently.
- The IDC has been carried out and issued to **tie** showing the conflicts between the Utilities IFC infrastructure design and the Approved infrastructure design.
- The Crawley Tunnel valves design has been issued to Scottish Water for approval.
- Crawley Tunnel roof slab design has commenced

5.1.4 Section 1D

- IFC drawings have been issued to **tie**.
- Haymarket Junction utilities redesign is complete and issued IFC.

- SDS has produced revised IFA drawings for Shandwick Place to Haymarket showing the remaining works to completion as agreed by tie. SDS chasing SUC approvals, SGN comments incorporated and IFA re-issued.
- Under instruction from tie SDS have supplied an additional resource to work on resolving Sections 1B-1D utilities issues. The additional resource has left the project and tie do not wish for a replacement.
- The IDC has been carried out and issued to tie showing the conflicts between the Utilities IFC infrastructure design and the Approved infrastructure design.

5.1.5 Section 2A

- IFC drawings have been issued to tie

5.1.6 Section 5A

- IFC drawings have been issued to tie
- Water of Leith Sewer lining issued IFC to tie.
- Roseburn St Viaduct Change means that the utility diversions need to be reassessed in proximity to the new structure. Coordinating with Network Rail/tie to resolve remaining outstanding issues.

5.1.7 Section 5B

- IFC drawings have been issued to tie.
- All sewer design issued for IFC except at South Gyle Access, design approved by Scottish Water. SDS has produced Prelim Design for revised scheme as instructed against Option 4. Awaiting further instruction from BSC. Revised design for South Gyle Access Sewer has been issued to Scottish water for Approval and comments being incorporated.
- SDS working with tie to amend original SDS to reflect site conditions.

5.1.8 Section 5C

- IFC drawings have been issued to tie.
- SDS amending Edinburgh Park utilities design based on site conditions and the supply of new as-builts.
- All Edinburgh Park TQ's responded to and revised details issued where required.

5.1.9 Section 6A

- IFC drawings have been issued to tie.

5.1.10 Section 7A

- 7A was carried out under RATS, tie to supply XYZ coordinate as-builts for comparison to design
- Gogar landfill sewer re-design has been issued IFA to Scottish Water.

5.1.11 Section 7B (utilities only section)

- Design being carried out by others (not SDS scope)

6 ADDITIONAL CONSTRUCTION SUPPORT

6.1 TQs

- 68 TQs were received during the reporting period (17th May 2010 to 4th June 2010) and 82 responded to; refer to the TQ register which is updated and maintained separately.

6.2 Month Ahead Org Chart and Activities

Proposed staffing for the upcoming month, based on anticipated construction activities from the BSC look-ahead programme is included as Appendix B.

Roads Construction Support Teams

- Support and attendance to section progress meetings
- Section 1C/1D (Princes Street)
 - a. Review of remedial/snagging works.
 - b. Monitoring of any ongoing activities in line with ITP requirements
 - c. Responding to on site and technical queries as required
- Section 1A
 - a. Responding to on site and technical queries as activity commences with BSC package contractor McKean.
 - b. Supporting Forth Ports queries
 - c. Attending meetings as required
- Section 1B
 - a. Ready to Mobilise and providing any design advice on mobilisation
 - b. Responding to on site and technical queries as necessary.
- Remainder of Section 1C
 - a. Ready to Mobilise and providing any design advice on mobilisation
 - b. Responding to on site and technical queries as necessary.
- Remainder of Section 1D
 - a. Ready to Mobilise and providing any design advice on mobilisation
 - b. Review and inspection of any advanced works

- c. Responding to on site and technical queries as activity commences with BSC package contractor
 - d. Attending meetings as required
- Section 5B
 - a. Monitoring and checking road construction works at Hermiston Gait/Edinburgh Park Station area.
 - b. Responding to technical queries and on site reviews.
 - c. Monitoring of ongoing activities in line with ITP requirements.
- Section 6
 - a. Monitoring and checking road construction works at Depot Access Road and car parking areas.
 - b. Responding to technical queries and on site reviews.
 - c. Monitoring of ongoing activities in line with ITP requirements.

Geotechnical Construction Support Teams

- Section 1A
 - a. Witness of inspections of formation testing associate with bridge works.
 - b. Witness of inspections of formation testing for retaining wall foundations
 - c. Witness and assistance with site visits for embankment works
 - d. Witness of inspections of formation testing for OLE foundation works
 - e. Monitoring of activities in line with ITP requirements
 - f. Responding to Site TQ's
- Section 2A
 - a. Review of investigations and verifications of ground conditions
 - b. Ongoing technical support to construction team through technical queries
 - c. Attendance at client and package contractor progress meetings as required
 - d. Review and support for earthworks in line with ULE90130-SW-GEO-00015
 - e. Witness of inspections of formation testing for OLE foundation works
 - f. Monitoring of activities in line with ITP requirements

- Section 5
 - a. Inspection and witness of Piling works at Russell Road
 - b. Review, inspection and witness of earthworks throughout Section 5 in line with ULE90130-SW-GEO-00015
 - c. Inspection and witness of reinforced earth works at Edinburgh approach ramps
 - d. Inspection and witness of any/all formations
 - e. Ongoing technical support to construction team through technical queries
 - f. Review and check suitability of arisings for use in make up
 - g. Monitoring of the placement of material
 - h. Monitoring of activities in line with ITP requirements
- Section 6
 - a. Ongoing technical support to construction team through Technical Queries
 - b. Attendance at client and package contractor progress meetings
 - c. Monitoring of ongoing activities in line with ITP requirements
 - d. Formation inspection for depot foundations
 - e. Formation inspections for road build up
 - f. Slope inspections
- Section 7
 - a. Review of investigations and verifications of ground conditions in line with Farrans programme of works
 - b. Ongoing technical support to construction team through technical queries
 - c. Attendance at client and package contractor progress meetings as required
 - d. Witness of inspections of formation testing for OLE foundation works
 - e. Review and support for earthworks in line with ULE90130-SW-GEO-00015
 - f. Monitoring of activities in line with ITP requirements

