

**Bilfinger Berger – Siemens – CAF Consortium**

**EDINBURGH TRAM NETWORK  
INFRACO CONTRACT**

**PERIOD REPORT No 2-1  
TO 25 APRIL 2009**

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## 1 EXECUTIVE SUMMARY

53,000 hours were worked in period 14, of which 18,000 were site hours with one reportable accident.

The basis for progress measurement in this report is the programme showing the agreed mitigated impact of the initial design slippage as 38 days (7 weeks 3 days) on the end date. The impact of design information from the current design issue programme and known access dates after MUDFA completion is to shift the original programme completion date to 14 October 2012.

Work is in progress to produce revised road, trackform and OLE designs, incorporating Infraco proposals.

System engineering design is finalised for OLE and traction power and approaching finalisation for track, Depot equipment, signalling and other disciplines.

Tram manufacturing is progressing well.

Virtually all construction works are impacted by external issues which require resolution through the change process or the contract. Meetings of Principals representing *tie* and the BSC partners and follow-on discussions have continued. Agreement on Princes Street has been reached on 20 March 2009, to allow works to start week commencing 23 March 2009.

## 2 HSQE

### 2.1 Health & Safety

#### 2.1.1 Safety Management including CDM

The Construction Phase Health & Safety Plan Rev 4 has been reviewed internally within BSC and was issued on the 17 April 2009.

#### 2.1.2 Accidents, Incidents and Near Misses/Unsafe Conditions:

##### Period 1-13 to 2-1 records up to 10 April 2009

##### 2 Accidents Recorded:

- A member of the public was trapped between the fencing at Princes Street Gardens at 3.45am on Sunday 8 March 2009.
- A member of the public gained access to the site at Princes Street opposite Next on 25 March 2009 at 18:00 hours where he suffered a minor ankle injury, he was removed from site under escort of the police.

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**8 Unsafe Conditions Recorded in the Period:**

- 1 Heras fencing left open at the foot of Hope Street on 2 March 2009.
- 5 further breaches of security on site at 1C Princes Street over a period of the 1-13– to 25 March 2009, some of which are associated with the Mound area that have been raised through consultation with MUDFA. Since the initial start of work breaches have subsequently become more infrequent.
- 1 unsafe condition recorded by TCA on a trailing cable outside the Roxburgh Hotel – action was taken by placing physical barrier.
- Verity House access road – mini excavator lifting manhole section with chains wrapped round bucket, reported on 10 April 2009.

**2 Incidents Recorded:**

- 1 Princes Street service damage on a cable by a mini excavator with breaker. Reported 12 March 2009.
- Frederick Street service damage to a cable with a floor saw on the 8<sup>th</sup> April – SP called to site to isolate a lighting cable.

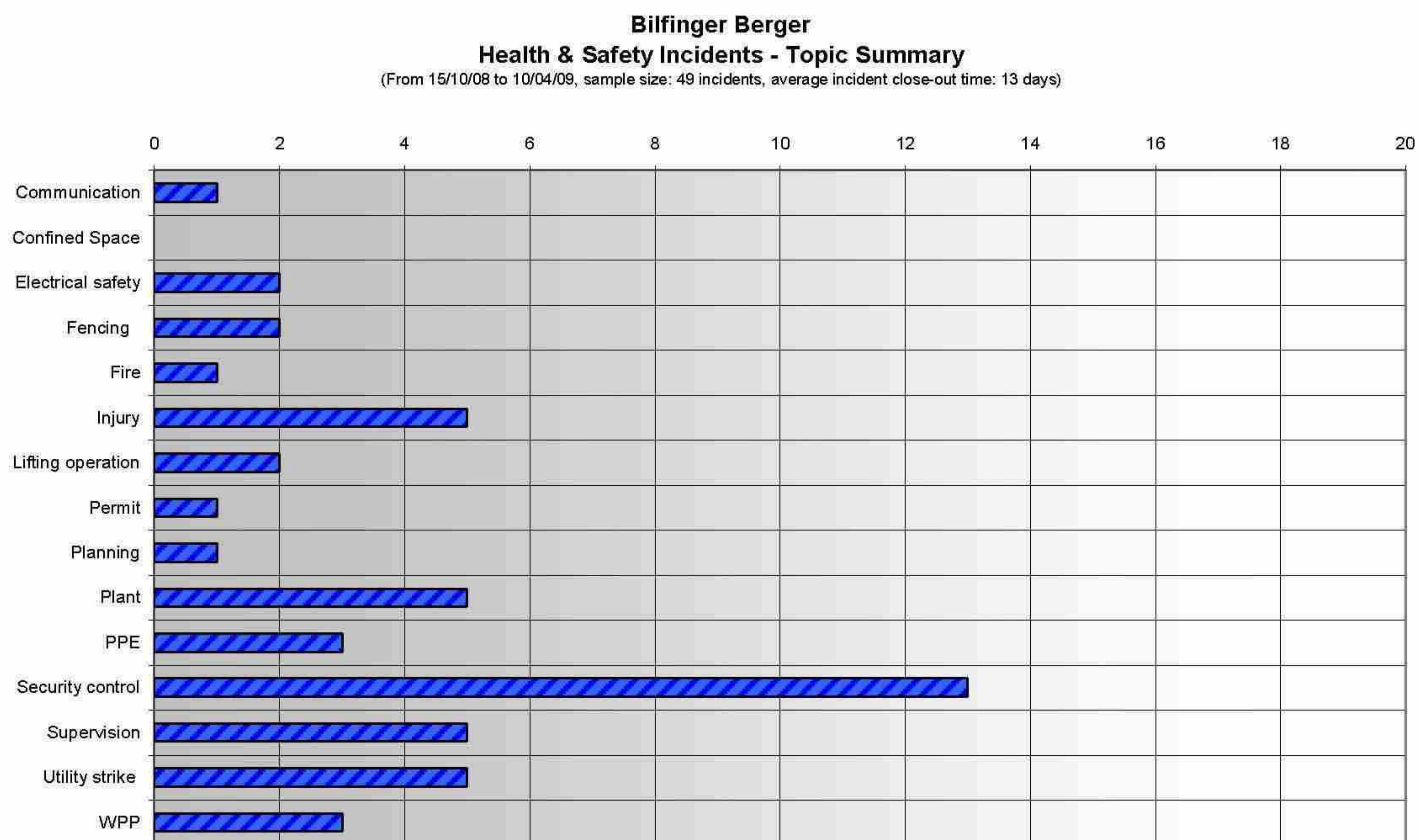
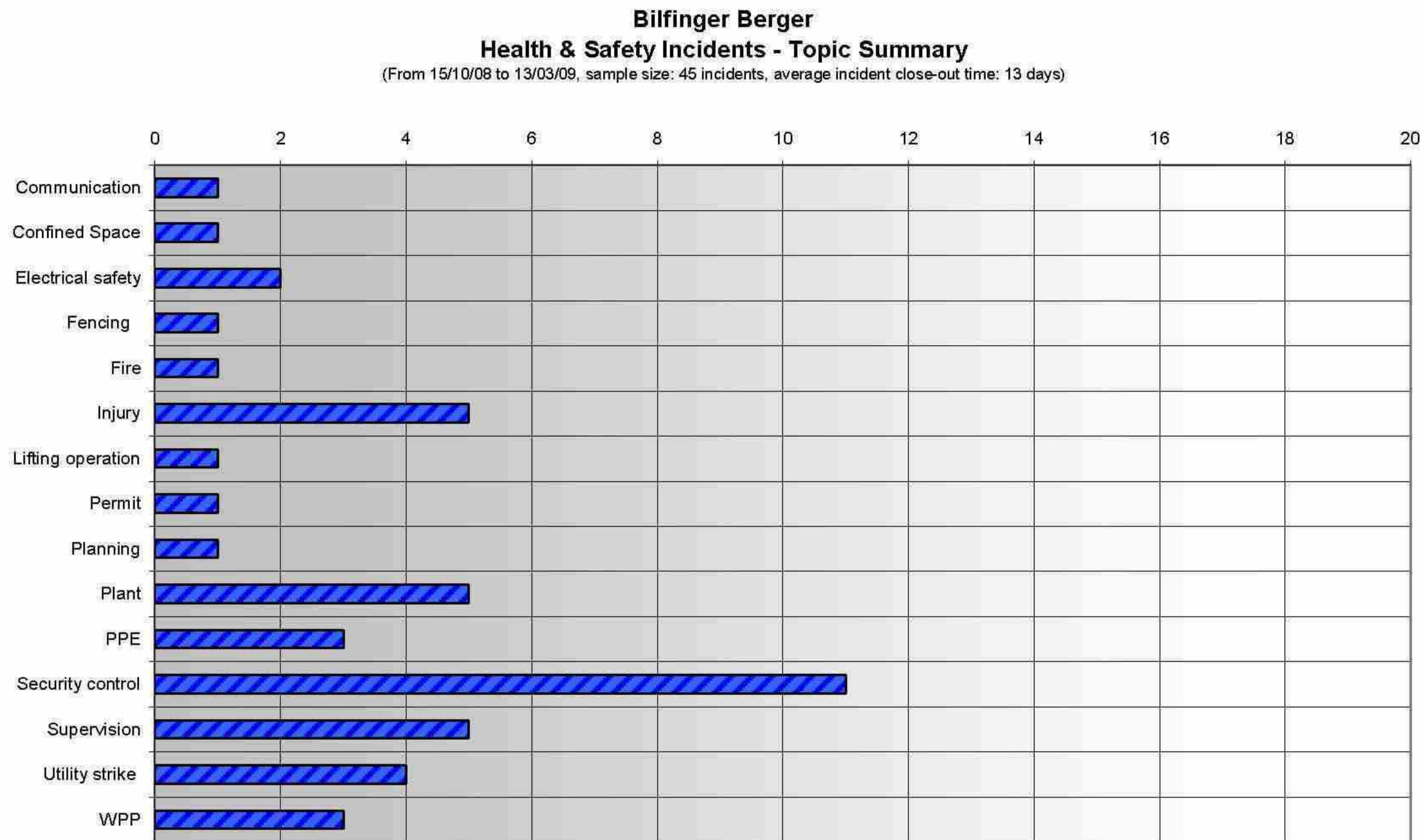
The rolling AFR for the first 13 periods is now 0.27.

