

Bilfinger Berger – Siemens – CAF Consortium

**EDINBURGH TRAM NETWORK
INFRACO CONTRACT**

**PERIOD REPORT No 4-3
TO 19 JUNE 2011**

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1 EXECUTIVE SUMMARY

HSQE:

In Period 4-2, 42,052 hours were worked, of which 27,106 were site hours with 4 recorded incidents.

Programme & Progress:

In order to provide visibility into the overall progress of the works as agreed during the Mediation and subsequent ongoing discussions, the Infraco will monitor progress of the Works against the “Programme following Mediation on 8 – 12 March 2011 (110506) Prioritised Works” (Revision 3).

Progress achieved up to 10 June 11 has been recorded and there is a weeks delay to Section A Completion. The delay is a result of out of sequencing working and a revised sequence of working has been identified which will overcome the slippage and prevent any delay to the Section A Completion Date.

Work continues on the Depot, A8 Underpass, Haymarket Yards and mini test track within Section 5C. Infraco are making arrangements to facilitate the enabling works to facilitate the Traffic Management to divert traffic from Princes Street to allow commencement of the Remedial Works and outstanding works to Princes Street from 4 July 2011.

Design:

It has been confirmed and agreed that Infraco shall self certify that the civils and systems and trackwork Design is in accordance with the Employer’s Requirements.

It has been confirmed and agreed that tie shall have no right or obligation to review and/or approve the civils and systems and trackwork Design and the Infraco shall be relieved of its obligations under Clause 10 and Schedule Part 14 of the Infraco Contract in so far as they relate to the civils and systems and trackwork Design.

Significant progress was made to complete the design by end of May 11 and by and large this was achieved; however, there are a number of exclusions predominantly design changes or linked to design changes.

E&M Systems design is substantially complete for all disciplines or system lots.

Tram Vehicles:

Tram manufacturing is completed at CAF Irun premises and Factory tests are outstanding only for Tram unit No 27.

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Tram No 2 was delivered to Edinburgh on 25 April 10. Tram No 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 and 26 are ready for delivery to Edinburgh though Factory Acceptance Routine Test Certificates for Trams No 25 and 26 have not yet been issued.

Mediation:

The City of Edinburgh Council, *tie* and Infraco together with Transport Scotland engaged in Mediation discussions during the week commencing 7 March 11.

The talks were constructive and we have established a mutual understanding of the key issues that have been impeding the progress of the works. We continue to work together to firm up the framework for our future working arrangements and the successful delivery of the Project.

On 12 May 2011, CEC released an Edinburgh Tram Update report dated 16 May 2011 in advance of a City of Edinburgh Council meeting scheduled for 16 May 2011 which outlines progress since the Mediation.

2 HSQE

2.1 Health & Safety

The next Workforce Consultation meeting will take place on 2 June 11.

The next Occupational Health & Safety meeting is scheduled for 28 June 11.

March A to B Newsletter was issued on 9 May 11.

Internal Rail audit took place on 25 May 11.

Internal HSE Management review took place on the 18 May 11.

2.1.2 Accidents, Incidents and Near Misses/Unsafe Conditions: Period 4-2 records up to 21 May 2011 is as follows:

4 No incidents recorded in Period 4-2.

The AFRs at the end of Period 4-2:

Project AFR:	0.13
KPI AFR for 2010/2011:	0.00

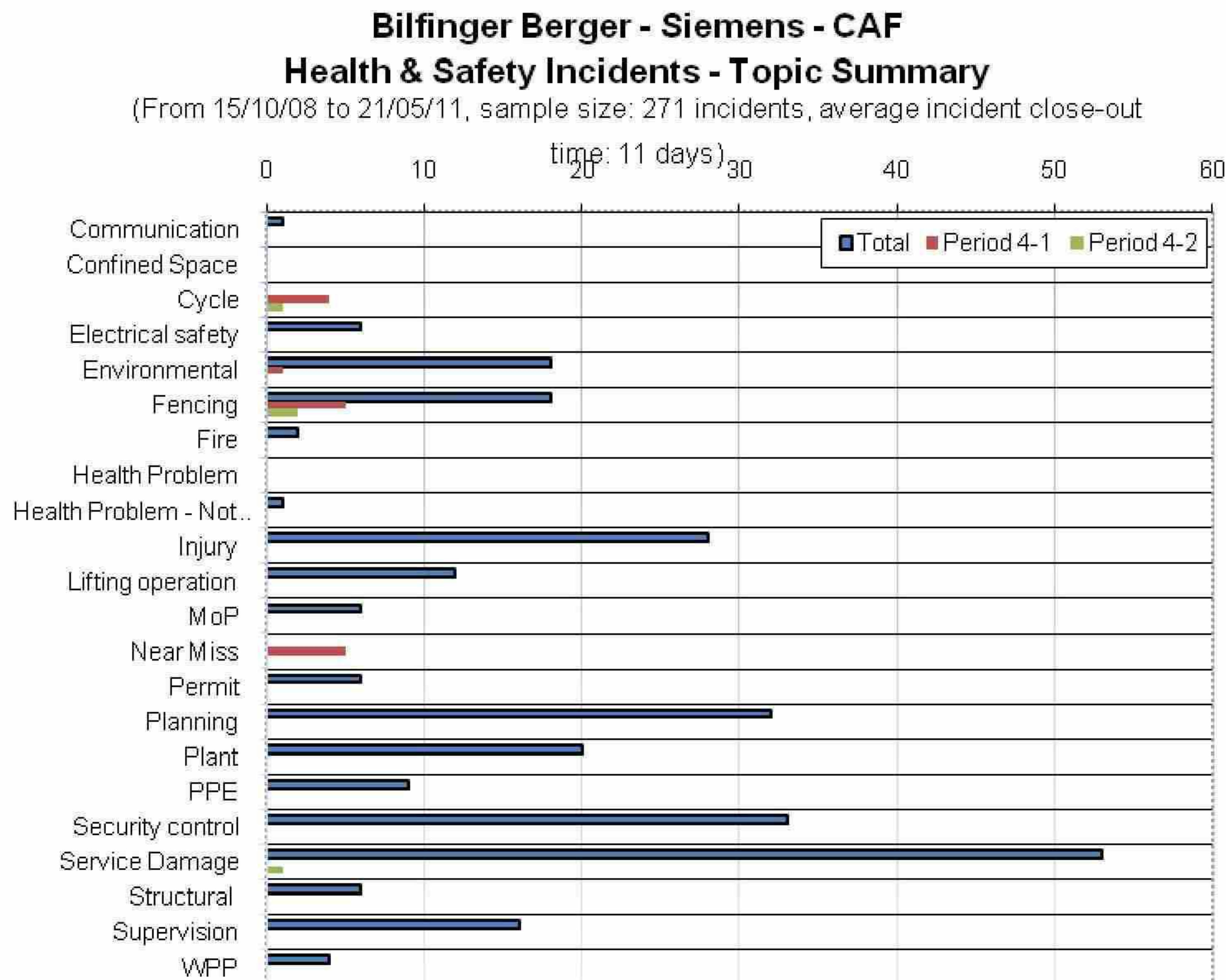
Total Hours worked in Period 4-2:

Total:	42,052
Non site hours =	14,946
Site Hours =	27,106

Contractor Period HS&E Return for Period 4-2 is attached at Appendix 10.1.

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2.1.3 Rolling Trend Analysis for Period 4-2 up to 21 May 2011 on Safety and Environmental Related Activities.



2.2.1 Environment

2.2.2 BSC has had an Environment audit carried out by an external auditor. The audit raised 1 No NCR relating to a waste management issue for a Sub-Contractor who, due to changes within their organisation, caused a gap in their waste returns. BSC has already made improvement and in the course of closing out the NCR.

Best practices identified were: Project being proactive in their Consent and Licences Management, Haymarket site being well set-up, Section 2/5A Preliminary Soil Investigation being ready and up to date, and continuing Environmental training within BSC.

2.2.3 Application to remove an Otter Holt has been granted and is valid until January 2014.

2.3 Any Other Business

Nil.