Civil and Structural teams

- a. Ongoing review of Construction programmes to ensure appropriate supervision of construction activities and ITP requirements.
 - b. Attendance at progress meetings as required.
 - c. Monitor and manage TQs in and out
 - d. Manage and provide detail for design changes as a result of site queries
- Section 1A

- a. Review and assistance with MUDFA conflict schedules for impact on construction works
- b. Responding to site queries related to ducting, drainage, civil and structural items
- c. Attendance at Contractor and package contractor progress meetings
- d. Support to BSC in resolution of Tower Place Bridge and review design change requests in relation to this structure
- e. Support BSC in relation to OLE foundation requirements, selection and testing regime
- Remainder of Section 1C / 1D
 - a. Prepare for Mobilisation commencement on new sites
 - b. Support at start-up meetings and workshops as required
 - c. Review and assistance with MUDFA conflict schedules for impact on construction works
 - d. Responding to site queries related to ducting and drainage, civil and structural items
 - e. Attendance at Contractor and package contractor progress meetings
- Section 2A
 - a. Ongoing inspections and support for construction of Haymarket Viaduct.
 - b. Inspection and witness of Russell Road bridge
 - c. Ongoing inspection and support for drainage, ducting, trackform, OLE foundations throughout Section 2A
 - d. Attendance at Contractor and Package contractor progress meetings
 - e. Ongoing technical support to construction teams through technical queries
 - f. Monitoring of construction activities in line with ITP requirements
 - g. Ongoing technical support to construction teams through technical queries
- Section 5
 - a. Ongoing inspections of Russell Road Piling works.
 - b. Ongoing inspection of Carricknowe Bridge construction works
 - c. Ongoing inspections of Edinburgh Park Bridge
 - d. Ongoing inspection of A8 underpass. Attendance at Contractor and Package contractor progress meetings
 - e. Ongoing inspections of Depot Access Bridge construction
 - f. Ongoing technical support to construction teams through technical queries
 - g. Monitoring of construction activities in line with ITP requirements

- h. Ongoing technical support to construction teams through technical queries
- Section 6
 - a. Ongoing inspections of OLE foundation works
 - b. Ongoing inspections of concrete works slabs and pits and trackform.
 - c. Ongoing inspections and technical support for construction activities related to building works
 - d. Ongoing inspections of drainage within the depot
 - e. Ongoing inspections of trackform improvement layer and associated works
 - f. Attendance at contractor and package contractor progress meetings
 - g. Monitoring of construction activities in line with ITP requirements
 - h. Ongoing technical support to construction teams through technical queries
- Section 7
 - a. Ongoing inspections of Gogarburn bridge and retaining walls.
 - b. Ongoing inspections of drainage and ducting installation
 - c. Attendance at Contractor and Package contractor progress meetings
 - d. Ongoing technical support to construction teams through technical queries
 - e. Monitoring of construction activities in line with ITP requirements
 - f. Ongoing technical support to construction teams through technical queries

7 DESIGN AND ADDITIONAL DESIGN SUPPORT

7.1 Activities Undertaken

SDS has continued to provide as-needed Additional Design Support to BSC as required and attended several meetings related to various items. As discussed with BSC and **tie**, SDS has reduced our resourcing during this period. Main focus over the past 4 weeks has been around:

- Coordination of CAF DKE and swept path run analysis results and clarifications
- Meeting and IDR of emerging BSC OLE designs
- Design and coordination of requirements for Road Rehabilitation Works
- Design and coordination of requirements for upcoming design for BSC Trackform integration
- Design and coordination of requirements for OLE design.
- Design and coordination of requirements for OLE foundation designs

7.2 Ongoing Design Issues

7.2.1 Picardy Place

- Section 1C-2
- Layout generally agreed with Roads Authority at coordination meeting 06th August pending confirmation of updated modelling results. CEC to advise any further TAA issues. Impact on PA, TA and IFC.
- CEC planning department desire 6no. additional cross sections as advised 01-September 08 via email.
- CEC Planning department have provided no feedback on plaza concept provided for informal comment.
- Informal Consultation drawings issued to CEC 26th Sep '08. Meeting to finalise PA on 02 Oct '08.
- Informal meeting of **tie** / CEC / SDS on 30 September 2008 where CEC identified new constraints with hotel.
- Informal meeting with CEC on 1st October 2008 to discuss design development. SDS issued letter on 2 October 2008.
- Prior Approval meeting on 2 October 2008. SDS issued information to CEC via email.
- Prior Approval issued on 17 October 2008.
- Comments on Prior Approval received informally from CEC on 30 October 2008.
- Technical Approval issued on 3rd November 2008. SDS responding to initial comments from CEC on TAA submittal.
- CEC informally noted to SDS on 20 November 2008 that they may wish to change Roads layout.
- Prior Approval including CEC comments re-submitted on 28 November 2008.
- TAA including CEC comments resubmitted on 28 November 2008.
- Updated Planning drawings submitted 05 December based on advance TAA comments received.
- Road Safety Audit and Tram Stop submitted to CEC on 12 December 2009.
- Meeting on 15 January 09 with CEC to discuss potential comments and provide clarifications.
- Meeting on 21 January 2009 to discuss CEC modelling concerns. No response from CEC on information provided.
- Email from CEC on 30 March 09 indicates potential CEC change to layout of the area. Clarification required.
- SDS received change notice from BSC. SDS reviewing and preparing estimate.
- **tie** requested this change be included on w/e 08 May Design Changes meeting.
- CEC identified that they have issue with operation of junction based on CEC internal modelling. Junction is designed to instruction provided and subsequent discussions during design development. SDS has done significant advance modelling and has advised CEC of potential issue in advance of CEC raising the issue.
- CEC indicated in recent TRO Meetings that paper sits with M. Paulson and awaits final decision before instruction can be issued.

- Letter issued by CEC on 18 September 09 identifying additional changes required.
- Instruction issued for Stage 1 and Stage 2 CEC change to island geometry. Design underway and advance letter on traffic modelling issued.
- Full report issued.
- SDS awaiting meeting notification, additional instruction or closeout design.