**Total Hours worked in Period 1-13:**

Total:	53,053
Non site hours =	34,692
Site Hours =	18,361

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2.1.3 Trend Analysis for period 1-12 and 1-13 on safety related activities.



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**2.2 Environment**

- 2.2.1. Construction Environmental Management Plan under review by an external provider to incorporate the Site Specific Environmental Management Plan, Waste Management Plan and the Environmental Mitigation and Management Plan.

**2.3 KPI**

KPI spreadsheet for Period 1-13 is attached at Appendix 1.

**2.4 Quality**

**2.4.1 Quality Management System**

BSC maintains a 'Document Deliverables Tracking Register' which fulfils the same role as the 'Submissions Schedule' mentioned in the Employer's Requirements (ER). Discussions are ongoing with *tie* as to BSC obtaining clarification on what some of the required document deliverables titles mean and what the content of them should be, as there is no description for some of them in the ER.

**2.4.2 NCRs**

At the time of writing there are currently 15 'open' 'quality' NCRs from a total of 27 raised to date, 1 having been cancelled, and the remainder having been closed-out. 12 of the currently 'open' 'Quality' NCRs are 'overdue'. 8 NCRs were raised during the last period.

**2.4.3 Audits**

A 'BSC Internal 'Procurement, Commercial Change Management & Project Controls' was carried out on 12 March 2009, this resulted in 3 NCRs being raised.

A 'BSC Internal 'Document Control' Audit is scheduled for 29 April 2009.

A joint [with *tie*] assessment visit to the Banagher [pre-cast] concrete manufacturing facility in Ireland was undertaken on 30 March 2009. There were no concerns from the visit and a report has since been submitted to *tie* for information.

**2.5 Other Business**

- 2.5.1 Occupational Health meetings and arrangements are ongoing with meeting due on 28 April 2009 with the Contractors, as to their progression with their systems and procedures and the commitment to the project.
- 2.5.2 Further meeting scheduled for 24 April 2009 with the HSE to demonstrate where we are on the Infraco project with our processes.

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- 2.5.3 Occupational Health provider was procured for the project on 9 March 2009 and progress is in place for provision of Occupational Health.
- 2.5.4 The A-B flyer has been well received on the project. It provides information to the workforce and Contractors on the project of events and initiatives, as well as information from the consultation of the workforce meetings.
- 2.5.5 BSC welcomes *tie's* newest member to the HSQE team, Paul Colquhoun, and look forward to his knowledge and assistance on the project.

## 3. PROGRAMME

### 3.1. Programme

The programme in the appendix to this report has the V31 mitigation programme incorporated. This programme has been accepted by tie in accordance with Clause 60.4 as the "Programme" (Rev 1)) and is used as a baseline for reporting progress.

Progress achieved up to 17 April 2009 has then been recorded against the above baseline including inputting the latest IFC dates received from SDS (V43). Where the V43 IFC dates are forecast to be after the data date of the V43 programme (09 March 2009) but before the data date of this programme (17 April 2009) and the drawings have not been received the date is defaulting to the 17 April 2009.

No IFC date has been received for the redesign of South Gyle Access Bridge (again showing 17 April 2009).

We have received revision 7.9 of the MUDFA programme. The Programme identifies completion of MUDFA works in each Intermediate Section and uses this date as a start milestone for the INFRACO work. Dates have been extracted from MUDFA revision 7.9 to update the Programme using the same logic. However, in a number of areas the works have not been completed in line with revision 7.9 and this update of the Programme is showing the finish of these works defaulting on the 17 April 2009.

It should be recognised that the Programme has only been updated were noted in this report and does not include for all changes that we are aware of or have been notified to date e.g. dealing with abandoned services, misalignment issues etc.

An additional activity has been added to the Programme to represent the greater volume of excavation and disposal at the depot site.

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The result is the following changes to Section Completion Dates:

	17 April 2009 Update	20 March 2009	Programme
A	13 June 2011	13 January 2011	01 June 2010
B	18 August 2011	30 March 2011	01 July 2010
C	17 April 2012	20 January 2012	10 March 2011
D	14 October 2012	18 July 2012	06 September 2011

Incorporating the additional earthworks activity at the depot puts back the Tram in Revenue Service date to 26 September 2012. The remaining slippage to this milestone is caused by incorporating V43 of the design programme and the further delays to the MUDFA programme.

The critical path currently runs through; depot earthworks; depot track work; track work in area 5C and 7A; track work in York Place and Picardy Place; OHLE in areas 1D, 1A, 5A and 1A.

At a number of locations the construction sequence has been changed, from that originally considered, to suit current constraints. Presently the logic of the Programme remains unaltered from that envisaged at Contract Award. Therefore some minor inaccuracies occur when “progress to date” has been entered into the Programme.

Note – the links between the third party consents and the related activities present in the Programme have been deleted to enable a true analysis to be provided of the current situation.

### 3.2 Look Ahead Programme

The Look-Ahead programme for the period April to July 2009 is an extract from the current construction programme updated with the latest IFC dates from the SDS V43 programme. MUDFA activities remain scheduled in accordance with their programme revision.7.9 issued 03 October 2008. Where MUDFA Works are ongoing, the Completion Milestones will continue to default to the report date or in some instances show estimated interface dates. An updated MUDFA programme is awaited as the inclusion of accurate current MUDFA locations and planned completion dates are critical to the accuracy of INFRACO programmes. The programme has also been updated with progress of The Works recorded to 17 April 2009.

#### Princes Street

The Princes Street detailed programme has been updated to Revision B to reflect the period of restricted operations prior to 23 March 2009 and includes for further information acquired on site during that period. Allowances have been made, by adjustment and some additional items, for breaking out reinforced concrete and removal of old tram furniture.



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The programme is planned around the constraints that MUDFA Works on Princes Street at The Mound and at South St. Andrews Street will be complete on 31 March 2009. The programme also allows for MUDFA occupation of the Lothian Road/Princes Street Junction until 24 April 2009. Ongoing occupation of the site by MUDFA and the Tram Display are delaying commencement of the Works from The Mound eastwards and negate the better than expected performance on extraction of existing concrete. The works are therefore estimated to be 0.5 weeks behind the Rev B detailed construction programme at this time giving completion 26 weeks behind Programme (Rev 1).

#### Haymarket Junction to Shandwick Place

Infraco works on Haymarket Junction were originally planned to commence on 05 January 2009. Ongoing Utility Works currently delay the commencement of this section. A detailed draft programme for the construction of Haymarket Junction from the viaduct through Shandwick Place to Lothian Road tie-in is in place and further information is awaited for MUDFA Works location and construction dates to establish the earliest start date for the INFRACO programme in this section.

The latest element of BT Works shown on MUDFA programme Rev. 7.9 indicates completion on 27 March 2009. This date is currently expected to be post 08 June 2009.

These works, as planned using the above dates, are 21 weeks behind the Programme (Rev 1)

#### Picardy Place to Princes Street

A detailed construction schedule is currently being developed.

### 3.3 Design and Consents Programme Status

Programme (Rev 1) has been issued by BSC to take account of the 7 weeks 3 day extension of time awarded by *tie*.

The combined effect of post V31 design programme slippages, late site possession due to the presence of MUDFA, the transfer of MUDFA scope to Infraco, dealing with abandoned services, notified variation and alignments issues are currently being considered in a sequential manner by BSC.

Planners from *tie* and BSC have jointly prepared first draft delay schedules for the above classes of delay measured at month end time slices of July, September and December 2008. This analysis is currently being placed on hold by agreement between *tie* and BSC.