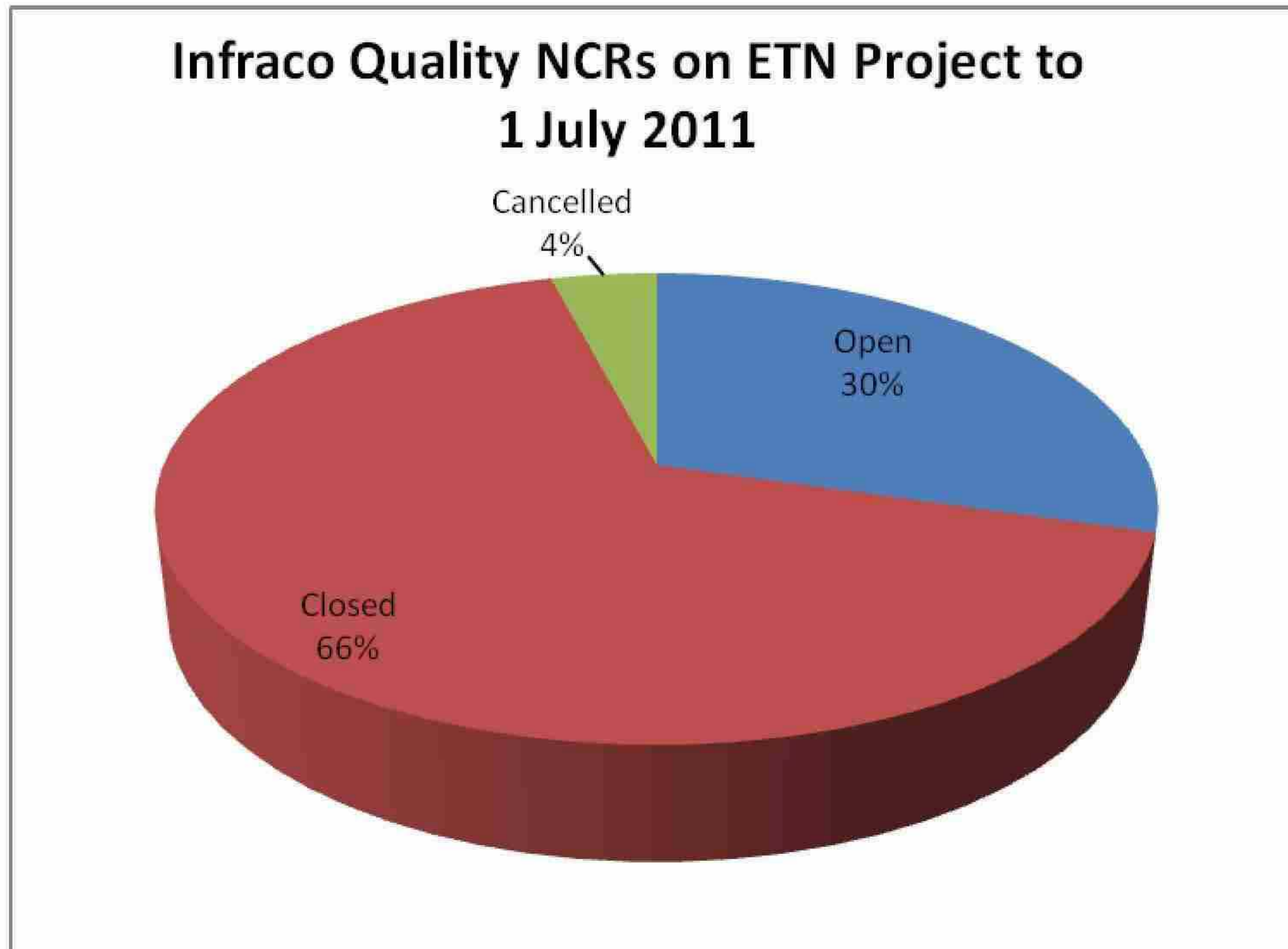
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2.4 Quality

2.4.1 Quality Management System

42 Infraco ITPs have been submitted to *tie*. 39 are 'Level A – No Objection', 1 at Level B and 2 at Level C. A further 2 E&M related ITPs have been submitted for information.

2.4.2 NCRs



NCRs in Period 4-2

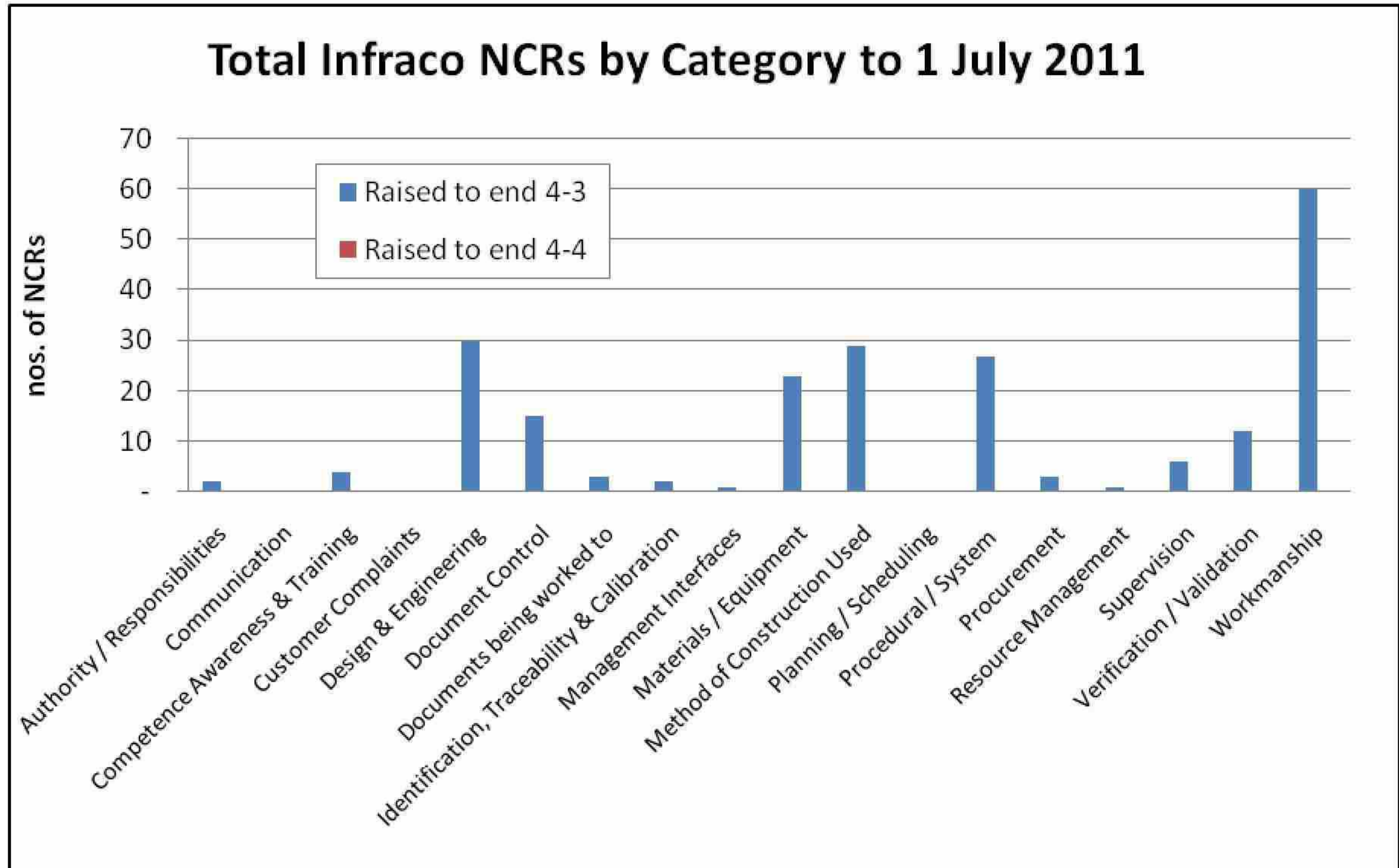
Raised in Current Period	1
Closed in Current Period	6
Cancelled in Current Period	0

NCRs in Period 4-3 to 03 June 11

Raised in Current Period	2
Closed in Current Period	2
Cancelled in Current Period	0

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The latest trending histogram for Quality NCRs is shown below.



2.4.3 Audits

During the reporting period 1 internal audit was carried out.

3. PROGRAMME

3.1. Programme

In order to provide visibility into the overall progress of the works as agreed during the Mediation and subsequent ongoing discussions, the Infraco will monitor progress of the Works against the “Programme following Mediation on 8 – 12 March 11 (110506) Prioritised Works” (Revision 3). This Progressed Programme for the Period is included at Appendix 10.2 of this report.

The report records progress achieved up to 10 June 11. At this time, works at Princes Street, Haymarket Corridor, A8 Underpass, Depot Access Bridge, the Mini Test Track, and the Gogar Depot have been filtered as an abstract from the overall programme.

The logic links from the On-Street Testing and Off-Street Testing activities to Re-mobilisation have been deleted as this logic was giving an inaccurate delay to early activities.

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Summary of Section Completion Dates:

Section	Update Including Progress to 10 June 2011	Programme following Mediation 8-12 March 2011
A	23 December 2011	16 December 2011
B	07 February 2013	07 February 2013
C	27 October 2013	27 October 2013
D	25 January 2014	25 January 2014

The Critical Path through the Prioritised Works to the Section C completion date in the Update Programme remains as follows:
Section 06A Trackwork sequence / Track Finishes / Overhead Catenary / OCS Testing and Commissioning to 16 December 11.

The 7 day delay to the Section A date is due to the late completion in Area 4. We have resolved this issue by rearranging the construction sequence to bring forward Works in Areas 3 & 4 to allow an earlier start to the Tamping Ballast activity in Section 6.

3.2 Look Ahead Programme

The Look-Ahead programme in Appendix 10.3 is an extract from the Prioritised Works programme updated with progress of the Prioritised Works recorded and assessed to 10 June 11.

This programme provides the required 4 week period and is extended to cover the period 11 June to 2 September 11.

Testing

Off-Street Geo-technical Testing started on 30 May 11, and On-Street Testing is now planned to commence on 6 June 11.

Section 1C/D
Princes Street

Attention to Safety Critical Works continue, and works are programmed when necessary.

Traffic Management enabling works commenced on 6 June 11 in preparation for the re-commencement of Princes Street Works on 4 July 11.