7.2.2 Transdev comments on 5C Technical Approval – Roads (DCR0102)

- Section 5C
- Transdev have written a paper on the design at Edinburgh Park. SDS has notified BSC of Change and will review paper when instructed.
- SDS received response to letter from BSC. SDS has returned response confirming position that change is required.
- Change Notice received. SDS submitted estimate w/e 27 Feb 09. SDS requested to provide revised estimate.
- Meeting scheduled for week of 22 June 09 to discuss responses.
- SDS evaluating relevant comments as outcome of meeting.
- Letter received from BSC containing tie position on this issue. SDS reviewing letter and SDS / BSC to have meeting to discuss as agreed in Design-Change Issues meeting.
- Meeting held between BSC and SDS on 07 Jan 10 to discuss issues and tie letter. SDS responded to BSC letter.
- SDS awaiting further instruction.

7.2.3 TRO Drawings (DCR0083, DCR0110, DCR0119)

- Section 1
- **tie** (Keith Rimmer) informally handed SDS marked up drawings catching fundamental changes to kerb lines for drawings already approved by CEC and in some instances, Issued For Construction to BSC. Change Order required.
- These drawings must be formally submitted to SDS under cover of **tie** letter for audit trail and QA / QC procedures.
- Discussion is required prior to execution of design work with the priority of Section 1B as changes to the Technical Drawings (i.e. gullies / kerbs etc) will need to be immediately instructed to BSC as construction work is already ongoing.
- Additional work outside the LOD arising from drawing mark-ups.
- Informal meeting with CEC on 14 November 2008 to discuss the mark-ups.
- SDS provided updated responses to Public Exhibition comments on 08 January 2009.
- SDS prepared scope and estimate for Changes (DCR0110)
- **tie** / CEC request final drawings for public deposit to be provided before Christmas. CEC have indicated that they have not yet reviewed sections 2-7. CEC indicate that they wish TAL 5/05 to be modelled. SDS yet to be instructed to use TAL 5/05, and have previously advised of potential issues which may arise.
- SDS advised **tie** via email on 08 January 2009 about issues arising from TAL5/05 and need for change order to SDS.

- BSC requested a meeting for discussion of TRO changes. BSC to advise.
- Change notices received, SDS submitted estimates w/e 27/02/09.(DCR0083, DCR0119)
- SDS received letter on 24 March 09.
- SDS has requested meetings with BSC to discuss, however these have been cancelled by BSC prior to meeting.
- Discussed at change meeting on 23 April 09. Agreed that higher level meeting to be scheduled to resolve commercial issue, as there is a fundamental disagreement with **tie**.
- CEC provided new comments with respect to recent made TRO along Fastlink after 26 May 09 meeting.
- Site walkout scheduled for 08 June 09 for Little King Street requirements.
- Meeting scheduled with CEC for 10 June 09 to confirm all requirements for TRO and aligned design moving forward.
- Additional meeting held on 17 June 09 completing information not covered in meeting of 10 June 09.
- TRO drawings issued to BSC / **tie** on 19 August 2009.
- Letter received from CEC outlining additional requirements and design for TRO drawings.
- Additional meeting held on 14 September 09 to talk through changes. Change order received.
- SDS has submitted final TRO drawings to **tie** / CEC containing all comments.
- SDS / BSC attended meeting with **tie** on 17 November 09 to discuss comments received from Statutory Consultation. **tie** indicated that they are looking for further written formal justification for the agreed and approved design in addition to the information previously supplied to support the TRO process. SDS believes this request to be extra work, as the drawings, schedules, public meetings, and informal TRO consultations have demonstrated the case that the design has been consulted with all parties in an appropriate manner. SDS to provide response to Statutory Consultation comments when formally received from BSC.
- Outstanding commercial issues to be resolved. BSC has requested meeting, SDS to confirm.
- SDS provided 2 updated versions of TRO General Overview document to BSC, based on multiple sets of informal comments received from **tie** on this document which has been provided to support the TRO process.
- **tie** has provided informal comments on schedules to BSC / SDS. SDS reviewing for any technical issues raised. Formal comments required.
- **tie** raised informal query to BSC on 15 Jan 10 via email to change the agreed and approved design based on frontager comment. SDS replied to BSC request for comment.
- SDS has provided updated TRO General Overview document based on informal comments by **tie**.
- SDS has provided summary of TRO changes from informal public consultation to public deposit document based on request by **tie**.

- SDS has provided updated TRO Schedules and one drawing based on informal comments by **tie**.
- SDS has formally written to BSC on the recent events of TROs.
- SDS received BSC letter containing **tie** letter with six issues requesting SDS response / clarification. BSC advised by **tie** (via email) that these six comments are the total of comments requiring assistance for TRO.

7.2.4 Operator Comments

- System-wide
- At the Design Assurance Presentation, SDS and BSC were informed that Transdev are currently undertaking Operator reviews of the Design. Any changes arising out of this must be instructed via the Change Control procedure.
- 2A Operational Review was on Thursday 30th October 2008. BSC could not attend.
- 6A Operational Review was on Wednesday 29 October 2008. BSC in attendance (Colin Brady).
- There is an ATR outstanding for attendance at these meetings and any future meetings.
- Letter from BSC received on 02 March 09. SDS to formally respond indicating that no revisions to be made unless formally instructed.
- SDS provided response letter to BSC on 09 March 09 (our ref ULE90130-SW-LET-01442)
- Meeting scheduled for week of 22 June 09 to discuss responses.
- SDS evaluating relevant comments as outcome of meeting.
- Meeting held between BSC and SDS to discuss issues arising.
- BSC to advise of any further actions.

7.2.5 Section 1C3 Closeout

- Section 1C3
- CEC provided letter closing out 1C3.
- Meeting anticipated to be held week of 29 June 09 to discuss and new / remaining comments to and requirements to close.
- New informatives included which must be closed during construction with procurement of items.
- Meeting held week of 16 November to discuss issues related to re-opening of Princes Street.
- New change (DCR0219) identified for additional crossing at Frederick Street. Meeting held with CEC on 27 January 10 at site to go through requirements. Draft design provided to CEC in advance of formal submittal to mitigate comments. Design with CEC for formal approval. SDS received informal comments and has responded to CEC.