Currently a recovery programme is being considered jointly by *tie* and BSC to see if an improved completion date to that noted above can be achieved. Individual “civil” works programmes have been prepared and distributed for each intermediate section of the works. The M&E works are currently being

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incorporated into these programmes to produce a single new programme for the project.

**3.4 Tramco Programme Status**

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

**4 PROGRESS**

Programme update attached as Appendix 10.2.

**4.1 CIVIL & BUILDING WORKS**

**4.1.1 Civil & Building Design**

**4.1.1.1 Production IFC Design**

The design tracker below shows the design BSC have received to date for each section.

Section	Non IFC	IFC	Total	%
1	119	572	691	82.78
2	8	89	97	91.75
5	200	732	932	78.54
6	11	141	152	92.76
7	34	189	223	84.75
SW	54	76	130	58.46
<b>TOTAL</b>	<b>426</b>	<b>1799</b>	<b>2225</b>	<b>80.85</b>

With a significant number of design changes as well as the outstanding approval and consent issues, the existing design packages have been split, in order to facilitate the submission of IFC design. We will therefore report progress on received IFC drawings rather than design packages from this period onwards.

During the last period we have received further IFC design drawings for Road and Track Construction in Sections 2A, 5 and 7 and the amended pre-stressed beam drawings for Edinburgh Park Station Viaduct.

OLE Foundations, Track Improvement Layer and Roads Construction Methodology have been submitted for review.

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Submissions for OLE, Trackform and CAF - design and will be covered under 4.2 E&M Systems.

Workshops for the identification of misalignments and design integration are ongoing.

Workshops on Roads Development and OLE Development have concluded and reports were submitted for review and signature.

A final conclusive workshop is required to confirm all misalignments Regarding Trackform Development are identified.

Following a review of the section design, it is proposed to reduce the number of development workshops to identify misalignments. These are as detailed below.

- Trackform (close out)
- Substations
- Cable ducts and Draw pits
- Power Supply
- Earthing and Bonding
- Depot
- Point and Switch Heating
- Tramstops

#### **4.1.1.2 Approvals & Consents**

Scottish Water (SW) has granted technical approval for all sections submitted to date (1B, 1C2, 1C3, 1D, 5A and 5C). Submissions are now with Business Stream for formal approval and permission to discharge. To date, only Section 6 has been formally approved by Business Stream.

The following Sections are to be resubmitted to SW following incorporation of SW comments – 5B (already submitted), 1A1 and 1A2 are due for submission to SW on 14 April 2009. Section 1C1 will now be issued with revised 1C2 Design.

The following Sections are to be submitted to SW for acceptance (i.e. first issue) - 1A4 is to be submitted by 17 April 2009 and 1A3 to be submitted on 1 May 2009.

On 10 April 2009, a revised method for formal approval close out was agreed with SW. Packages of the final technically approved design to be issued on a subsection by subsection basis by SDS to SW and Business Stream based on the agreed prioritisation list. Sections 1C3 and 1D are due for submission to SW on 14 April 2009 with formal approval due 17 April 2009.

Balgreen Road NWR Access Bridge (Section 5A) has been submitted to CEC for Technical Approval. IFC drawings are on target to be issued on 15 May 2009.

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The Roads Packages for Sections 1C2 and 6A are with CEC for approval.

Section 1A3 Roads Package is outstanding and dependant on clarification from CEC/Forth Ports. A further Design Change Instruction in regard to Road 8 is due from *tie*. Design is currently on hold to avoid any further abortive work. If instruction is issued this week, 1A3 could be submitted to CEC in early May 2009.

The Road Design for Sections 1A1/1A2, 1A4, 1B, 1C1, 1C3, 1D, 2A, 5A, 5B, 5C and 7A are approved with comments by CEC. These are being addressed by SDS.

Roads Close out Reports for 1B, 1D, 1C1, 1C3, 2A, 5A, 5B, 5C and 7A have been submitted to CEC. Reports for Sections 1A1, 1A2 and 1A4 are to be submitted this week by SDS. The Close out Report for 1B has been signed off by CEC.

#### 4.1.1.3 Issues and Concerns

A fortnightly Design Change Issues Meeting between BSC, SDS and *tie* has been set up to work through and seek resolution to Design Change Issues and has included the following key issues:

- TAL 505 instruction received from *tie*. Modelling work is now progressing – approx three weeks to complete.
- New Ingliston Limited (NIL); SDS has provided supplemental estimate based on new scope of work. BSC and SDS to agree estimate prior to issue to *tie*.
- CEC preference for Demarcation between Tramway and Roadway; Demarcation solution accepted by SDS. Commercial issue to be resolved between *tie* and BSC (SDS). SDS is providing additional information to support their argument.
- CEC Transport request for relocation of OLE poles is deemed to be a genuine change. SDS is providing additional information to support this argument and
- Environmentally Friendly Bat Lighting – SDS confirm presence or not of Bats within Line 2. This has a potential impact on the lighting design for all of Line 2.

The following other issues need to be resolved as a matter of urgency:

- Resolution of Forth Ports (Road 8) in Section 1A3 as detailed above.
- Transdev comments received late and need *tie* instruction.
- TRO Programme – meeting required urgently to move this issue forward.

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- RBS Gogarburn Tram Stop – Agreement between *tie* and RBS is required in order to complete the Gogarburn Tram Stop design.
- Picardy Place (Section 1C2) – Clarification required on potential changes within this section and
- West End Tram Stop Review – *tie* to authorise change estimate.

#### 4.1.1.4 Extended Construction Support and Design Support

The proposed organisational chart for the upcoming month has not changed from the previous month and is included as Appendix 10.9.2.

The look ahead below is based on anticipated construction activities during the next four weeks.

#### Roads Construction Support Teams

- Support and attendance at section progress meetings
- Section 1
  - a. Pavement Surveys/Conflict reporting in an attempt to keep in front of construction works.
  - b. Supervision and consideration of road excavation.
  - c. Assistance with GI survey
  - d. Responding to on site and Technical Queries

#### Geotechnical Construction Support Teams

- Section 6  
Depot remediation works survey/design
- Section 7  
Ongoing investigations and verifications of ground conditions
- Section 5  
Inspection of embankment profile and track slab foundations  
Supervision of additional GI

#### Civil and Structural teams

- Support and attendance at section progress meetings
- Section 1  
Princes St only – Supervision and consideration of GI survey input

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- Section 7  
Ongoing inspections of piling, bridge and culvert concrete works
- Section 5  
Inspections of piling and bridge works

#### **4.1.1.5 Request for Information**

In this period BSC have issued 5 RFIs, none were responded to and none were closed.

There are 64 RFIs open of which 14 RFIs were responded to but not satisfactorily answered. We propose a close meeting with *tie*.

Request for Information is scheduled in the RFI Register in Appendix 10.5.

#### **4.1.2 Procurement**

##### **4.1.2.1 Sub-Contractors**

A Sub-Contract Procurement Schedule, showing status at 13 April 2009, is attached as Appendix 10.6.

##### **Section 1A**

Section 1A has now been split into three areas, Newhaven to Ocean Terminal (1A1), Ocean Terminal to Bernard Street (1A2) and Bernard Street to Foot of the Walk (1A3).

Meetings have been held with McKean Construction & Barr Surfacing & Civil Engineering regarding subletting 1A1 and 1A2. Final negotiations are continuing however uncertainty on programme in these areas as a result of MUDFA is hindering progress.

BSC intend to extend Crummock's involvement down from Foot of the Walk to Bernard Street (1A3).

##### **Section 1B**

BSC have concluded our procurement process for Section 1B.

##### **Section 1C**

Crummock have submitted their price for 1C1 (MacDonald Road - London Road) and BSC are currently reviewing this. BSC's ability to conclude discussions with Crummock are restricted by the uncertainty over programme and access.

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BSC are concluding terms and conditions with Mackenzie Construction Ltd over section 1C3 (Castle Street - Waverley Bridge).

It is our current intention to self deliver the remaining works in Section 1C2 (London Road – Waverley Bridge) and a final strategy for carrying out the works is still to be agreed. This work is now not expected to start until January 2010 and a procurement process will commence late spring 2009.

#### **Section 1D**

Final negotiations are proceeding with MacKenzie to conclude a Sub-Contractor order.

#### **Section 2A and 5A (Part)**

Final negotiations are proceeding to conclude a Sub-Contractor order.

#### **Section 5A (Part), 5B and 5C (Part)**

Dunne, Expanded and Farrans have provided competitive lump sum fixed price quotations for the balance of the structures. Discussions continue over programme etc.

Package quotations for the balance of the civils works in Section 5 have been received and are currently under review; however BSC's ability to review these prices is affected by the uncertainty over programme and access.

#### **Section 6**

BSC are currently finalising the terms and conditions of the full Sub-Contractor order for Barr Ltd for the construction of the depot.