Section 2
Haymarket Corridor

Construction of Haymarket Yards re-commenced on 3 May 11. Works started in Phase 2 and are considered to be progressing to Programme. The update of the Prioritised Works Programme is currently showing slippage but the sequence scheduled no longer reflects the planned sequence of works on site which allows for an early start to trackwork on the viaduct and a more efficient sequence for track laying.

Section 5A

Testing started in preparation for the Works planned to commence on 4 July 11.

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Section 5C

Depot Access Bridge

The bridge is substantially complete. Deck finishes were completed on 16 May 11 with parapet erection complete and safety fencing ongoing with planned completion during this period.

A8 Underpass

Finishes to Phases 1 & 2 are ongoing to programme.

Deck construction on Phase 4 is also ongoing but the sequence of wing wall and deck construction has changed. South Portal Works commenced on 10 May 11 ahead of the planned start of 1 June 11.

The Prioritised Works Programme indicates the works in Phase 4 are approx 3 weeks late but the programme requires updating during the next period to more accurately reflect the sequence and duration of ongoing works which are considered to be on programme.

Mini Test Track

Works are progressing to programme.

Section 6

Depot

Works re-commenced on 4 April 11, and is generally progressing to programme. Criticality of the track laying activity through to commissioning is visible and remains the focus of works in the depot. Initially, intense construction activity resulted in a slow start to track laying due to limited access. This has now resulted in improved access and laying outputs, and indicates recovery to planned dates over the next two periods. Track laying is currently ongoing in areas 2 and 5.

3.3 Tramco Programme Status

Updated tram design, procurement, manufacturing, delivery and commissioning programme is attached as Appendix 10.4.

4 PROGRESS

4.1 CIVIL & BUILDING WORKS

**4.1.1 Civil & Building Design
Design Issues**

4.1.1.1 Timelines for Close Out of Design

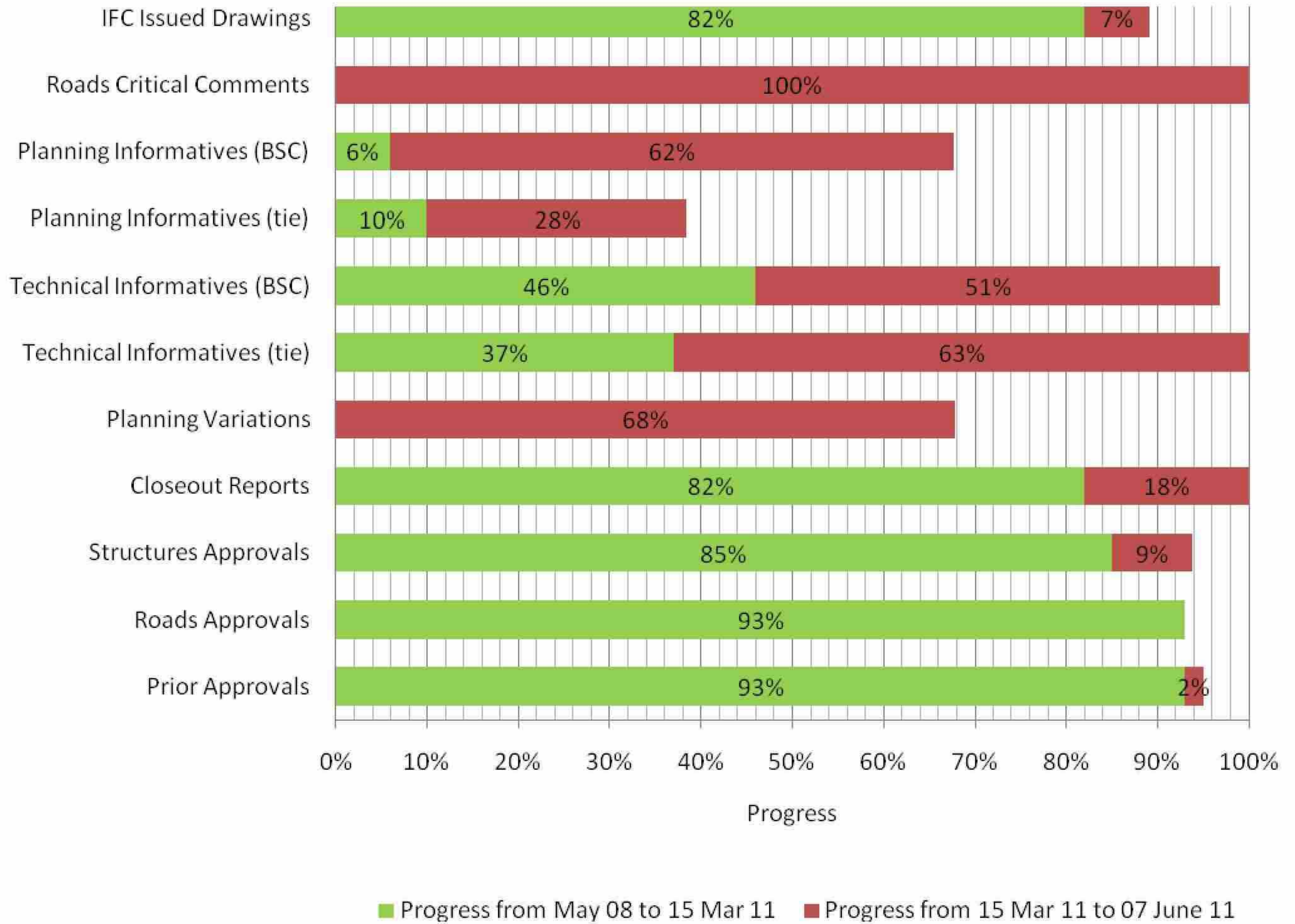
Significant progress was made to complete the design by end of April 11 and by and large this was achieved; however, there are a number of exclusions outlined below. The exemptions are predominantly design changes or linked to design changes.

CEC has confirmed that key staff will be based at Edinburgh Park for the duration of the project. This will facilitate the quick resolution of any further

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design issues or change that becomes necessary through the implementation, testing and commissioning phases.

Design Status Summary for breakdown of progress



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4.1.1.2 Key Design items still to be closed out:

1. Trackform Design.
2. Section 1A Drainage (FP approval required) – CEC/*tie* to confirm.
3. Edinburgh Gateway.
4. Picardy Place/Section 1C2 Roads Approval (& Planning Variation for this batch).
5. St Andrew Square – Public Realm Design and tie in with Tram Design
6. Airport Canopy & Kiosk.
7. Roseburn Viaduct.
8. Murrayfield Retaining Walls (S21 B - D) Ground Improvement Works.
9. Floating Track Slab Design.
10. York Place Terminal Point.
11. Cathedral Lane Substation Design.
12. Close Out of Final Signalling Works.
13. Lindsay Road Cycle Paths.
14. Forth Ports Fencing Requirements.
15. Forth Ports Cruise Liner Terminal Road (Full Planning Approval required).
16. Dublin Street Listed Building Consent
17. Tram Turn Back Strategy.
18. A number of design finalisation issues dependent on clarifications from *tie*/CEC (refer to section 4.1.1.4 below)
19. A number of Planning Variations (statutory process only).
20. Final IDCs and Design Assurance Statements (DAS).

4.1.1.3 Design that will not be Closed Out by 01 July 11:

1. Edinburgh Gateway.
2. Airport Canopy & Kiosk.
3. York Place Terminal Point Design.
4. Cathedral Lane Substation Design.
5. Murrayfield Retaining Walls (S21 B - D) Ground Improvement Works.
6. Floating Track Slab Design.
7. St Andrew Square – Public Realm Design and tie in with Tram Design
8. Dublin Street Listed Building Consent
9. Lindsay Road Cycle Paths.
10. Forth Ports Fencing Requirements.
11. Forth Ports Cruise Liner Terminal Road (Full Planning Approval required).
12. Section 1C2 Redesign (Picardy Place, Elder Street, York Place etc).
13. Final IDC and DAS.

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4.1.1.4 List Instructions for New Design Changes or Confirmation on Scope (*tie*/CEC):

Refer latest Issues Tracker for current status (updated to 07 June 2011)

1. Gogar Castle Access Road - realignment to reduce land take/avoid tree.
2. Depot Access Road Turning Head - relocation of turning head.
3. Additional Cycle path at Lindsay Road – Hawthornvale.
4. Roseburn Viaduct (scope confirmation).
5. Cathedral Lane Substation (scope confirmation).
6. New Footpath at Ocean Drive – instruction.
7. Incorporate new design for Ocean Terminal Bypass Road - incorporate AECOM design.
8. Confirmation of no lettering/signage on top of tram stop shelters.
9. Design of Temporary Overhead Catenary System for 'Mini Test Track' – instruction.
10. Inclusion of Blenheim Place redesign (for TRO) within Picardy Place redesign – instruction.
11. York Place Terminal Point - Options Feasibility Report (includes estimate for final design works).
12. W14C SEPA CAR Licence - *tie* to formally confirm process for ongoing monitoring works.
13. *tie*/CEC to confirm Forth Ports Approval for Section 1A drainage.
14. Princes Street - new cycleway crossing through The Mound (14A) and Cycleway from The Mound onto Princes Street (14B)
15. St Andrew Square Public Realm - instruction to produce Clarification Report.
16. Lindsay Road 0 – 230M redesign - clarification by CEC required.
17. Letter to confirm full closure of Princes Street and Embargo has been lifted.
18. Letter regarding *tie*'s non involvement in BBS design moving forwards.
19. Letter covering audit (trackwork) and in general to allow BBS to complete design and agree this with CEC.
20. Cathedral Lane Substation - change to Henderson Global Design - new instruction.
21. St Andrew Square Public Realm Design finalisation (will follow on from Item 15 above).
22. Letter to confirm all changes to Employer's Requirements following close out of design with CEC.
23. Letter to confirm Infraco are to address some of the Planning Informatives for NIL Future Proofing works.
24. Letter to instruct Infraco to carry out track crossing and associated works for Scottish Water in vicinity of depot.