7.2.6 Little King Street Reversal

- Section 1C2

- SDS and CEC completed walkout on 08 June 09 and identified several potential issues arising out of instruction.
- Current change instruction does not account for all required works if moved forward.
- SDS provided email to CEC on 12 June 09 outlining issues arising, potential impacts, and proposed resolution. Preliminary information on modelling impacts of not reversing direction of street included to assist CEC in decision making process.
- Formal response from CEC required.
- Letter issued by CEC on 18 September 09 outlining issues with this area.
- SDS await formal closeout.

7.2.7 Elder Street / York Place Design Change

- Section 1C3
- **tie** (D. Fraser) informally requested a design change to the TRO and Roads design via email to SDS (S. Ney) on 19 June 09.
- SDS response was that no action to be taken unless formally instructed through appropriate contractual channels.
- Letter issued by CEC on 18 September 09 outlining changes to this area to accommodate Henderson Global Development.
- Change order required.
- SDS awaits instruction.

7.2.8 Gogar Intermodal Stop

- Section 5C
- Kick-off meeting held 17 June 09 with Transport Scotland.
- Change order received. Tie to schedule workshop for 02 July 09 to discuss design details.
- SDS preparing list of required items from NR designer in advance of meeting.
- SDS completed actions arising from initial meeting.
- SDS issued information requested by Network Rail.
- Network Rail confirmed which proposal they intend to progress forward with. **tie** to issue formal instruction of Network Rail proposal. SDS working to verbal agreement with BSC / **tie** of modified concept.
- Meeting held 22 September to confirm scope requirements.
- Preliminary design completed.
- Assisted Mott McDonald with NWR planning application as requested.
- Informal Consultation meeting with CEC held 06 November 09.
- BSC confirmed at progress meeting on 21 October 09 that design should be finalised assuming new interchange to be built after implementation of base tram scheme.
- SDS has identified issues with track / sewer level interface which needs to be resolved.
- OLE and trackform designs from Siemens critical to closing out design and planning requirements.

- Radio Mast requirements to be closed out at meeting on 24 November 09.
- Tram stop and canopy design progressing, including structural steel framework.
- Earthworks being progressed, including landscaping based on information received from Mott Macdonald. Change order required for new / additional works identified.
- Change to wall design required due to water line design being proposed by NWR.
- CEC requested radio mast to be placed on NWR building. SDS to confirm with NWR issues arising.
- SDS instructed not to proceed with Prior Approval submittal by tie.
- SDS awaiting clarification on requirements for relocated wall as a result of the sewer diversion by others.
- Prior Approval submitted.
- SDS received comments from CEC related to finishes and radio mast location. SDS responded to comments. tie to clarify with CEC position of radio mast.

7.2.9 CAF DKE Swept Path Analysis

- Systemwide
- Assumptions and analysis finalised.
- Several issues requiring more in-depth analysis have been identified during the review process.
- Draft results issued to BSC via email.
- Closeout report issued.
- Letter received from BSC noting perceived issues. SDS provided response.
- SDS proceeding with revised tram stop layout based on dimensional requirements of CAF tram. Impact to platform width and stop shelter roof dimension.
- SDS awaiting instruction.
- Additional analysis for ballasted areas instructed by BSC.

7.2.10 Section 3 Technical Reviews by CEC

- Required to closeout detailed design.
- Revised Road Safety Audits provided.
- De-prioritised by CEC.
- Confirmation of programme to complete required.

7.2.11 Depot

- Responding to TQ's as required.
- Attending weekly meetings at site.
- Raising RFIs to BSC to clarify information shown on ICF documentation.
- Coordinating E&M design with Architectural and Structural elements and amending layouts.
- Updating layouts in line with site changes.

- Reviewing subcontractor drawings.
- Revising inspection pits details and layouts.
- Revising wheel lathe details and layouts.
- Revising switch room trench RC and general arrangement.
- Coordinating energy centre design.
- Blockwork package updates to suit ODR and changes.
- Joinery package updates to suit ODR and changes.
- Partition package updates to suit ODR and changes.
- Fire strategy updates to suit ODR and changes.

7.2.12 Roseburn Street Viaduct

- SDS submitted to CEC for technical approval – approval received.
- SDS submitted to CEC for informal consultation. Meeting held. CEC requested changes to alignment of retaining walls, new walls beneath bridge, and revised surface finishes.
- Meeting held with **tie** to discuss design development.
- Additional meeting with tie on 11 May 2010 to determine way forward.
- Meeting held 03 June 2010 with CEC TAA and Planning to closeout find mutually acceptable requirements of CEC.

7.2.13 NIL Future proofing

- SDS developing detailed design based on scope.
- SDS requested Siemens to relocate OLE poles based on drive locations in scope of works.
- Design submitted to BSC for **tie** / NIL confirmation. Comments received and SDS responded.
- Design to be submitted to CEC Planning for Informal Consultation immanently upon confirmation of OLE requirements from BSC.

7.2.14 Gogarburn (RBS) Tram Stop

- Instruction received.
- SDS developed design based on instruction. Submitted to CEC for Informal Consultation.
- CEC request additional footway from A8 to site along access drive. Path partially outside LOD. SDS notified BSC / **tie**. **tie** confirmed path to be included in requirements.
- BSC issued instruction amendment to SDS indicating that future proofing (foundations) no longer to be provided.

7.3 Additional Resources

The Design Team Leaders detailed below can be made available to respond to TQ's and attend the appropriate meeting (subject to suitable notice) on the proviso that BSC give instruction that these DTLs time spent will be paid for.