In the meantime Barr Ltd has been issued with a Limited Instruction to Proceed to progress any area of the depot where it is possible to do so.

#### **Section 7A**

Final negotiations with Farrans on the terms and conditions of a Sub-Contract order have been concluded.

Outstanding issues in respect of the EAL Collateral Warranties prevent BSC from concluding Farrans Sub-Contract.

#### **General**

Procurement of relevant key Sub-Contractors (Major Civil Works Contractors, Piling Contractors, Ground Stabilisation Specialists) includes the requirement for provision of a Collateral Warranty, in accordance with Clause 28.7 of the Contract.

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BSC may need to offer *tie*, in some instances, alternative wording for their agreement, as BSC have not as yet been able to conclude our negotiations with potential Sub-Contractors using the template in Schedule 8 Part F.

The length of time it has taken to either procure, negotiate and conclude any Sub-Contract has been affected by the complexity of the main contract negotiations and how BSC step these down into the subcontract, the necessity to operate a complex milestone schedule which can be adversely affected by progress and change on site and the overall uncertainty on programme.

#### **4.1.3 Materials**

No comment.

#### **4.1.4 Long Lead Procurement Management**

A Letter of Intent was issued to Fairfield Mabey to secure delivery of the beams for the Water of Leith Bridge.

BSC are currently sourcing prices for the beams and bearings for Tower Dock Bridge to maintain programme. These materials relate to section 1A2.



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**4.1.5 Construction**

**4.1.5.1 Progress on site, to 17 April 2009**

Reported against Programme (Rev 1)

**Progress on site to 17 April 2009  
Reported against Programme (Rev 1)  
Duration % Complete**

<b>Section</b>	<b>Planned Progress Programme (Rev 1)</b>	<b>Actual Progress to 17-04-2009</b>	<b>Completion Date Programme (Rev 1)</b>	<b>Anticipated Completion Date (Progressed Programme (Rev 1))</b>
<b>1A</b>	29%	0%	07/03/2011	17/04/2012
<b>1B</b>	34%	3%	05/11/2010	20/12/2011
<b>1C</b>	25%	1%	11/03/2011	13/04/2012
<b>1D</b>	36%	2%	17/09/2010	24/10/2011
<b>2A</b>	54%	8%	03/03/2010	21/04/2011
<b>5A</b>	35%	0%	20/12/2010	14/02/2012
<b>5B</b>	42%	10%	31/08/2010	18/10/2011
<b>5C</b>	39%	1%	20/09/2010	01/11/2011
<b>6</b>	44%	1%	01/06/2010	13/06/2011
<b>7</b>	44%	10%	05/10/2010	22/11/2011
<b>Construction</b>	38%	4%	Section C 10/03/2011 Section D 06/09/2011	Section C 17/04/2012 Section D 14/10/2012

**4.1.5.2 Section 1A Newhaven Road to Foot of the Walk**

No activities carried out during period, section progress remains at 0%.

Currently 24.5 weeks behind Programme (Rev 1).

**4.1.5.3 Section 1B Foot of Leith to McDonald Road**

Section progress remains at 3%.

No activities carried out during period, section progress remains at 0%.

Currently 35 weeks behind Programme (Rev 1).

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**4.1.5.4 Section 1C McDonald Road to Princes Street West**

Section progress remains at 1%.

McDonald Road to Picardy Place Ch 0 – 375  
No activities carried out during period.

Construction activities currently 24.5 weeks behind Programme (Rev 1).

**4.1.5.5 Section 1D Princes Street to Haymarket**

Section progress remains at 2%.

Princes St Ch 0 -280 & 1980 - 1360

Construction activities commenced 23 March 2009, in line with Rev B of Princes St construction programme

Site clearance has activities have now been substantially completed. Planning of carriageway and breaking out of concrete to track box has been completed between the Mound and Lothian Rd. Drainage activities in this area have also commenced

Construction activities are currently 10 weeks behind Programme (Rev 1).

Haymarket Ch1250 -1125

No activities carried out during period

Construction activities 13 weeks behind Programme (Rev 1).

**4.1.5.6 Section 2A Haymarket to Roseburn Junction**

Section progress remains at 8%.

Haymarket Station Viaduct

No activities carried out during period.  
Currently 29 weeks behind Programme (Rev 1).

Verity House Access Road

Construction activities continued during the period

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Haymarket – Roseburn Trackwork

No activities carried out during period.  
Construction activities currently 33 weeks behind Programme (Rev 1).

**4.1.5.7 Section 5A Roseburn Junction to Balgreen Road**

Section progress remains at 0%.

Russell Road Bridge

No activities carried out during period.  
Currently 43 weeks behind Programme (Rev 1).

Russell Road Retaining Walls W3 & W4

No activities carried out during period.  
Currently 22 weeks behind Programme (Rev 1).

Murrayfield Tram Stop Retaining Wall

No activities carried out during period.  
Currently 36 weeks behind Programme (Rev 1).

Roseburn Street Viaduct

No activities carried out during period.

Murrayfield Retaining Wall

No activities carried out during period.  
Currently 34 weeks behind Programme (Rev 1).

Murrayfield Stadium Underpass

No activities carried out during period.  
Currently 34 weeks behind Programme (Rev 1).

Murrayfield Retaining Walls 21D

No activities carried out during period.  
Currently 11 weeks behind Programme (Rev 1).

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Water of Leith Bridge

No activities carried out during period.  
Currently 36 weeks ahead of Programme (Rev 1).

Baird Drive Retaining Wall

No activities carried out during period.  
Currently 33 weeks behind Programme (Rev 1).

**4.1.5.8 Section 5B Balgreen Road to Edinburgh Park Central**

Section progress 10%.

Carrick Knowe Bridge

No activities carried out during period  
Currently 29 weeks behind Programme (Rev 1).

Trackwork Balgreen Road – Saughton Road

No activities carried out during period.  
Currently 34 weeks behind Programme (Rev 1).

Bankhead Retaining Wall

No activities carried out during period.  
Currently 43 weeks behind Programme (Rev 1).

South Gyle Access Bridge

No activities carried out during period.  
43 weeks behind Programme (Rev 1).

Track work Saughton Road North – Bankhead

No activities carried out during period.  
Currently 24 weeks behind Programme (Rev 1).

Track Work Bankhead – Edinburgh Park Station

No activities carried out during period.  
Currently 35 weeks behind Programme (Rev 1).

Track Work Edinburgh Park Station – Edinburgh Park Central

No activities carried out during period.  
Currently 34 weeks behind Programme (Rev 1)

Edinburgh Park Station Bridge

Construction of sub-structure has continued.

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PC Beams to span six and seven erected 8/9 April 2009.

Currently 20 weeks behind Programme (Rev 1).

**4.1.5.9 Section 5C Edinburgh Park Central to Gogarburn**

Section progress remains at 1%.

Track Work Edinburgh Park Central – Gyle Centre

No activities carried out during period.

Currently 33 weeks behind Programme (Rev 1).

Gyle Tram Stop Retaining Wall

No activities carried out during period.

Currently 44.5 weeks behind Programme (Rev 1)

A8 Underpass

Sheet piling operations commenced during period. Works aborted. Redesign to accommodate encountered ground conditions has commenced.

Currently 22 weeks behind Programme (Rev 1).

Track Work Depot Stop – Gogarburn

No activities carried out during period.

Currently 23 weeks behind Programme (Rev 1)

**4.1.5.10 Section 6A Depot**

Section progress 1%.

Bulk excavation to Depot commenced on 6 April 2009.

Currently 42 weeks behind Programme (Rev 1).

**4.3.5.11 Section 7A Gogarburn to Edinburgh Airport**

Section progress 10%.

Gogarburn Culvert No 1

Precasting of Culvert units has been completed

Currently 17 weeks behind Programme (Rev 1).

Gogarburn Culvert No 2

Excavation has been completed and PC units placed. Backfill to structure has continued. River training works have commenced.

Currently 18 weeks behind Programme (Rev 1).

Gogarburn Culvert No 3

Precasting of Culvert units has been completed.

Currently 18 weeks behind Programme (Rev 1).

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## 4.2 E&M SYSTEMS

### 4.2.1 OLE (Overhead Line Equipment)

#### Design

Detailed design of OCL system has been submitted and reviewed by *tie*. Requirements clarification has been carried out with *tie*, where all requirements in Employers' Requirements addressed to lot OCL have been talked through, a common understanding has been reached and a validation & verification/ close-out method has been mutually agreed on with *tie* and BSC.

A small number of open items has been identified and will be followed up accordingly.

OLE misalignment workshop report review by *tie*/BSC/CEC/Transdev/SDS 3 April, final report due to be issued by BSC week ending 10 April 2009.

#### Approvals and Consents

No specific review comments have been received from *tie* with respect to location of poles with specified timescales.

An update of the concept of combined OCL poles has been presented to *tie* and is currently under review, informal comments have been communicated, and an updated version for CEC is programmed for re-issue.