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25. CEC/*tie* to issue letter to clarify provision of IFC drawings to CEC and *tie* from Infraco.
26. Letter to confirm incorporation of Bulls Heads outside Roseberry House.
27. *tie* to provide list of statutory utility company contact details to Infraco.
28. CEC to issue letter to SUs to confirm Infraco are point of contact for Tram works.
29. Letter to confirm use of existing fibre cable into City Chambers.
30. Letter to confirm use of existing fibre cable between City Chambers and Annandale bus garage.
31. Letter to confirm acceptance of recommendations on PIDs outside LoD.
32. CEC/*tie* to confirm close out of Depot Access Road design issue with BAA/EAL.
33. CEC/*tie* to confirm close out of BAA/EAL issue with relocated Burnside Road.
34. CEC/*tie* to confirm BAA drawdown process moving forwards
35. CEC/*tie* to issue letter to confirm Gogar Depot Radio Mast is not to be installed.
36. Murrayfield Accommodation As Built.
37. A8 footpath reinstatement

4.1.1.5 Traffic Modelling

The updated traffic modelling report was issued 19 May 2011 to CEC for Approval and is currently being reviewed by CEC. Further joint discussion between CEC and Infraco is required to progress this approval expeditiously.

Although the two traffic modelling reports affecting tram signalling have not been formally signed off by CEC, the signalling design is progressing on the basis of the submitted reports, as far as possible, but requires a freeze of traffic modelling reports. This is currently expected from CEC by 17 June 2011 (up to York Place).

There are however a number of unresolved recommendations to be actioned by CEC and these have the potential to affect completed signalling design. Minor roads design amendments required to tie in with final modelling which have commenced ahead of formal sign off of the traffic modelling by CEC.

The two traffic modelling reports relating to tram operations are still to be agreed and have dependencies for the traffic signalling design.

4.1.1.6 Edinburgh Gateway

The preferred design option was confirmed by *tie*/Transport Scotland on 06 May 2011.

Design Coordination and EMC/E&B issues still to be resolved by Network Rail. Design Meeting was held on 01 June 2011 to progress. Issues are being worked through with Network Rail.

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4.1.1.7 Statutory Undertakers Companies (SUCs) – Contact Details

CEC/*tie* to issue letter to SUCs to confirm Infraco are point of contact for off street (Haymarket to Airport) Tram Works. *tie* to provide list of statutory utility company contact details to Infraco.

tie has provided list. Infraco are reviewing.

4.1.1.8 Princes Street - New Cycle Crossing at The Mound

CEC are to advise whether Infraco are to include the CEC design for a new cycle crossing at The Mound within the Infraco design. *tie* have issued letter to Infraco and this is being reviewed at present.

Separate design for new Cycle path from The Mound onto Princes Street also to be instructed. Infraco await instruction from *tie*.

4.1.1.9 TNC 129 Gogar Castle Access Road

New TNC issued by *tie* – letter INF CORR 7510/DB dated 11 March 11. Redesign of road required to avoid land take issue (land not procured by *tie*). The scope of this change was unknown prior to issue of letter by *tie*. Design complete and issued IFC.

Instruction required from *tie*.

4.1.1.10 TNC 130 Depot Access Road, Hammer Head

New TNC issued by *tie* – letter INF CORR 7508/DB dated 11 March 11. The scope was unknown prior to issue of letter by *tie*. Design complete and issued IFC.

Instruction required from *tie*.

4.1.1.11 Scope Creep (Various)

Infraco are concerned about scope creep by *tie* (e.g. Roseburn Viaduct, Edinburgh Park Viaduct North Abutment, Airport Canopy/Kiosk, NIL).

CEC/*tie* to issue instructions to Infraco for any new scope that is to be carried out.

4.1.1.12 Forth Ports – Tower Place Bridge – Ramp/Steps Issue

CEC have accepted revised AIP. Design is being finalised for Technical Approval.

The steps solution will not remove all loading from dock wall which may not be acceptable to Forth Ports. Infraco and CEC met with Forth Ports on 5 May 11 to discuss this and other design issues related to Forth Ports. Design to be submitted to Forth Ports following CEC Technical Approval.

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4.1.1.13 Forth Ports – Design Issues

Further design work is required to close out the following with Forth Ports.

- Section 1A Drainage – *tie*/CEC to confirm Forth Ports Approval for Section 1A drainage (issued to *tie* 18 November 10). Infraco have requested a letter from CEC stating their approval in addition to the “letter of comfort” from SW to allow this to move forwards.
- Forth Ports Fencing requirements – proposed design submitted to CEC for discussion and agreement with Forth Ports.
- Ocean Terminal Tram Stop Finishes, Lighting, Landscaping, Adoption Boundary etc to be agreed with FP – Lighting design to be finalised. Target date for finalising design is w/c 13 June 2011. CEC/FP to then determine adoption boundary.

These issued impact on the completion of design within Section 1A.

4.1.1.14 Forth Ports Licence – Approvals and Access Issue

Forth Ports have stated they would wish for only one more closure with all the tram work scope completed in it to cause minimum disruption.

CEC – Forth Ports Agreement is not legally binding. CEC recognise there are issues with Forth Ports that may impact on CEC/*tie* ability to secure Forth Ports third party consent and design approvals as noted above.

4.1.1.15 Scottish Water Approvals issues

Meeting held with Scottish Water on 31 May 2011. Outstanding issues are:

Six month time limited Approvals – Business Stream awaiting feedback from internal SW meeting and the issue is still not resolved. Reapproval for Section 1C1 / 1C2 outstanding. SW to advise by 03 June 2011. Response not received from BS/SW as of 07 June 2011.

Phase 1a / 1b interface design - Infraco require formal approval from BS/SW. Response not received from BS/SW as of 07 June 2011.

tie to clarify to SW how Section 3 (Phase 1b) will be managed.

4.1.1.16 OLE Base / SW infrastructure issue

Principle of this issue to be discussed between Scottish Water and CEC/*tie*. Discussed at meeting on 31 May 2011 with SW. SW to clarify their legal position to *tie* by letter to clarify their position. SW confirmed at meeting that this did not apply to sewers. This is a change to previous statements made by SW representatives.

Options include build over agreement / diversion of utility or relocate OLE (likely design, approvals and construction impact).

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SW will issue letter to *tie* to confirm their position. CEC/*tie* are to advise Infraco.

4.1.1.17 PSCC and ICP Liaison Meetings

Confirmed and agreed that management of the ICP is to remain with *tie*. Role of PSCC meeting has been reviewed by *tie* following Infraco request. First follow-up meeting was more streamline and efficient, indicating that review process was effective.

4.1.1.18 Scope of Works for York Place Terminal Point

It was confirmed on 22 March 11 that Terminal Point will be York Place Cross over. Concept design options were issued to CEC on 7 April 11 for consideration. A further meeting was held on 20 April 11.

Infraco submitted briefing note to CEC for the two preferred options with budget design costs on 12 May 11. CEC subsequently requested further breakdown of design costs and implications on maintenance costs. Updated briefing note was provided to CEC on 08 June 11.

Instruction required from *tie* for initial Feasibility Works and also for detailed design works for preferred option.

4.1.1.19 Cathedral Lane Substation

Infraco had recommenced the “original” Cathedral Lane Substation Design (based on conversion of existing toilet block). CEC/*tie* advised on 28 April 11 to put this design on hold and that *tie* would issue the scope of works and instruction to carry out the “Henderson Global” design by 29 April 11. As of 25 May 11, the scope and instruction are still to be provided. Marked up sketch provided by CEC showing cable routes. This is being reviewed by Infraco design team at present to allow design estimate to be prepared.

Meeting held on 06 June 2011 with Henderson Global to discuss design and allow design works to commence. HG / CEC to issue scope pack to Infraco to allow design estimate and programme to be developed.

Instructions required from *tie* to confirm progression of “original” design, halt the “original” design and to commence the “HG design”.

4.1.1.20 OLE Foundation – Utility Conflict at Princes Street

Building fixing option for two of the three poles; however third pole cannot be a building fixing. *tie* may need to divert or slew the utilities to accommodate this pole, so it would make sense to divert / slew the utilities for all three poles and avoid Listed Building Consent. Infraco submitted a briefing note on 28 April 11 to CEC.

At meeting held 10 May 11, CEC requested that the OLE remains as poles with utility slewed or diverted to avoid clash. Infraco to carry out trial trenches as part of early works within Princes St to confirm piled foundation solution is feasible (with diversion or temporary slew of utility). Infraco to advise CEC

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upon completion of trial trench works. The option of retaining the OLE poles means that a separate solution for street lighting may not be necessary.