<u>DISCIPLINE</u>	<u>Code</u>	<u>DTL (and contact details)</u>
Tram	TRM	Tony Goodyear
Track (and Alignment)	TRK	Phil Bull
Track Auxiliaries	TRA	Mike Reeves
Roads	RDS	Mike Rogers
Pavement Design	RDS	Orlando Walters
Structures (P)	STR-P	Andy Groves
Structures (H)	STR-H	Phil McKenna
Traction Power Supply	TPS	Graeme Evans
Sub Stations	SUB	Brian Hall
Depot / Gogar Interchange	DEP	Steven Anderson
Tram Stops	STP	Ashwin Rabadia
Overhead Line Equipment	OLE	Mike Coupe
Supervisory, Control and Comms	SCC	Mike Goldsworthy
Low Voltage Supplies	LVS	John Ash
Street Lighting	STL	Anthony Walsh
Drainage	DRN	Bob Jones
Ducting	DUC	Chris Reid
Geotechnical	GEO	David Raeside
Environment	ENV	Kat Dennis
Utilities (L2 - Sections 2, 5, 6 and 7)	UTL	Alan Dolan
Utilities (L1 - Sections 1 and 3)	UTL	Brian McCrear
Landscape	LSC	John Ramsay
Noise		Rupert Taylor

APPENDICES

APPENDIX A – RFI REGISTER

BSC RFI Register

HB#	BIW Ref	RFI Reference	Title	Issuer	Issue date	Requested response date	Response date	Response HB#	Open/closed
92191	SDS RFI-00001	ULE90130-SW-RFI-00120	Earth Bonding Requirements	C. Reid	23/02/09				
92193	SDS RFI-00002	ULE90130-SW-RFI-00121	Base Plate Hole & Anchor Bolt Diameter	C. Reid	23/02/09				
92194	SDS RFI-00003	ULE90130-SW-RFI-00122	Locking Nut Confirmation	C. Reid	23/02/09				
92195	SDS RFI-00004	ULE90130-SW-RFI-00123	Ghout Below Base Plate Information	C. Reid	23/02/09				
92196	SDS RFI-00005	ULE90130-SW-RFI-00124	Loading Issue	C. Reid	23/02/09				
92197	SDS RFI-00006	ULE90130-SW-RFI-00125	Axes Convention for applied load effects	A. Groves	23/02/09				
92199	SDS RFI-00007	ULE90130-SW-RFI-00126	Load Effects at Other Limit State	A. Groves	23/02/09				
92202	Not Issued	ULE90130-SW-RFI-00127	Inclination of Backstay Cables	A. Groves	Not issued				
92348	SDS RFI-00008	ULE90130-SW-RFI-00128	Inclination of Backstay Cables	A. Groves	23/02/09				
92349	SDS RFI-00009	ULE90130-SW-RFI-00129	Inclination of Backstay Cables	A. Groves	23/02/09				
92350	SDS RFI-00010	ULE90130-SW-RFI-00130	Inclination of Backstay Cables	A. Groves	23/02/09				
92575	SDS RFI-00011	ULE90130-SW-RFI-00131	Vibration Assessment	C. Reid	23/02/09				
92576	SDS RFI-00012	ULE90130-SW-RFI-00132	Vibration Assessment	C. Reid	23/02/09				
92577	SDS RFI-00013	ULE90130-SW-RFI-00133	Deflection/Rotation Limits	A. Groves	23/02/09	25/02/09			
92876	SDS RFI-00014	ULE90130-SW-RFI-00134	Rheda City Interfaces	C Reid	02/03/09	ASAP	20/04/2009	94295	Closed
92881	SDS RFI-00015	ULE90130-SW-RFI-00135	Rheda City Interfaces	C Reid	02/03/09	ASAP	20/04/2009	94295	Closed
92883	SDS RFI-00016	ULE90130-SW-RFI-00136	Grooved Rail Bearers	C Reid	02/03/09	ASAP	20/04/2009	94295	Closed
92889	SDS RFI-00017	ULE90130-SW-RFI-00137	Rheda City Derailment	C Reid	02/03/09	ASAP	20/04/2009	94295	Closed
92890	SDS RFI-00018	ULE90130-SW-RFI-00138	Trackform at S20 Russell Road Bridge	C Reid	02/03/09	ASAP	20/04/2009	94295	Closed
92891	SDS RFI-00019	ULE90130-SW-RFI-00139	Groove Rail Containment	C Reid	02/03/09	ASAP	20/04/2009	94295	Closed
92897	SDS RFI-00020	ULE90130-SW-RFI-00140	Groove Rail Containment	C Reid	02/03/09	ASAP	20/04/2009	94295	Closed
94197	SDS RFI-00021	ULE90130-01-RFI-00078	Transitions to ballasted track	C Pope	15/04/09	ASAP	21/12/2009		Closed
94486	SDS RFI-00022	ULE90130-05-RFI-00018	At grade crossing grass track (Rheda green trackform)	C Pope	29/04/09	ASAP			
94526	SDS RFI-00023	ULE90130-05-RFI-00019	Rheda city green document	C Pope	29/04/09	ASAP	21/12/2009	105205	Closed
94527	SDS RFI-00024	ULE90130-01-RFI-00079	Transitions to ballasted track	C Pope	29/04/09	ASAP			
94879	SDS RFI-00025	ULE9013-SW-RFI-00141	CCTV Camera Specification	S Ney	15/05/09				
95179	SDS RFI-00026	ULE90130-06-RFI-00003	Basic design - special track forms	C Pope	22/05/09	ASAP			