A design walk through with *tie* and Transdev has been completed in support of the review and planning approval processes. Provisional dates for presentation to outside bodies in support of planning consents set for week commencing 11 May 2009.

#### Issues and Concerns

N/A

#### Production

Competitive tenders from sub suppliers for poles, wires and installation have been received and currently in negotiations.

OLE Installation contractors, tenders now evaluated and short list generated.

### 4.2.2 TPS (Traction Power Supply)

#### Design

Design finalised. Both, basic design (4) and detailed design submissions (7) have been submitted to *tie*, walk through reviews have been held and *tie's* formal replies have been received, one with review status level A – no objection, 10 with level B - proceed, none with level C – resubmit. BSC is currently in the process of formally replying to *tie's* comments for close out. BSC sent formal reply to 6 submissions. *tie's* final confirmation is awaited. 2 further replies are currently under preparation. FAT procedures have been

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accepted by *tie* with status “Level A – no objection”. BSC does not see a need to reply to those and consider the acceptance process of these submissions as closed.

Order for 11kV switchgear is now placed, detailed design document is currently being produced using details provided from subcontractor. The submission of relay coordination study is planned for June/ July 2009 and needed not before start of commissioning, as further hardware definition/ design activities are not dependent on study results.

The FAT procedure, which has not been submitted to *tie*, yet is the one for 11kV MV switchgear, where the same thing applies as “design” above. Requirements clarification has been carried out with *tie* and BSC, where all requirements in Employers’ Requirements addressed to TPS have been talked through, a common understanding has been reached and a validation & verification close-out method has been mutually agreed.

Programming of Protection & Control software is finalised. Testing is currently being carried out (successfully, so far).

#### **Approvals and Consents**

No current issues.

#### **Issues and Concerns**

Some clarifications regarding Employers’ Requirements wording conflicts have been submitted to *tie*. Formal reply awaited from *tie* after clarification has been mutually agreed. Monk:Newton. Formal reply also required for mutually agreed clarification on requirements close out methods. BSC cannot understand why this item still appears to be open, as *tie’s* formal reply is still outstanding (first letter on that is dated 3 December 2008, last follow-up letter 2 March 2009, which is overdue).

Another derogation proposal form was submitted to *tie* for acceptance. The content was addressed by *tie* during design review. *tie’s* formal reply is also required.

#### **Production**

TPS Installation contractors - Tenders issued, clarifications being raised and responded to. Programme issue as per OLE.

### **4.2.3 TRW (Trackwork)**

#### **Design**

- Wheel-Rail Interface report was submitted
- Basic Design Report Transitions to ballastless track on structures was submitted
- Basic Design Report Longitudinal Calculations and Expansion Joints was submitted

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**Approvals and Consents**

- Trackwork Specification Concrete is approved
- Drawing Transition Rails is approved
- Direct Fixation Typical Section is approved
- Rheda City C Typical Section is approved
- Rheda City D Typical Section is approved
- Rheda City Green Typical Section is approved
- Ballasted Track Generic Trackform is approved
- Alignment Definition Drawing is approved

**Issues and Concerns**

- Changes in Design and Change Orders may influence the programme
- Un-clarified programme situation

**Following activities are planned within the reporting period**

- Submittal of Basic Design Rheda City Green
- Re-submittal of Basis of Design Report Trackwork
- Re-submittal of Basic Design Report Rheda City C
- Re-submittal of Basic Design Report Rheda City D
- Re-submittal of Basic Design Report Ballasted Track

**Production**

- 72 m Test Track has been constructed at the South Yard storage facility, for training of operatives, trackmen and welders.
- New Instruction to Subcontractor BAM to start at Princes Street on 5 June 2009 instead of 7 April 2009 has been provided
- WPP Princes Street under revision
- WPP Integrated Test Track South Gyle under revision
- Inspection and Test Plan under revision
- Delivery of 1900 m Rheda City C materials
- Delivery of 500m Rheda City G materials

**Following activities are planned within the reporting period**

- Delivery of 500 m Rheda City D materials
- Delivery of 500 m Rheda City G materials
- Construction integrated test track
- Further preparation start of trackwork construction Princes Street

**4.2.4 DWE (Depot Workshop Equipment)**

**Design**

Design is further progressing.

Design of the Service Vehicles are finished is submitted to *tie*.

Current progress includes preparation of detailed design of

- Measuring Equipment
- Machines



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- Storage equipment

all in support of procurement of long lead time items and to provide design input.

Technical meetings with the tram maintenance for the performance requirements of the equipment are conducted and will be followed up.

#### Approvals and Consents

Under floor Wheel Lathe design submittals handed over in October 2008.

Crane Submittal handed over in January 2009.

Lifting Plant Submittal handed over in January 2009.

Washing Plant Submittal handed over in January 2009.

Comments from *tie* to the submittals of

- Underfloor Wheel Lathe Submittal
- Crane Submittal
- Lifting Plant Submittal
- Washing Plant Submittal

Have been received and will be answered and resubmitted as version B documents.

Resubmission is scheduled for April 2009 depending on the input required by manufacturers and interface partners.

#### Issues and Concerns

No current issues.

#### Production

Procurement of long lead items finalised.

Orders placed for underfloor wheel lathe, underfloor lifting plant, washing plant.

#### 4.2.5 Signalling, Communication, SCADA, PIS, PA

##### Design

##### Signalling

Detailed Design of Signalling has been issued inclusive supervisory control system, interlocking, TPDS wayside and onboard equipment. Initial Design Review has been conducted with *tie* and Transdev on 24 March 2009. Formal review comments awaited from *tie*.

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Joint Hazard Workshop “Use of Track Circuits” carried out with *tie*, the ICP, Transdev and Siemens whereby the proposed Signalling track layout has been considered acceptable.

#### SCADA, PIS, PA (RailCom Manager), PABX, Radio

Detailed Design of Comms has been issued with initial design review has been conducted with *tie* and Transdev on 23 March 2009. Formal review comments to the detailed design awaited from *tie*.

Radio design within Tram agreed with CAF.

### **Look-Ahead**

The following documents are expected to be submitted during the next month:

- Railcom Manager: Detailed Design: CCTV Monitor Array (Rev A);
- Railcom Manager: Detailed Design: Control Room Operator Interface (Rev A);
- Railcom Manager: Detailed Design: Depot Equipment (Rev A);
- Railcom Manager: Detailed Design: Performance Monitoring System (Rev A);
- Railcom Manager: Outline Design Specification (Rev B).

Development of the “Control Room Operator Interface” detailed design has concentrated on the Voice Unit’s touch screen interface. The document will be issued with this element at a point which allows a design review meeting to be held with the client to discuss its general operation.

Further discussions are expected with subsystem suppliers so that orders can be placed after the detailed designs are accepted.

### **Approvals and Consents**

Approval in principle agreed for Tramstop Cabinet, formal application for this and Points Control (Interlocking) Cabinets to be made.

### **Issues and Concerns**

Tramstop equipment approvals require to be resolved, including requirements over and above ERs (Passenger Help Point appearance, PID mounting, PA speaker location aspirations, inductive loop provision and positions). Joint BSC/*tie* meeting to be convened to resolve.

### **Production**

TPDS onboard computers have been ordered.  
Points heating systems have been ordered.  
Tram stop E&M Cubicles have been ordered  
Radio supply contract awarded to Tait.

Revised quotations for the ODN equipment are being finalised with the target for ordering this equipment by the end of April 2009.

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**4.2.6 TLC (Traffic Light Control)**

**Design**

No current issues.

**Approvals and Consents**

No current issues.

**Issues and Concerns**

No current issues.

**Production**

No current issues.

**4.2.7 HV/LV - Supply**

**Design**

Sub contractor Core has held first technical meeting with Scottish Power to agree basis of design acceptance.

**Approvals and Consents**

Formal submissions to Scottish Power to be made by Core. Wayleave process with external parties commenced, lease agreement Scottish Power from TEL? for sub-station rooms to be established.

**Issues and Concerns**

Re-programming due to delays in MUDFA works and resultant delays to BSC's construction programme, most significantly Gogar; credible dates required to mitigate potential abortive costs.

**Production**

8 number HV supply orders placed with "Core" (contracting arm of Scottish Power)

**4.3 TRAMS**

**4.3.1. Design**

Detailed design is nearly finished and CAF works in order to fully close this process.

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There is a *tie* Change request regarding the interior Lay-out of the trams, with no impact for other partners, that is about to be agreed with *tie*.

Free issue equipment to CAF:

This definition refers to:

- TPDS, Radio supplied by Siemens
- Bus Tracker supplied by *tie*

It is important to state that CAF is not responsible of the performance and functionality of the TPDS (Siemens), Radio (Siemens) or Bus Tracker (*tie* via Ineo), except interfaces with CAF. Then, it is *tie* and Siemens responsibility to provide any demonstration about it. It is an issue for *tie* and Siemens to both collect relevant documentation and present it in front of *tie*, as they may do for some other performance or functionality.