OLE Pole / Basement / Utility conflicts at Hanover Street junction still to be resolved. Infraco will investigate and advise.

4.1.1.21 SEPA W14C CAR Licence

SEPA have issued W14C CAR Licence. Copy will be forwarded to *tie* for their records. *tie* / TEL to note obligations to provide ongoing monitoring works upon completion of construction works.

tie have issued formal confirmation that ongoing monitoring works will be carried out by TEL.

4.1.1.22 W18 – LOD issue

Issue with W18 Retaining Wall and LOD is to be resolved. CEC propose to move W18 by 300mm to avoid any LOD issue. SDS have issued updated design to close out this issue.

4.1.1.23 W4 – LOD Issue

It was previously confirmed by CEC that there was no LOD issue at Retaining Wall W4 (PO Sorting Office). *tie* has issued letter to Infraco advising of an issue with the LOD. Infraco are reviewing the contents of *tie's* letter and will respond shortly.

4.1.1.24 Section 1A – Ocean Drive – New Footpath

New footpath required along Ocean Drive by CEC. *tie*/CEC to determine if required or not.

Instruction and scope required from CEC/*tie*.

4.1.1.25 Section 1A - Additional Cycle path at Lindsay Road – Hawthornvale

This additional design was introduced by CEC at meeting on 29 March 11. CEC are to issue the scope of works to Infraco. Infraco will progress design but this was not considered within Phoenix and Infraco require change order from *tie*. CEC confirmed on 19 April 11 that cycleway design should proceed.

Instruction required from CEC/*tie*.

4.1.1.26 Section 1A – Ocean Terminal Bypass Road

New design has been developed by AECOM for *tie*. CEC expressed desire at meeting on 1 April 11 for this to be integrated into Infraco design.

Instruction and scope required from CEC/*tie*.

4.1.1.27 Section 1A – Lindsay Road 0 – 230m Road Alignment Redesign

The full scope of works issued under TNC may not be feasible. Infraco met with CEC on 26 May 2011 to discuss the 0 – 230 m works. It was agreed that this element of the change was feasible at this stage due to unknown

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programme for construction of this section of the tram works. Infraco have issued final report to CEC on 07 June 2011.

CEC to review and confirm this element of the design change is not to proceed.

The other element of the design change to design temporary tie in detail to minimise works until tram is constructed is progressing.

4.1.1.28 Roseburn Viaduct

tie issued letter to Infraco to confirm scope of works agreed between CEC and Infraco on 16 March 11. Design has been submitted to CEC for Prior Approval.

4.1.1.29 Roseburn Viaduct – Scottish Power 132 kV issue

Representative of Scottish Power has advised that the proximity of the Roseburn Viaduct to the existing 132 kV cables is not acceptable to Scottish Power. Infraco are reviewing; however *tie* are requested to provide senior SP contact details and initiate discussion with SP. Meeting to be held with SP on 08 June 2011 to resolve.

4.1.1.30 Tram Stop Design

IFCs were issued w/c 11 April 11 to close out Informatives. Technical Informatives are closed with Planning Informatives following on within existing Planning Batches. Minor clarification on the PID is resolved with CEC Planning.

Design based on branding details as agreed with *tie*, TEL and CEC. Should branding change, a change order would be required.

tie issued letter to confirm no lettering on top of shelters and confirming other amendments to Employer's Requirements (TVMs locations and numbers, no seating at FOTW and weatherproof display). Letter still required from *tie* to address tram stop lighting, bus tracker and other amendments to ERs agreed during close out of the tram stop design.

4.1.1.31 Depot Water Supply - 250mm main connection

tie have completed sufficient works to the 250 mm main works to allow Infraco to progress the Depot water connection.

Infraco / SW progressing necessary works ahead of connection. Target Date for connection is w/c 13 June 2011.

4.1.1.32 'Mini' Test Track

Instruction is to be issued by *tie* for the design of the temporary Overhead Catenary System.

Briefing note issued on 5 May 11 to CEC with request for urgent instruction to construct to the Gateway design. Infraco has proceeded based on Edinburgh Gateway Alignment.

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Instruction required from CEC/*tie*.

4.1.1.33 Section 7A – NIL Future Proofing Works

tie/CEC to issue instruction to Infraco should *tie* wish to extend Infraco scope of works to include for discharge of Planning Informatives, previously confirmed that *tie* would close out the Informatives.

tie confirmed that they will discharge the Planning Informatives.

4.1.1.34 Traffic Regulation Orders (TROs)

2No TRO changes proposed by CEC that may impact design at Picardy Place (Blenheim Place) and Shandwick Place (Canning Street). Infraco/CEC workshop to be held; however, this may require further instructions for any design changes. Refer below.

4.1.1.35 TRO Works – Blenheim Place – Increase in Scope for Picardy Place Works

Instruction required from CEC/*tie*

4.1.1.36 TRO Works – Canning Street - Stafford Street Link

Instruction may be required for Canning Street change. CEC have issued scope drawing to Infraco (by email) and requested budget estimate to design and implement this change. Infraco to provide budget estimate to CEC.

4.1.1.37 Trackform – General

Revised Design Statement taking into account CEC/*tie* comments re-issued 20 May 2011. Meeting to review further CEC / *tie* comments was held 25 May 2011. Relevant comments being addressed within formal trackform submission. Planned issue to CEC on 10 June 11. CEC has requested ITPs and Method Statements to be issued at the same time. These are currently being prepared and drafts are circulating internally within Infraco.

4.1.1.38 Trackform – Direct Fix to Rheda Open

Following discussion with CEC and *tie*, Infraco have changed the trackform at the Mini Test track to Rheda Open from Direct Fix and are investigating the extent of the direct fix trackform that can be switched to Rheda Open.

There are no CEC Technical or Planning issues associated with this change. This may require review of Structures Design by CEC Structures if Rheda Open is proposed for Structures currently with Direct Fix. Infraco provided a briefing note to CEC.

4.1.1.39 Trackform – Setted Areas

Infraco understand that setts are to remain and as part of trackform approval, CEC and Infraco are reviewing extent of setts across the route. Confirmed by CEC and *tie* at meeting on 25 May 2011.

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4.1.1.40 Reprogramming of *tie* Audits

It has been confirmed and agreed that no new Audits are scheduled by *tie* before July 11. New programme to be agreed between parties.

4.1.1.41 New Track Crossing for Scottish Water within ‘Mini’ Test Track

Scottish Water advised that a new crossing is required between the depot halt and Gogar Castle Access Road. *tie* instructed SDS under MUDFA contract to carry out design.

tie have since issued tNC 137 on 18 May 2011. Infraco are reviewing the scope of this change and will issue Estimate in due course.

Instruction to be issued by *tie*.

4.1.1.42 MUDFA Reinstatement Works

Infraco awaiting details from *tie* in regard to MUDFA reinstatement works that need to be completed ahead of Infraco works. For example, works outstanding at Hope Street, Lothian Road, and Princes Street Junction.

In the vicinity of Gogar depot – existing septic tank – the tank was damaged during MUDFA works and not made good as part of MUDFA as was required. On 27 April 11, *tie* issued letter to Infraco attempting to shift the responsibility to Infraco for resolving this. *tie* stated at monthly progress meeting that they are considering the withdrawal of this letter. Infraco await update from *tie*.

Infraco do not agree with the summary of events issued by *tie* on 07 June 2011. Existing Septic tank was not made good and is leaking into Infraco work site and Infraco are unable to complete earthworks until this is resolved. It was agreed with *tie*'s Andy Scott that he would resolve this through MUDFA contract with SDS. Infraco await resolution of issue by *tie*.

A8 footpath reinstatement – *tie* has previously stated they would carry out this work as part of service diversions. Infraco await confirmation as to when these works will be carried out. *tie* has issued tNC to Infraco to carry out these works. Infraco to review and submit Estimate.

CEC/*tie* need to resolve MUDFA issues or provide instruction to Infraco to include within Infraco scope of works.

4.1.1.43 MUDFA As Builts

tie have issued a number of unsigned MUDFA ‘As Builts’ and Infraco have concerns over the completeness, quality and accuracy of the information provided by *tie* to date. It is assumed there is no impact on Infraco design due to utility conflicts.

4.1.1.44 Reinstatement of Bulls Heads near Haymarket Tram Stop

Instruction required from CEC/*tie* to reinstate the Bulls Heads as part of the Infraco works.

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4.1.1.45 Delivery of IFC Design Drawings

CEC have requested copies (1A3 and 1 pdf copy) of IFC and as built drawings to be issued to them. Infraco request clarification as to whether drawings will be issued to CEC by *tie* following usual process or if Infraco are to issue directly to CEC.

Infraco continue to issue IFCs to *tie* until instructed otherwise, assuming that *tie* issue set of IFCs onto CEC.

4.1.1.46 BAA/EAL issues

tie has confirmed close out of Depot Access Road design by BAA.

BAA/EAL have requested an additional Road Safety Audit to address their concerns with the relocated Burnside Road. CEC/Infraco to discuss.

tie will continue to submit draft and final drawdown notices directly to BAA, working closely with Infraco in preparation and issue of the documentation.

4.1.1.47 SRU/Murrayfield Accommodation Works

Infraco carried out design works for *tie*; who, separate to Infraco Contract, completed the construction works. A number of issues are to be resolved with *tie* (Form Q, As-Builts and *tie* request for Collateral Warranty to be signed by SDS).