97808	SDS RFI-00027	ULE90130-SW-RFI-00142	Requirements for Earthing and Bonding	Huseyim Yildirim	27/08/09				
97809	SDS RFI-00028	ULE90130-SW-RFI-00143	Depot Sub Station	Huseyim Yildirim	27/08/09				
97810	SDS RFI-00029	ULE90130-SW-RFI-00144	Traction Power Containment	Huseyim Yildirim	27/08/09				
97812	SDS RFI-00030	ULE90130-SW-RFI-00145	Gogar Depot Wesurail Tramwash Proposal	Huseyim Yildirim	27/08/09	ASAP	15/09/2009	98430	Closed
97813	SDS RFI-00031	ULE90130-SW-RFI-00146	Gogar Depot Wesurail Tramwash Proposal	Huseyim Yildirim	27/08/09	ASAP	15/09/2009	98430	Closed
97817	SDS RFI-00032	ULE90130-SW-RFI-00147	Gogar Depot Wesurail Tramwash Proposal	Huseyim Yildirim	27/08/09	ASAP	15/09/2009	98430	Closed
97818	SDS RFI-00033	ULE90130-SW-RFI-00148	Gogar Depot Wesurail Tramwash Proposal	Huseyim Yildirim	27/08/09	ASAP	15/09/2009	98430	Closed
97823	SDS RFI-00034	ULE90130-SW-RFI-00149	Traction Power	Huseyim Yildirim	27/08/09				
98454	SDS RFI-00035	ULE90130-06-RFI-00004	OLE pole foundation ch.121+674	C Reid	18/09/09	ASAP	28/09/2009	98896	Closed
98587	SDS RFI-00036	ULE90130-06-RFI-00005	Gogar depot sub-station building Siemens drawings	S Schatten	23/09/09	29/09/09			
98589	SDS RFI-00037	ULE90130-06-RFI-00006	Gogar depot sand silo details	S Schatten	23/09/09	29/09/09	19/10/2009	99361	Closed
98590	SDS RFI-00038	ULE90130-06-RFI-00007	Gogar depot sanding plant details	S Schatten	23/09/09	29/09/09			
98592	SDS RFI-00039	ULE90130-06-RFI-00008	Gogar depot sand silo details (2)	S Schatten	23/09/09	29/09/09	23/04/2010		Closed
98592	SDS RFI-00040	ULE90130-06-RFI-00009	Gogar depot Wesurail tramwash issued drawings	S Schatten	23/09/09	29/09/09	14/10/2009	99278	Closed
98940	SDS RFI-00041	ULE90130-06-RFI-00010	Airside Drainage and Levels North Batter Area	N Baldwin	06/10/09	05/10/09	12/10/2009	99186	Closed
98951	SDS RFI-00042	ULE90130-05-RFI-00032	Section 5B TPDS Detector Locations for Connection to Trackside Ducting	M Fell	05/10/09	07/10/09	10/05/2010		Closed
98982	SDS RFI-00043	ULE90130-06-RFI-00011	Depot Tramwash Siemens Drawings	R Young	06/10/09	07/10/09	12/10/2009	99184	Closed
99087	SDS RFI-00044	ULE90130-06-RFI-00012	Depot Technical Specification of PFAFF Manual Turntable (1)	R Young	07/10/09	09/10/09	13/10/2009	99228	Closed
99088	SDS RFI-00045	ULE90130-06-RFI-00013	Depot Technical Specification of PFAFF Manual Turntable (2)	R Young	07/10/09	09/10/09	12/10/2009	99185	Closed
99246	SDS RFI-00046	ULE90130-06-RFI-00014	Gogar Depot Wesurail Tramwash Drawing	S Thyagarajah	14/10/09	15/10/09			Request for Drawings
99253	SDS RFI-00047	ULE90130-06-RFI-00015	Gogar Depot Building Bogie Wash Details	D James	14/10/09	20/10/09			
99450	SDS RFI-00048	ULE90130-06-RFI-00016	Sand Filling System	S. Thyagarajah	22/10/09	23/10/09	09/11/2009	105194	Closed
99470	SDS RFI-00049	ULE90130-06-RFI-00017	GOGAR DEPOT – Equipments & Communication Room	I Akerkaou	22/10/09	28/10/09			
99566	SDS RFI-00050	ULE90130-01-RFI-00105	OLE Query - Relocation of Building Fixing 121000	S. Ney	26/10/09	03/11/09	11/12/2009	100979	Closed
99857	SDS RFI-00051	ULE90130-01-RFI-00106	Traction Power Duct Cross Section Reduction at Crawley Tunnel	M Fell	09/11/09	ASAP	17/11/2009	100992	Closed
100000	SDS RFI-00052	ULE90130-05-RFI-00033	Edinburgh Park Station Bridge – OLE Pole Base Plates	M Coupe	12/11/09	16/11/09	11/12/2009	101017	Closed
100312	SDS RFI-00053	ULE90130-SW-RFI-00154	Gogar Depot Service Yard	G Clement	12/11/09	18/11/09			
100297	SDS RFI-00054	ULE90130-SW-RFI-00153	Sub Station Requirements	S Surtees	25/11/09	27/11/09			
100660	SDS RFI-00055	ULE90130-01-RFI-00107	OLE Query - Relocation of Pole at 100+ 769B	S. Ney	04/12/09	09/12/09	17/12/2009	105195	Closed