CAF considers as an outstanding issue the fully definition of the Bus Tracker system provided by *tie*/Lothian Buses.

It is important to clarify that the Bus Tracker supplier (Ineo) already delivered information to CAF at the end of 2008 and it has recently has informed CAF that the mechanical interface will not change and that they are on the final stages defining the functionality which for CAF will imply the full definition of the system with no mayor change compared with existing information

CAF has used the information delivered last year in 2008 in order to develop its tram design. It is anticipated that there will be no impact when fully and final detailed information is released

#### 4.3.2 Procurement

Procurement for the trams is progressing according to programme. CAF intends to install and test all systems on the different phases of the testing process (CAF premises, Test Track and Edinburgh Tram Network), including Free Issue Equipment.

For this purpose, we need all the materials been delivered when necessary on CAF premises.

If any material is not delivered as it is necessary to feet manufacturing purposes, CAF will evaluate the impact and will let the supplier know.

#### 4.3.3 Manufacturing

CAF manufacturing process started at beginning of December 2008.

- All seven bodyshells for the first tram have been completed and approved by CAF and made available for inspection to the customer by the 2<sup>nd</sup> of April 2009.
- At least, four of those bodyshells have also been also painted.

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- The manufacture of the seven bodyshells for the second tram has also started.

Please, see the manufacturing status on the attached document “Estado fabricación Edimburgo 06\_04\_09”.

## 4.4 SYSTEMS INTEGRATION

### 4.4.1 EMC

#### 4.4.1.1 Earthing & Bonding

Clarification of individual civil structures is ongoing.

#### 4.4.1.2 Stray Current

Presentation of Calculation Results has been carried out at SCWP on 5 March 2009. Preliminary Report of these results has been prepared and forwarded to *tie*.

As a result of the last SCWPs the Stray Current documentation is currently being updated.

#### 4.4.1.3 Network Rail Immunisation

The Milestone structure has been refined and updated.

### 4.4.2 System Assurance

#### 4.4.2.1 Deliverables issued

- Detailed Design Assurance Plan, Rev E – (formerly System Assurance Plan) updated and issued to *tie*. This describes the activities required to satisfy the project requirements under ROGS (2006). This incorporates comments received from *tie* and the ICP.
- System Hazard Log - Comments and updates on the Hazards have been received from REL, RA, Tram Maintenance. Hazard Log has been updated accordingly. PSSC Sub-Committee is to review these comments on 21 April 2009. Initial comments and mitigations still being progressed from SDS and CAF.

#### 4.4.2.2 Activities completed

- Hazard Log - Operational Risk Assessments (ORA's). Transdev's ORA are being reviewed so that where a risk has been identified that could have an impact on design, this is being cross referenced to hazards in the hazard log. Also where applicable a new hazard will be raised (75% complete). Hazard Owners will be required to review ORA and assess risks and subsequent issues in respect to design using the design review process

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- HAZOP – Use of Track Circuits. Review complete and report issued for comment to participants
- Hazard workshop – REL (Electrification) – Review of Hazard associated with OLE and TPSS to identify any new or previously unidentified hazards based on projects using similar architecture, products, sub-systems and environment. Draft report issued for internal review.
- Immunisation – Review of Immunisation Hazard Log carried out with FMA.

#### 4.4.2.3 Activities Ongoing and Planned:

- Safety Assurance Meeting, Manchester between BSC, *tie*, Transdev – 07/08 April 2009, to discuss way ahead for Case for Safety from SDS and Design Assurance Statements.
- Update and manage Hazard Log based on Hazard owners responses (on going). Based on mitigation provided by the Hazard owner the *tie* PSCC will review the hazard, rank the hazards' residual risk and confirm the if the hazard has been controlled so Far As Is Reasonably Practicable (SFAIRP). (Target Date ongoing)
- Conduct Hazard Analysis Work Shops as per System Assurance Plan (SAP). The objective is to ensure that a complete set of risks / hazards is has been identified and managed. NOTE - The remaining Hazard workshops require planning. These should be complete by the end of April 2009, in order to prevent the possibility of any major rework of design. The operator and Maintainer will require to be involved in each review.)
- NR / ETN Immunisation Work - See above. A presentation is planned to the Network Rail Infrastructure Systems Review Panel (ISRP) a 'Case For Safety' to demonstrate that the two work streams that we have undertaken above have minimised the risk to the Network Rail Infrastructure ALARP. This document is due in August / September 2009.
- Human Factors - Control Centre - The contract requires an ergonomic assessment of the control centre against Standard - ISO 11064 "Ergonomic Design of Control Centres." To date some work has been done by the LOTS (REL, RA, York and Transmitton) to involve the Operator and Maintainer but this standard also requires an assessment in respect to the SCC furniture, lighting, climate control, etc).

#### 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, Technical Coordination, Requirements Man, SCWP.

#### 4.5 TESTING, COMMISSIONING AND START-UP

CAF manufacturing process commenced at the beginning of December 2008. First body shell finish should be available for inspection before the end of February. As an attachment you can see the up-date for manufacturing.

## 5 NOT USED

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## 6 STAKEHOLDER AND THIRD PARTY ISSUES

Discussions have continued to agree how *tie's* existing Stakeholder Management and Communications team can be best used to mutual advantage. BSC are willing in principle to contribute in kind or cost transfer to supplement this team, rather than duplicating resources to comply with the specific requirements of the Employer's Requirements as drafted.

## 7 COMMERCIAL

### 7.1 Milestones

Preliminary Milestones Achieved in the Period:

Month 12 Preliminaries (BB)  
 Month 12 Preliminaries (S)  
 Month 13 SDS Interface

#### Construction Milestones Achieved in the Period

A13940	Princes Street Ch 280 - 0, 1980 – 1360	Establish Traffic Management & Temporary Fencing
768	Edinburgh Park Station Bridge (S27)	North Approach Ramp Steelfixing
523	Edinburgh Park Station Bridge (S27)	South Abutment Cladding
19	Edinburgh Park Station Bridge (S27)	Pier 1
179	Gogarburn Underbridge (S29)	East Abutment Piles and Columns
209	Gogarburn Underbridge (S29)	West Abutment Piles and Columns

#### Milestones Programmed but not Achieved

Regular discussions take place now between *tie* and BSC on the subject of Milestones and the Milestones Programmed but not achieved are recorded elsewhere.

### 7.2 CHANGE MANAGEMENT

7.2.1 The Change Register in Appendix 10.7 to this report shows 368 notifications of change at 14 April 2009, which are being processed currently.

To date, 28 *tie* Change Orders have been issued. However there is no agreement to some Estimates that BSC provided as *tie* have unilaterally modified these Estimates and issued the *tie* Change Orders. Also included in *tie's* Change Order Pro-forma; "Relief required from compliance with Infraco obligations under the contract", "Programme impact and required Extension of Time", "Impact on Performance" remain unresolved.

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Main reasons for not issuing Change Orders are: change not agreed in principle, BSC not being able to submit estimates within contract period, figures in estimates not agreed, Base Date Design Information not agreed, percentages for preliminaries and overheads not agreed.

Cost related issues for INTC No.1 programme misalignment V26 - V31 remain not agreed. Time related issues have been agreed.

With regards to matters corresponding to the SDS provider notices, *tie* has rejected all SDS Provider's notices of extension of time and related impact. *tie* does not accept that these issues constitute a change.

The complexity, nature and amount of changes have overloaded the change mechanism included in the Infraco contract, because the estimates cannot be submitted within the time frame requested in the contract and also due to the fact that the overall impact to the programme from a given change cannot be assessed on an individual basis. It has been agreed that the estimates submitted by BSC will only deal with direct related effects (costs) of a given change. Time related effect will be assessed separately.

Prioritisation of changes is currently under review internally within BSC to be aligned with the anticipated construction of the Works. This prioritisation will be presented in the following reporting period.

A series of high level management meetings with the aim of solving major outstanding issues (among others: Base Date Design Information, applicable percentages for preliminaries and overheads, period for estimate submission, etc) are being held.