Infraco require *tie*'s fabricator's calculations to close out Building Warrant Form Q with CEC.

4.1.1.48 Network Rail Haymarket Station Development

tie confirmed Infraco to proceed with works as per current approved design. *tie* / CEC to discuss with Network Rail and advise Infraco.

4.1.1.49 Section 2A – Junction 91

This issue is related to cars trying to squeeze around a tram held across the car park entrance. The IMU box is being relocated so that the tram now blocks the whole entrance.

Design basis statement to be formally issued by Infraco to CEC for close-out. This is to be issued w/c 13 June 2011.

4.1.2 Outstanding Consents

4.1.2.1 CEC Planning

1. Forth Ports Cruise Liner Terminal Road – to be submitted.
2. Listed Building Consent for 4 Dublin Street – to be submitted.
3. Roseburn Viaduct Prior Approval – with CEC Planning for approval.
4. Planning Variations – 27 of 45 planning batches approved to date with 7No with CEC for approval. The outstanding variations still to be approved are split as follows: 5 Off-Street and 13 On-Street.

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5. Planning Informatives – information being submitted to CEC as part of the Planning Variations to close out.
6. Trackform – colour and finish of concrete was agreed with CEC Planning on 24 May 2011. Final walkthrough of details held 26 May 2011. Line 2 crossings to be discussed w/c 13 June 2011.
7. Points position indicators locations – to be submitted.
8. OLE Pole finials – details to be confirmed with CEC Planning.
9. CEC/*tie* Planning Informatives to be closed out with CEC Planning.
10. Cathedral Lane Substation – new Prior Approval to be submitted.
11. York Place – new Prior Approval (TBC by CEC Planning) to be submitted.
12. Edinburgh Gateway Planning Variation – to be submitted if required

4.1.2.2 CEC Technical (Roads) – To Be Submitted:

1. Section 1C2 (Picardy Place) – to be submitted.
2. Technical Informatives – remainder to be submitted and closed.
3. Trackform – CEC have issued Approval in Principle for trackform design. Design Statement has been amended to incorporate responses to *tie*/CEC queries. Anticipated date for formal submission w/e 10 June 11.
4. Overall tram and traffic signalling strategy – to be closed out with CEC.
5. Signalling and ducting details to be submitted to close Informatives.
6. High Level Control (following on from Traffic Modelling close out).

4.1.2.3 CEC Technical (Roads) – Submissions With or In Discussion with CEC:

1. Traffic Modelling – some “tweaks” to modelling required to close out. Impact on roads design to be assessed.
2. Use of existing fibre link from Ingliston to City Chambers for CCTV to permit design to be finalised.
3. CEC / TEL provided protocols for Bus Tracker – Infraco to update design document.
4. Use of existing fibre link from City Chambers to Annandale Bus Garage for Disaster Recovery Control.
5. Junction 91 (Section 2A) issue to be finalised - Infraco await response from *tie* to allow CEC close out of this issue.

4.1.2.4 CEC Technical (Structures)

1. Murrayfield Retaining Walls S21B & D – Ground Improvement Works – to be submitted.
2. Edinburgh Gateway – Retaining Wall – to be submitted.
3. Review of Roseburn Viaduct (cladding around abutments) – to be submitted.
4. Tower Place Bridge – Steps in place of ramp – Design to be submitted for Technical Approval

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4.1.2.5 CEC Building Control

1. Edinburgh Gateway Tram Stop - Building Warrant – Infraco to respond to CEC comments.
2. Edinburgh Airport Kiosk and Canopy – Building Warrant – progressing design for Building Warrant.
3. Cathedral Lane Substation – Building Warrant - awaiting scope from CEC/*tie* to commence “HG” design.

4.1.2.6 Scottish Water

1. Edinburgh Gateway – 1525 sewer diversion and interface with Retaining Wall.
2. Six month time limit on Approvals – process to manage this requirement to be agreed between CEC, SW and Infraco. Section 1C1/1C2 outstanding.
3. Phase 1a/1b formal Approval from SW required
4. OLE Base/Scottish Water infrastructure – principle to be discussed between SW and CEC/*tie*.

4.1.2.7 Forth Ports

1. Section 1A Drainage – CEC/*tie* to issue Forth Ports Approval to Infraco.
2. Forth Ports fencing requirements – proposed design submitted to CEC for onward issue to Forth Ports.
3. Ocean Terminal Tram Stop Finishes, Lighting, Adoption Boundary etc to be agreed with Forth Ports – design to be finalised to allow CEC / FP to determine adoption boundary.
4. Tower Place Bridge – steps in place of ramp to be agreed.
5. Forth Ports Licence issues – CEC/*tie* to advise.

4.1.2.8 Network Rail

1. Edinburgh Gateway – Retaining Wall Design Approval – to be submitted.

4.1.2.9 BAA / EAL Approvals

1. Airport Canopy/Kiosk and Airport Tram Stop – submitted to EAL
2. BAA/EAL has requested an additional Road Safety Audit to address their concerns with the relocated Burnside Road. CEC/Infraco to discuss.

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4.1.2.10 Other Third Party Consents

1. Consents and requirements required for 4 PIDs located outside LOD (BAA, FP approval etc) – Infraco proposal submitted to *tie*. *tie*/CEC to advise.
2. TEL/CEC to respond on use of existing fibre links – strategic decision required.

4.1.3 Civil & Building Procurement

4.1.3.1 Sub-Contractors

In light of the mediation which has taken place in March 11 and Minute of Variation 4 procurement of the original Infraco works for works outwith the scope of the Mar Hall agreement has been suspended.

We have completed the procurement of subcontractors for the Prioritised Works.

In respect of the On Street Works enquiry documents were issued on the 28 April 11 with a return date of Friday 20 May 11 with additional supporting information issued on the 4 May 11. Several subcontractors requested an extension to the return date and after careful consideration we agreed to extend the enquiry return date to the 3 June 11.

We have received six quotations from the seven remaining subcontractors on the due date of the 3 June 11. These are currently being reviewed.

4.1.4 Civil & Building Construction

**4.1.4.1 Section 1C McDonald Road to Princes Street
Trackwork Waverley Bridge to Castle Street**

Progress

Enabling works to allow Princes Street closure to be implemented commenced in the period.

Issues and Concerns

None.

**4.1.4.2 Section 1D Princes Street to Haymarket
Trackwork Castle Street to Lothian Road**

Progress

Enabling works to allow Princes Street closure to be implemented commenced in the period.

Issues and Concerns

None.

Trackwork Lothian Road to Haymarket

Progress

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Geo-technical testing on existing carriageway commenced in the period.

Issues and Concerns
None.

**4.1.4.3 Section 2A Haymarket to Roseburn Junction
Haymarket Station Viaduct**

Progress
No activities carried out during the period.

Issues and Concerns
None.

Trackwork Haymarket to Russell Road

Progress
Duct laying and chamber construction continued in the period. OLE foundation works have commenced in the period.

Issues and Concerns
OLE foundation construction was delayed by late temporary diversion works by SGN.

No confirmation received from SGN that premenant diversion works will be completed as required by the 22 June 11.

**4.1.4.4 Section 5A Roseburn Junction to Balgreen Road
Russell Road Retaining Walls W3 & W4**

Progress
No activities carried out during the period.

Issues and Concerns
No confirmation that owner/occupier issues have been resolved.

Murrayfield Retaining Wall 21B

Progress
Geo-technical testing has been completed in the period.

Issues and Concerns
None.

Murrayfield Stadium Underpass

Progress
Geo-technical testing has been completed in the period.

Issues and Concerns
None.

Murrayfield Retaining Walls 21D

Progress
Geo-technical testing has been completed in the period.

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Issues and Concerns
None.

Water of Leith Bridge

Progress
No activities carried out during the period.

Issues and Concerns
None.

Depot Access Bridge

Progress
Structure now substantially complete.

Issues and Concerns
None.

A8 Underpass – Phases 1 & 2

Progress
Parapet beam construction has continued.
Deck waterproofing works have been completed and backfilling has commenced.
Removal of temporary utility bridge has commenced.

Issues and Concerns
No confirmation has been received from Utility providers on relocation completion dates.

A8 Underpass – Phase 4

Progress
Works recommenced on 3 May 11.
Excavation around piles has been completed.
Trimming of piles has been completed in the period.
Erection formwork and fixing of reinforcement to west wing wall and deck has commenced in the period.

Issues and Concerns
None.

Trackwork Gyle Centre to Depot Stop (Mini Test Track)

Progress
Installation of drainage has continued in the period.
Duct installation has continued in the period.
2nd stage earthworks has continued in the period and track formation works have commenced.

Issues and Concerns
None.

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Trackwork Depot Stop – Gogarburn (Mini Test Track)

Progress

Installation of drainage has continued in the period.

Duct installation has continued in the period.

2nd stage earthworks has continued in the period and track formation works have commenced.

Issues and Concerns

None.

Depot Tram Stop

Progress

Excavation and construction of foundations have been completed in the period.

Blockwork to platform has commenced in the period.

Issues and Concerns

None.

**4.1.4.5 Section 6A Depot
Earthworks/Drainage**

Progress

2nd stage earthworks has been completed in the period.

Issues and Concerns

None.