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BSC RFI Register

100665	SDS RFI-00056	ULE90130-01-RFI-00108	OLE Query - Relocation of Pole at 100+777	S. Ney	04/12/09	09/12/09	11/12/2009	100991	Closed
100666	SDS RFI-00057	ULE90130-01-RFI-00109	OLE Query - Relocation of Pole at 100+769A	S. Ney	04/12/09	09/12/09	16/12/2009	105196	Closed
100667	SDS RFI-00058	ULE90130-01-RFI-00110	OLE Query - Relocation of Pole at 100+799	S. Ney	04/12/09	09/12/09	16/12/2009	105198	Closed
100668	SDS RFI-00059	ULE90130-01-RFI-00111	OLE Query - Relocation of Pole at 100+866	S. Ney	04/12/09	09/12/09	16/12/2009	105199	Closed
100669	SDS RFI-00060	ULE90130-01-RFI-00112	OLE Query - Relocation of Pole at 101+056	S. Ney	04/12/09	09/12/09	11/12/2009	100990	Closed
100670	SDS RFI-00061	ULE90130-01-RFI-00113	OLE Query - Relocation of Pole at 130+383A	S. Ney	04/12/09	09/12/09	11/12/2009	100994	Closed
100671	SDS RFI-00062	ULE90130-01-RFI-00114	OLE Query - Relocation of Pole at 131+149B	S. Ney	04/12/09	09/12/09	11/12/2009	100989	Closed
100681	SDS RFI-00063	ULE90130-01-RFI-00115	OLE Query - Relocation of Pole at 110+715	S. Ney	04/12/09	09/12/09	11/12/2009	100988	Closed
100845	SDS RFI-00064	ULE90130-01-RFI-00116	OLE Query - Relocation of Pole at 130+291A, 130+314A, 130+339A	S. Ney	10/12/09	15/12/09	11/12/2009	100987	Closed
101944	SDS RFI-00065	ULE90130-SW-RFI-00156	Points Motor information	C. Reid	15/01/10	18/01/10			
101943	SDS RFI-00066	ULE90130-SW-RFI-00155	IMU information	C. Reid	15/01/10	18/01/10			
101945	SDS RFI-00067	ULE90130-05-RFI-00034	Russell Road Retaining Wall – OLE Interface	M. Coupe	14/01/10	ASAP	17/03/2010	105204	Closed
101946	SDS RFI-00068	ULE90130-SW-RFI-00157	OLE Pole positions in relation to Tramstop pedestrian crossing walkways.	M. Coupe	14/01/10	ASAP	14/04/2010		
101947	SDS RFI-00069	ULE90130-06-RFI-00020	OLE Pole repositioning in Depot	M. Coupe	14/01/10	ASAP	18/03/2010	105207	Closed
101948	SDS RFI-00070	ULE90130-05-RFI-00035	Russell Road Bridge – OLE Interface	M. Coupe	14/01/10	ASAP			Awaiting Attachments
102183	SDS RFI-00071	ULE90130-SW-RFI-00159	System Wide Request for Autocad Files	C. Reid	26/01/10	ASAP			Awaiting Attachments
102189	SDS RFI-00072	ULE90130-SW-RFI-00160	Substation Gate widths	B. Hall	26/01/10	31/01/10	31/03/2010	105201	Closed
101967	SDS RFI-00073	ULE90130-01-RFI-00118	Cathedral Lane Substation - Boundary Wall Owners	B. Hall	19/01/10	26/01/10	10/03/2010	105202	Closed
101966	SDS RFI-00074	ULE90130-SW-RFI-00158	Tram Stop Earthing	S. Ney	19/01/10	22/01/10			
102213	SDS RFI-00075	ULE90130-01-RFI-00119	Leith Sands Substation information	B. Hall	27/01/10	31/01/10	22/03/2010		
102284	SDS RFI-00076	ULE90130-01-RFI-00120	As-Built Information for Princes Street Tram Stop	S. Ney	01/02/10	05/02/10			
102286	SDS RFI-00077	ULE90130-SW-RFI-00162	Tram Stop Information	S. Ney	01/02/10	05/02/10			
102339	SDS RFI-00078	ULE90130-SW-RFI-00163	Tram Stop Names	S. Ney	03/02/10	10/02/10	12/10/2009	105200	Closed
102340	SDS RFI-00079	ULE90130-SW-RFI-00164	Tram Stop - 110V Supply	S. Ney	03/02/10	10/02/10			
102341	SDS RFI-00080	ULE90130-SW-RFI-00165	Tram Stop Cabinet and OLE Information from Siemens	S. Ney	03/02/10	10/02/10			
102347	SDS RFI-00081	ULE90130-SW-RFI-00166	Tram Stop - Bus Tracker Info Panel Locations	S. Ney	03/02/10	10/02/10			
102348	SDS RFI-00082	ULE90130-SW-RFI-00167	PID Infrastructure Requirements - ER Section	S. Ney	03/02/10	10/02/10			
102467	SDS RFI-00083	ULE90130-SW-RFI-00168	CCTV on Tramstop	S. Ney	08/02/10	13/02/10			
102485	SDS RFI-00084	ULE90130-06-RFI-00021	Tram wash area public health requirements	S. Surtees	04/02/10	12/02/10	12/02/2010		
102486	SDS RFI-00085	ULE90130-06-RFI-00022	Tram wash area structural requirements	S. Surtees	04/02/10	12/02/10	15/02/2010	105208	Closed
102475	SDS RFI-00086	ULE90130-01-RFI-00121	OLE Query – Relocation of Pole at 101+518	S. Ney	08/02/10	12/02/10			
102709	SDS RFI-00087	ULE90130-01-RFI-00122	Princes Street Tram Stop	S. Ney	12/02/10	19/02/10			
102760	SDS RFI-00088	ULE90130-SW-RFI-00169	Sub-Station requirements	G Clement	15/02/10	19/02/10	22/02/2010		Closed
102767	SDS RFI-00089	ULE90130-06-RFI-00023	Under floor lifting Plant	G Clement	15/02/10	19/02/10	18/03/2010	105203	Closed
103400	SDS RFI-00090	ULE90130-SW-RFI-00170	Sub-Station requirements	G Clement	02/03/10	05/03/10	15/04/2010		
103402	SDS RFI-00091	ULE90130-07-RFI-00010	Trackform – Earthing & Bonding	G Clement	03/03/10	10/03/10	13/04/2010		
103435	SDS RFI-00092	ULE90130-05-RFI-00036	S27 Edinburgh Park Viaduct – Earthing & Bonding	G Clement	05/03/10	10/03/10	14/04/2010		
103437	SDS RFI-00093	ULE90130-07-RFI-00011	S29 Gogar Burn Bridge – Earthing & Bonding	G Clement	05/03/10	10/03/10	14/04/2010		
103444	SDS RFI-00094	ULE90130-05-RFI-00037	S23 Carrick Knowe Bridge – Earthing & Bonding	G Clement	05/03/10	10/03/10	13/04/2010		
103643	SDS RFI-00095	ULE90130-05-RFI-00038	S22B Balgreen Road NR Access Bridge – Earthing & Bonding	G Clement	05/03/10	10/03/10	15/04/2010		
103644	SDS RFI-00096	ULE90130-02-RFI-00156	S19 Haymarket Viaduct – Earthing & Bonding	G Clement	09/03/10	16/03/10	14/04/2010		
103645	SDS RFI-00097	ULE90130-05-RFI-00039	S20 Russell Road Bridge – Earthing & Bonding	G Clement	09/03/10	16/03/10	14/04/2010		
103710	SDS RFI-00098	ULE90130-05-RFI-00040	S26 South Gyle Access Bridge – Earthing & Bonding	G Clement	10/03/10	17/03/10	13/04/2010		
103712	SDS RFI-00099	ULE90130-05-RFI-00041	S21E Water of Leith Bridge – Earthing & Bonding	G Clement	10/03/10	17/03/10	13/04/2010		
103713	SDS RFI-00100	ULE90130-05-RFI-00042	S22A Balgreen Road Bridge – Earthing & Bonding	G Clement	10/03/10	17/03/10	13/04/2010		
103714	SDS RFI-00101	ULE90130-01-RFI-00123	S16 Victoria Dock Entrance Bridge & S17 Tower Place Bridge – Earthing & Bonding	G Clement	10/03/10	17/03/10	13/04/2010		Closed
104582	SDS RFI-00102	ULE90130-01-RFI-00124	OLE Query - Relocation of Pole at 121+314	S. Ney	06/04/10	13/04/10	13/04/2010		
103944	SDS RFI-00103	ULE90130-05-RFI-00043	S28A8 Underpass & S32 Depot Access Bridge - Earthing & Bonding	G Clement	16/03/10	23/03/10	13/04/2010		
104584	SDS RFI-00104	ULE90130-05-RFI-00044	OLE Query - Relocation of Pole at 530+673	S. Ney	06/04/10	13/04/10			
104747	SDS RFI-00105	ULE90130-06-RFI-00024	Equipment & Communications room cabinet layout and electrical requirements.	S. Surtees	09/04/10	23/04/10	21/04/2010		
104947	SDS RFI-00106	ULE90130-06-RFI-00025	Section 6 Depot Sub-Station requirements	T. Culligan	19/04/10	23/04/10			
104991	SDS RFI-00107	ULE90130-06-RFI-00026	Trackform in Depot	C. Cox	21/04/10	29/04/10	22/04/2010		
104992	SDS RFI-00108	ULE90130-01-RFI-00125	OLE Query - Relocation of Pole at 100+691	S. Ney	21/04/10	28/04/10			
104993	SDS RFI-00109	ULE90130-01-RFI-00126	OLE Query - Relocation of Pole at 101+106	S. Ney	21/04/10	28/04/10			
104995	SDS RFI-00110	ULE90130-01-RFI-00127	OLE Query - Relocation of Pole at 110+076B	S. Ney	21/04/10	28/04/10			
105172	SDS RFI-00111	ULE90130-SW-RFI-00171	System Wide – Tram stop Cabinet	A. Rabadia	28/04/10	30/04/10	10/05/2010		Closed
105432	SDS RFI-00112	ULE90130-06-RFI-00028	Scottish Power HV Feed to Depot Substation Requirements	M.Fell	06/05/10	10/05/10	11/05/2010		Closed