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**7.2.2 E&M System**

1 Change known / opened	36	58%
2 Calculation in progress	2	3%
3 cost breakdown to TIE	3	5%
4 negotiations with TIE ongoing	2	3%
5 signed cost breakdown sheet by TIE	0	0%
6 signed Change Order / Claim / Instr. by TIE	1	2%
7 Paid / Closed	4	6%
Time related Changes (in preparation, no letters)	14	
<b>Lump Sum</b>	<b>62</b>	

**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 KPI Report**

Project Health, Safety, Quality and Environment Report  
Data Sheet - Year 2008-2009



	Period 1		Period 2		Period 3		Period 4		Period 5		Period 6		Period 7		Period 8		Period 9		Period 10		Period 11		Period 12		Period 13		
	Period	Year to date	Period	Year to date	Period	Year to date	Period	Year to date	Period	Year to date	Period	Year to date	Period	Year to date	Period	Year to date	Period	Year to date	Period	Year to date	Period	Year to date	Period	Year to date	Period	Year to date	
<b>2.1.1.3 SAFETY DATA</b>																											
Interaction with Health & Safety Executive	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Visits by the Health & Safety Executive	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Proposals pending	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Concussions	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Improvement Notices issued	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Improvement Notices closed out	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Prohibition Notices issued	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Prohibition Notices closed out	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Prohibition Notices open	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Prohibition Notices closed	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Statutory Reporting Requirements</b>																											
Fatal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Major Injuries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lost Time Reportables	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Notifiable Dangerous Occurrences	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Other non-RIDDOR events</b>																											
Accidents - Lost Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Accidents - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Incidents	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Non-RIDDOR Accidents	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Hours Worked</b>																											
Total hours worked - SITE	918	918	2,742	3,160	1,875	5,035	4,583	9,618	4,798	14,416	7,439	21,855	10,188	32,053	12,262	44,335	14,915	59,250	12,620	71,870	21,216	93,086	29,518	121,604	18,361	130,965	
Total hours worked - NON-SITE	3	3	5,769	7,544	15,697	23,241	18,100	41,341	18,119	59,460	15,238	75,698	16,895	92,693	12,262	111,671	22,545	134,216	16,486	150,702	22,588	173,270	24,297	197,507	34,692	224,199	
<b>TOTAL Performance YTD</b>	<b>2,873</b>	<b>2,873</b>	<b>8,511</b>	<b>10,704</b>	<b>17,572</b>	<b>28,276</b>	<b>22,683</b>	<b>50,959</b>	<b>22,917</b>	<b>73,876</b>	<b>22,677</b>	<b>97,553</b>	<b>27,083</b>	<b>124,746</b>	<b>31,370</b>	<b>156,006</b>	<b>37,460</b>	<b>193,466</b>	<b>29,106</b>	<b>222,572</b>	<b>43,784</b>	<b>266,356</b>	<b>52,795</b>	<b>319,111</b>	<b>59,953</b>	<b>372,864</b>	
Reportable Injuries / Lost time accidents to date	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dangerous Occurrences to date	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Site hours worked to date	918	918	2,742	3,160	1,875	5,035	4,583	9,618	4,798	14,416	7,439	21,855	10,188	32,053	12,262	44,335	14,915	59,250	12,620	71,870	21,216	93,086	29,518	121,604	18,361	130,965	
Non-Site Hours Worked to Date	3	3	5,769	7,544	15,697	23,241	18,100	41,341	18,119	59,460	15,238	75,698	16,895	92,693	12,262	111,671	22,545	134,216	16,486	150,702	22,588	173,270	24,297	197,507	34,692	224,199	
<b>ATP Performance Rolling</b>																											
Reportable Injuries / Lost time accidents Rolling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dangerous Occurrences Rolling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Site hours worked Rolling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Non-Site Hours Worked Rolling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Major Near Misses</b>																											
Bulky Count Injury	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Head	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Back/Torso	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Eye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Legs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Feet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>TOTAL COMPLIANCE</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>MONITORING DATA</b>																											
Monitoring planned	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Monitoring completed	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Monitoring % Achieved	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Monitoring for the month	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Monitoring % Achieved	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
<b>Safety Tours</b>																											
Tours planned	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tours completed	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tours % Achieved	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
<b>NON-COMPLIANCE REPORTS</b>																											
Contractor and Sub-contractor	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NCRs raised	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NCRs closed out	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NCRs over due	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NCRs open	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NCRs % Achieved	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
<b>AUDIT DATA</b>																											
Contractor Internal and Sub-contractor Audits	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Audits planned	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Audits completed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Audit findings / NCRs raised	0	0	0	0																							

## PERIOD END DATES

(subject to confirmation)

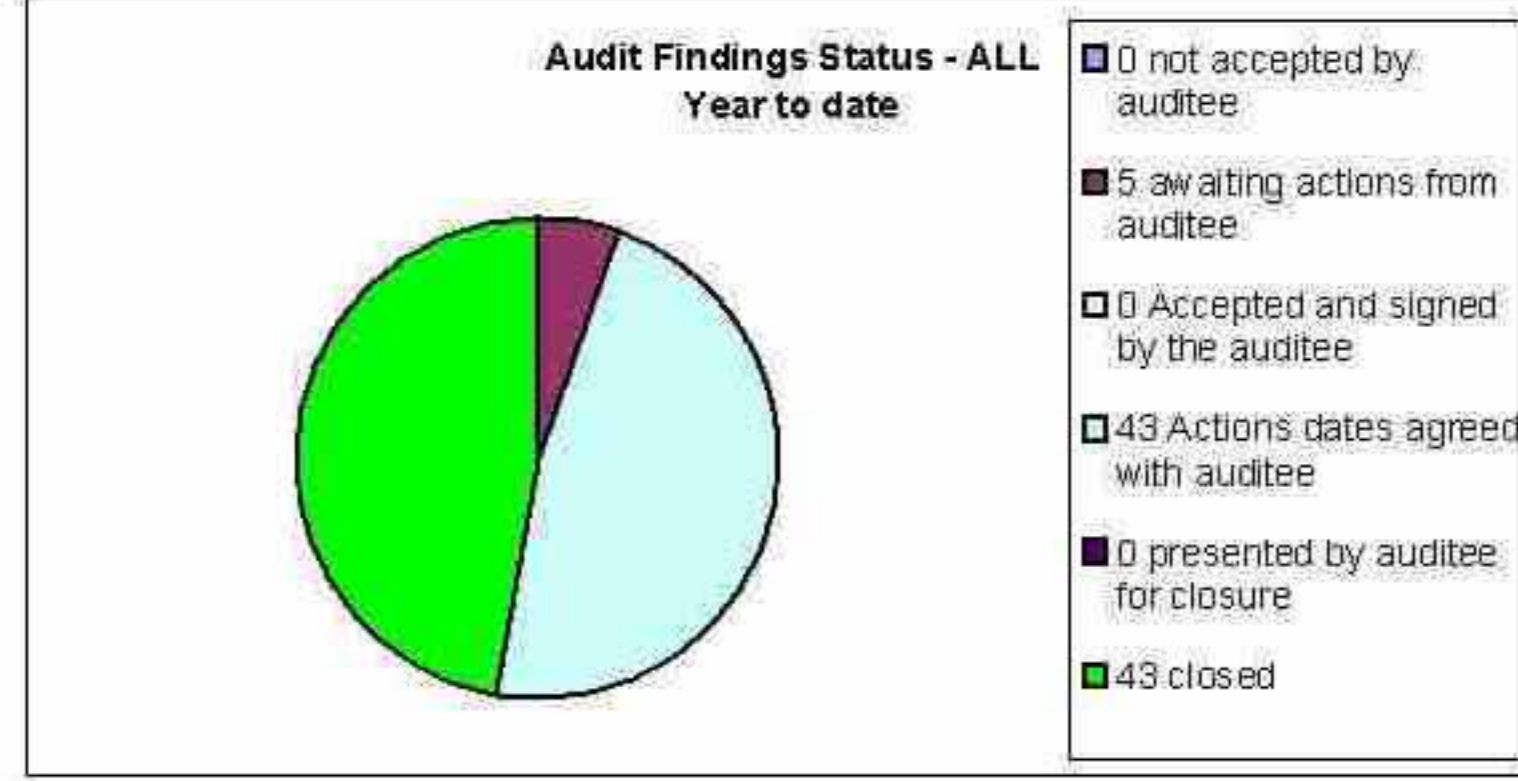
	2007 / 08	2008 / 09	2009 / 10	2010 / 11	2011 / 12
1	28/04/2007	26/04/2008	25/04/2009	24/04/2010	23/04/2011
2	26/05/2007	24/05/2008	23/05/2009	22/05/2010	21/05/2011
3	23/06/2007	21/06/2008	20/06/2009	19/06/2010	18/06/2011
4	21/07/2007	19/07/2008	18/07/2009	17/07/2010	16/07/2011
5	18/08/2007	16/08/2008	15/08/2009	14/08/2010	13/08/2011
6	15/09/2007	13/09/2008	12/09/2009	11/09/2010	10/09/2011
7	13/10/2007	11/10/2008	10/10/2009	09/10/2010	08/10/2011
8	10/11/2007	08/11/2008	07/11/2009	06/11/2010	05/11/2011
9	08/12/2007	06/12/2008	05/12/2009	04/12/2010	03/12/2011
10	05/01/2008	03/01/2009	02/01/2010	01/01/2011	31/12/2011
11	02/02/2008	31/01/2009	30/01/2010	29/01/2011	28/01/2012
12	01/03/2008	28/02/2009	27/02/2010	26/02/2011	25/02/2012
13	31/03/2008	28/03/2009	27/03/2010	26/03/2011	31/03/2012