Trackwork

Progress

Installation of ducts has continued.

Installation of drainage has commenced.

2nd stage earthworks and formation preparation has continued in the period.

Placing of lower ballast has commenced in the period.

2nd stage concreting of track around aprons has commenced in the period.

Issues and Concerns

None.

Depot Building

Progress

Internal fit-out has continued in the period.

Electrical testing/commissioning has continued in the period.

Installation of water supply pipe has continued.

2nd stage concreting of track form has continued.

Issues and Concerns

None.

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Access Roads/Car Parks

Progress

2nd stage earthworks has continued in the period.

Drainage and concreting of hard standings has continued in the period.

Erection of permanent fencing has continued in the period.

Issues and Concerns

None.

4.1.4.6 Section 7A Gogarburn to Edinburgh Airport

Trackwork Ingliston to Airport

Progress

No activities carried out during the period.

Issues and Concerns

None.

4.2 E&M SYSTEMS

4.2.1 OLE (Overhead Line Equipment)

Design

Design complete but some minor details to be agreed with the Planners (see below). Some building fixing details being modified for clad buildings.

Approvals and Consents

The CEC Planners have now accepted the OLE insofar as they do not now require a full submission in addition to the Planning Drawings that have already been agreed and incorporate the OLE poles. There are some pole height/finish details that need to be clarified and a meeting is scheduled for w/c 6 June 11.

All OLE informatives have been closed except two, one subject to collision risk assessment (SDS proposals currently with CEC) and one in relation to the location of Isolator Cabinets.

Issues and Concerns

Programme issues remain unchanged from last report.

Production

No update since last report.

4.2.2 TPS (Traction Power Substations)

Design

No update since last report.

Approvals and Consents

No update since last report.

Issues and Concerns

Cathedral Lane Substation, refer Section 4.1.1

Meeting planned for w/c 6 June 11 for information gathering.

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Production

No update since last report

4.2.3 TRW (Trackwork)

Design, submittals to *tie* in the reporting period:

- None
- Post-Phoenix, noise and vibration design is progressing.

Approvals and Consents, RoR's

- BSC Inspection and Test Plan for Trackwork Addendum to Rev.4.1 (#055057)
- Infraco continues to pursue closure of the trackwork Informatives and a resolution to Princes Street. There have been a number of developments to the detail of concrete beams and coverage material to satisfy CEC technical and planning requirements. The formal submission will be made during w/c 6 June 11.

Issues and Concerns

- Infraco is aware of certain locations where the Infraco design may be in conflict with existing utilities that have not yet been diverted by tie or where insufficient information is available on the as-builts provided by tie. If accurate and detailed as-builts cannot be provided by tie, site investigation will be required (through instruction from tie) as well as analysis of the SI information to determine if there is any impact to the design. The locations include but are not limited to:

275 kV cable - Arthur Street to Dalmeny Street
Scottish Power Tunnel - Leith Walk
Culvert on North Street Section of Constitution Street

- Ground conditions and utilities that cannot be / have not been relocated to lower levels may influence the TRW design and programme. As stated earlier in this report, Infraco does not have confidence that MUDFA As-Builts are accurate.

Production

- Track construction in depot – area 2c
- Delivery of turnouts area 4
- Track construction in depot – south apron

Following production activities are planned within the reporting period:

- S&C production ongoing, subsequent delivery of depot turnouts
- Preparation of track installation Section 2.
- Track construction in depot – area 3a
- Track construction in depot – engineering track
- Joint sealing works depot workshop, east and south apron tracks

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- Preparation of track installation section 2 Haymarket Yard – Haymarket Viaduct .
- Preparation for remedial works in section 1C/1D Princes Street

4.2.4 DWE (Depot Workshop Equipment)

Design

The status remains unchanged compared to the previous period report.

Approvals and Consents

All status remains unchanged compared to period the previous report.

Issues and Concerns

None.

Delays to Site Availability

The status remains unchanged compared to the previous period report.

Production

The status remains unchanged compared to the previous period report

Installation and Deliveries

Installation activities for washing plant technical room are close to be finished. Wash brushes and wash arches installation will pursue when preconditions are finally checked by survey.

Installation works for the Underfloor Lifting Plant have been largely completed and will be finalized once the preconditions are available. The current installation status of the Underfloor Wheel Lathe enables a quick restart of the installation works once the missing preconditions are available. The Overhead Girder Crane has been installed successfully. Remedial works concerning the crane rails will be performed asap. Both the Service Vehicle and the concerned platforms including the accessories are stabled in Edinburgh.

Next installation activities will be the small shop machinery and the compressed air plant. Tools and small equipment will be expected in Edinburgh until end of June 2011.

4.2.5 Signalling, Communication, SCADA, PIS, PA

Design

Signalling

Signalling design is being completed in response to traffic modelling closure between SDS and CEC and is expected to be complete by w/c 6 June 2011.

Approvals and Consents

Approvals of overall Tramstop submission has been granted, which includes consent of PID, PA, PHP.

Status CEC Informatives SIG

- Earth boxes submission made and details agreed Official CEC approval outstanding
- Colours of Interlocking clarified and approved. Only colour of interlocking cabinet Airport has to be changed

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- Signal Head PPI / RI details submitted and agreed. Official CEC approval outstanding
- SIG interlocking drawings in progress to be submitted

CEC has taken a pragmatic view over equipment already procured to earlier versions of Appendix 19/1 relating to the paint finishes of network equipment, with the exception of that within the World Heritage Area.

Issues and Concerns

Ticket Vending Machine type now advised by the operator and design developed. Some ER relaxations necessary.

CEC/tie/BSC have agreed that BSC will use hand held radios until the Edinburgh Gateway is constructed where a permanent mast will be installed.

Following the Mediation, a Traffic Light Controls (TLC) interface partner is now on board to assist with gaining CEC approvals. Conclusion of signalling design and all three interfaces; civils (ductwork etc), cabling and communication/ information have been able to progress following this appointment

The Tram Detector Report (part of the overall traffic modelling report) is being considered by CEC. Until approved, there is a risk that further tram signalling design will be required.

Production

Minor works continue in the Gogar Depot OCC with the installation of the Signalling Mimic displays, CCTV array displays and the fit out of three operator workstations.

Gogar Depot Equipment Room COM/SCADA installation works continues . This includes the installation of the COM/SCADA racks and the cabling of the racks to the structured cabling rack within the equipment room which is substantially complete.

Demonstration of Mechanical Point Indicator will be carried out at the Depot on Thursday 9 June 11 along with demonstration of Point Operation Bar.

4.2.6 TLC (Traffic Light Control)

Issues and Concerns

Infraco has received no instructions to proceed with any traffic signal installation from tie (other than works completed on Princes Street in December 2009). Since the Mediation, however, Infraco is progressing this work. TLC design will be dependent on close-out of traffic modelling with CEC.

4.2.7 HV/LV – Supply Design

No comments

Approvals and Consents

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No update since last report

Issues and Concerns

Way-leaves still required from Cathedral to Leith Sands substations and Ingliston P&R substation. (wayleave currently awaiting agreement of T&C's between BAA and Scottish Power).

Production

No comments.

4.2.8 RFI Status (E&M)

Total	54
Closed out	41
Withdrawn	07
Open with <i>tie</i> for response or further response	06

4.3 TRAMS

See CAF programme update Estado de fabricación Edimburgo 31-05-2011 (Appendix 10.4).

4.3.1 Design

Detailed design is considered finished except for the free issue equipment system for which there is not enough information.

Free issue equipment to CAF, this definition refers to:

- TPDS and Radio supplied by Siemens, closed.
- Bus Tracker supplied by *tie*

4.3.2 Procurement

Procurement for the trams is going according to programme.

4.3.2.1 Delivery of Materials

Materials to complete the assembly of the full fleet have been delivered in CAF.

For the materials that are not available, CAF will evaluate the impact of not having the materials delivered and available as is necessary to meet manufacturing programme. Meanwhile, the trams have been assembled without those materials.

4.3.3 Manufacturing

CAF manufacturing process started at beginning of December 2008.

The manufacturing status is detailed on document “Estado de fabricación Edimburgo 31-05-2011”.

- Bodysell manufacturing for the complete fleet has been achieved.
- Bodysell painting for the complete fleet has been achieved.

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- Assembly for the full fleet has been achieved

The total number of trams manufactured is 27.

4.3.4 Testing in CAF Irun

CAF intends to test all equipment on the different phases of the testing process (CAF premises, Test Track and Edinburgh Tram Network) according to the protocols agreed with the customer and in cooperation with the suppliers of each equipment, including Free Issue Equipment delivered by Siemens (TPDS and Radio) and *tie* (Bus Tracker).

With the material and information available today CAF will perform as many of the agreed tests as possible.

Testing for TU27 should be achieved during June 2011.

The total number of trams to be tested is 27.

4.3.5 Dynamic testing at Wegberg-Wildenrath

CAF performed static and dynamic tests for tram No1 and tram No 2 at the Wegberg-Wildenrath Test and Validation Centre of Siemens at the beginning of the year 2010. Since UT1 has been moved back to CAF Irun where it was unloaded at the beginning of January 11 and UT2, having satisfactorily performed all its dynamic tests, was sent to Edinburgh in April 10.

Therefore this dynamic test chapter is fully closed.