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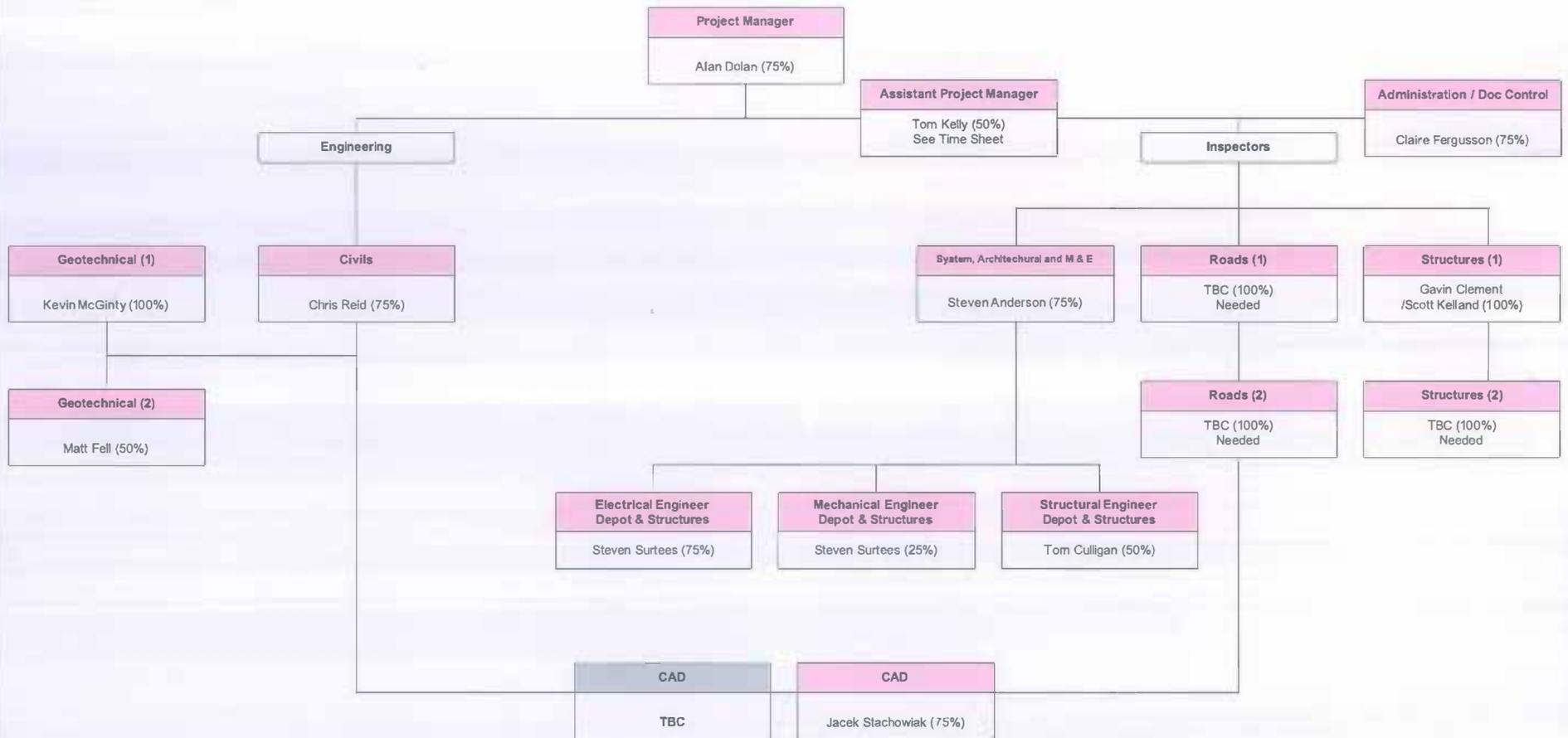
APPENDIX B – CRITICAL ISSUES DRAWINGS

Doc Ref ULE90130-SW-DRG-00651 (Line 1)

Doc Ref ULE90130-SW-DRG-00652 (Line 2)

**APPENDIX C – ORGANISATIONAL CHARTS FOR DESIGN SUPPORT AND
EXTENDED CONSTRUCTION SUPPORT**

Extended Construction Support Services - For The Period 19/06/10 to 17/07/10



Design Support Services - For The Period 23/05/10 to 14/06/10