4.3.6 Delivery of Trams to Edinburgh

CAF was ready to deliver trams to Edinburgh according with its contractual programme but there was, and still there is, no depot available to receive the trams.

The first tram delivered (UT2) was unloaded on 25 April 10 at Princes Street according to the MoV of *tie* Change Order 152.

Presently, unit 1 has its Factory Acceptance Type Test Certificate delivered and unit 2, unit 3, unit 4, unit 5, unit 6, unit 7, unit 8, unit 9, unit 10, unit 11, unit 12, unit 13, unit 14, unit 15, unit 16, unit 17, unit 18, unit 19, unit 20, unit 21, unit 22, unit 23 and unit 24 have their correspondent Factory Acceptance Routine Test Certificates delivered by the Tram Inspector. Unit,unit 25 and unit 26 should have their certificate delivered soon.

4.3.7 Tram Storage

CAF has no storage facilities available.

As the depot is not ready and CAF has received no instructions regarding storage, CAF has proceeded according to its Contractual obligations in order to deal with the storage issue.

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CAF has been forced to make some works inside CAF premises in Irun in order to prepare some parking facilities. The area available is able to park 12 trams. At the moment the finished trams are located at the following locations:

- Tram Unit 2 in Edinburgh under MoV of *tie* Change Order 152 and Minute of Variation dated 23 April 10.
- Tram units at CAF Irun and RENFE Irun: UT 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 25 and 26.

The total number of trams to be delivered is 27.

4.4 SYSTEMS INTEGRATION

4.4.1 EMC

4.4.1.1 Earthing & Bonding

No update since last report.

4.4.1.2 Stray Current

Investigation of possibly affected utilities started. Individual utilities are indicated and will be clarified whether a risk may exist.

4.4.1.3 Network Rail Immunisation

Draft test procedure for Immunisation measurements has been provided to NWR and *tie* informally.

Please refer to chapter 4.4.2.2 in addition.

4.4.2 System Assurance

4.4.2.1 Deliverables / Documents Issued

- Preliminary Case for Safety (CfS)
 - All Cases for Safety now at Level A or B. Those at Level B, Plan agreed with PSCC and ICP to incorporate outstanding comments in next phase of project as part of the Staged Case for Safety process.
- Immunisation
 - See section 4.4.2.3

4.4.2.2 Activities completed

- PSCC Safety Verification Scheme (SVS) Audit – Tram, TSA-10-04, completed. One finding on BSC. Issue of Interface Management in respect to free issue equipment to Tram builder. BSC to clarify approach to PSCC.
- Hazard Log Update –
 - See section 4.4.2.3.

4.4.2.3 Activities Ongoing and Planned:

- Immunisation–

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- Hazard Mitigation - Design mitigation provided with objective of being able to close hazards from a design perspective
- Hazard Log Management –
 - Hazard Log has been updated for the Design Phase based on Hazard owner’s responses (ongoing). Response has been provided to PSCC Sub-committee chairman, Initial feed back from PSCC is favourable as indicated at PSCC meeting, 13/05/2011, and awaiting formal response to confirm if the hazard can be deemed as providing evidence that Hazards have been, controlled so Far As Is Reasonably Practicable (SFAIRP). for the Design Phase (see Section 4.4.2.2)
- Control Room HFI Assessment–
 - Manage HFI Issues Log as identified in HFI OCC Report (ongoing)
- SVS Audit Action Close Out. Following actions closed;
 - TQA-08-17, Audit Finding 20 – Rail Adhesion and leaf fall.
 - TSA-10-03, Additional information as requested supplied to PSCC. BSC awaiting tie audit report
 - TSA-10-04, Tram, BSC awaiting audit report from PSCC
- Responses to RFI’s from ICP
 - RFI 20 and 21; Progressed responses from SDS. More information required from SDS as agreed with ICP.
 - RFI 017; General response agreed with ICP. Meeting arranged for the 22/06/11 with ICP to discuss the BSC process of Interface Management and System Integration in detail.
- Revision of Approach of PSCC agreed in terms of its role and the route for escalation of issues not deemed as being resolved in a timely manner. PSCC Sub-Committee Chairman has responsibility of identifying key issues with other PSCC members and escalating if required.

4.4.2.4 Regular activities and attendances:

As well as the above a number of other activities are ongoing such as regular attendance at the following meetings; PSCC, PSCC Sub-Committee, ICP Liaison Meetings.

4.5 TESTING, COMMISSIONING AND START-UP

For the planned acceptance tests for Depot and Mini-Test Track a Testing and Commissioning Plan is being prepared. This plan is an extract of the overall Testing and Commissioning Plan which is being developed and will be submitted in the near future

5 NOT USED

6 STAKEHOLDER AND THIRD PARTY ISSUES

Nothing to report.

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7 COMMERCIAL

7.1 Prioritised Works Milestones

Fixed Sum Prioritised Works Milestones Achieved in the Period:

PW/3/44	Preliminaries	BBUK	1,200,000.00
PW/3/44	Preliminaries	Siemens	494,000.00
PW/5/44	Haymarket Yards	BBUK	175,000.00
PW/6/44	A8 Underpass - Phase I,II & IV Works	BBUK	150,000.00
PW/7/44	Depot Access Bridge	BBUK	115,000.00
PW/8/44	Depot Area: Building	Siemens	200,000.00
PW/9/44	Depot Area: External Works	BBUK	750,000.00
PW/9/44	Depot Area: External Works	Siemens	200,000.00
PW/10/44	Depot Area: Mini Test Track	BBUK	200,000.00
AI/1/44	Ongoing Maintenance Works	BBUK	15,000.00
AI/2/44	Additional Testing in Murrayfield Corridor	BBUK	20,000.00
AI/5/44	A8 Underpass - Ongoing maintenance works	BBUK	75,000.00
61	Delivery of 26th Tram	CAF	110,083.25

7.2 Change Management

7.2.1 There has been no change in the information provided from Period Report 4-2 as set out below. The Infraco Change Register is as presented in Appendix 10.7 of Period Report 4-2.

816 Changes have been notified to 12 May 11 - 108 by *tie* and 708 by Infraco.

137 of these Changes have been superseded by further Changes or withdrawn therefore there are 679 current Changes.

Of the 679 notified Changes, 357 have been accepted in principle, 129 have been rejected and 193 have neither been accepted nor rejected by *tie*.

87 Changes have a delay only impact and will not require a design/construction Estimate (the impact of these is reflected in the various entitlement programmes submitted to *tie*).

Therefore there are 592 Changes requiring Estimates.

Infraco has submitted Estimates for 545 Changes for design only or for design and construction works to *tie* and 3 delay only Estimates

The total Infraco value of the submitted Estimates is £165,797,161 which includes £12,714,398 for non-scope work on Bernard Street and St Andrew Square and £20,140,355 for INTC's impacting on Sectional Completion A.

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219 of the 545 submitted Estimates have been agreed by issue of a *tie* Change Order. **The value of Change Orders issued by *tie* is £25,919,825.**

There are 28 Design Estimates that require to be formally submitted which are the subject of ongoing discussions.

There are 74 remaining notified Changes for which Construction Estimates are required. It is not possible to prepare 16 of those Construction Estimates until either an SDS design Estimate is received, validated by Infraco and approved by *tie*, and/or the required information is obtained from the SDS Provider.

There are a further 26 Changes which have been notified which are currently being reviewed as they may be included within other Construction Estimates already submitted.

Prioritisation of the remaining Estimates is aligned with the latest intended construction sequence.

Dispute Resolution Procedure (DRP):

(Currently all Disputes below are stayed or “Frozen” by mutual agreement following mediation discussions held in early March 2011)

- Dispute 18 – Disputed Payment for Princes Street Works
Referred by Infraco 17 September 10.
Adjudication is ongoing.
- Dispute 21 – Lindsay Road Lowering
Referred by *tie* 30 November 10
Mediation took place 11 February 2011. Further discussions are continuing between the parties.
- Dispute 24 – MUDFA 2 - Delays and Additional Costs arising from incomplete Utilities Works
Referred by Infraco 18 January 11.
Mediation proposed by *tie*.
- Dispute 25 – Section 5B – Roads, Street Lighting and Roads Drainage (INTC 204) – Referred by *tie* 01 February 2011.
Internal DRP ongoing.
- Dispute 26 – Section 5C – Roads, Street Lighting and Roads Drainage (INTC 205) – Referred by *tie* 01 February 2011.
Internal DRP ongoing.
- Dispute 27 – Section 2A – Roads, Street Lighting and Roads Drainage (INTC 212) – Referred by *tie* 01 February 2011.
Internal DRP ongoing.
- Dispute 28 – Section 5A – Roads, Street Lighting and Roads Drainage (INTC 528) – Referred by *tie* 01 February 2011.
Internal DRP ongoing.

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Remediable Termination Notices (RTN's)

tie has raised 10 RTN's and Infraco has responded to all 10 RTN's and have refuted their validity.

Underperformance Warning Notices (UWN's)

tie has raised 3 UWN's and Infraco has responded to all 3 UWN's and have refuted their validity.

8 RESOURCES

8.1 Organisation Charts

Consortium and Systems organisation charts are included in this report.

See Appendix 10.8.

9 OTHER ISSUES

No comments.

10 APPENDICES

10.1 Contractor Period HS&E Return