NB 2010/11 and 2011/12 in particular may change

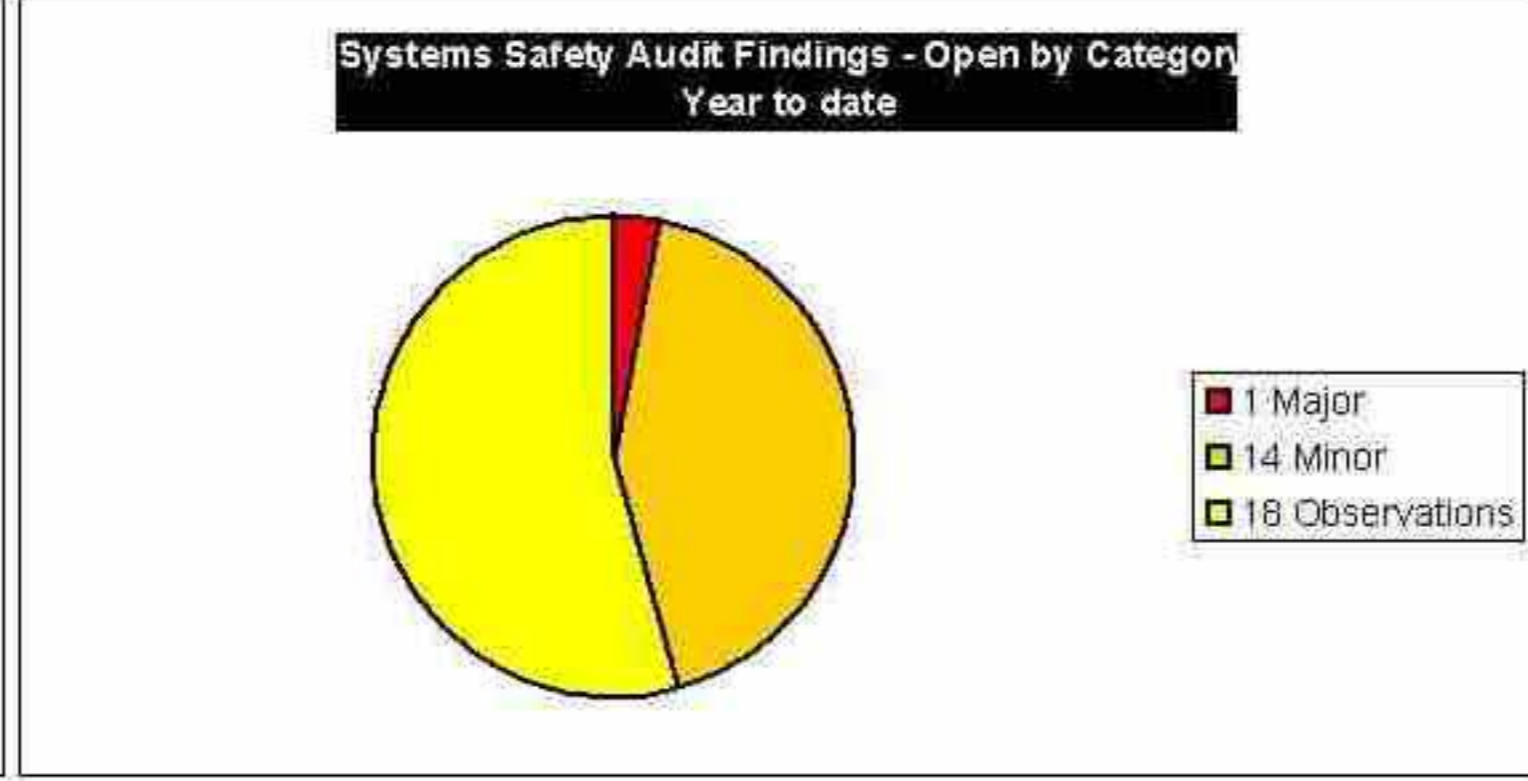
Data required by first Tuesday 12:00 hrs following period end.

Updated for Period 12 Tram report.

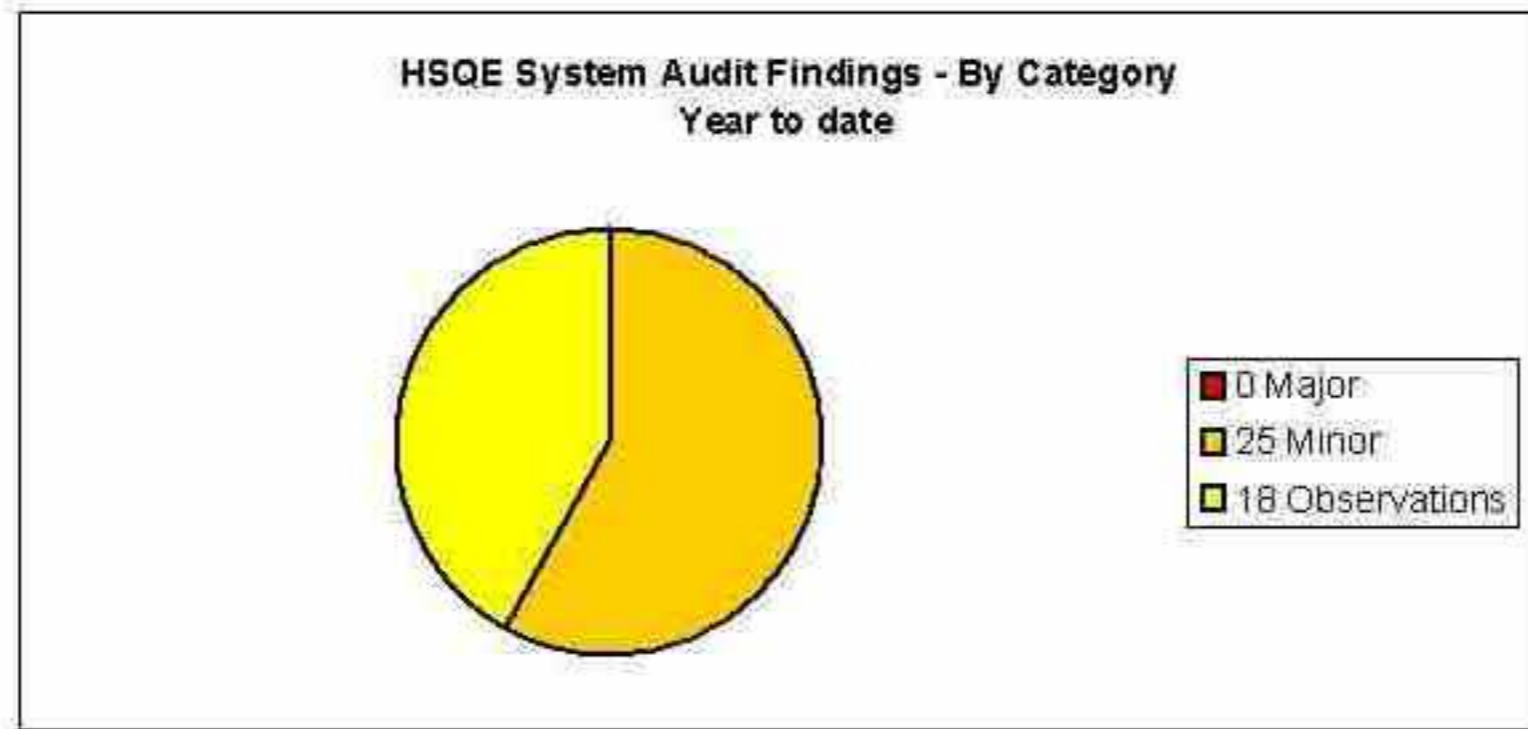
**Audit Findings Status - ALL**  
 0 not accepted by auditee  
 5 awaiting actions from auditee  
 0 Accepted and signed by the auditee  
 43 Actions dates agreed with auditee  
 0 presented by auditee for closure  
 43 closed



**Systems Safety Audit Findings - By Category**  
 1 Major  
 14 Minor  
 18 Observations



**HSQE System Audit Findings - By Category**  
 0 Major  
 25 Minor  
 18 Observations



**AUDIT FINDINGS - ALL**

	1	2	3	4	5	6	7	8	9	10	11	12	13
Closed Period	###	###	###	###	###	###	###	###	###	###	###	###	###
Total raised Period	###	###	###	###	###	###	###	###	###	###	###	###	###
Closed YTD	###	###	###	###	###	###	###	###	###	###	###	###	###
Total raised YTD	###	###	###	###	###	###	###	###	###	###	###	###	###
Open													
Overdue													
Period - Major	0	0	0	0	0	0	0	1	0	0	0	0	0
Period - Minor	0	0	13	0	14	0	0	7	8	2	0	3	
Period - Observation	0	0	0	0	11	0	12	16	0	0	0	4	

**Systems Safety Audit Findings Status**

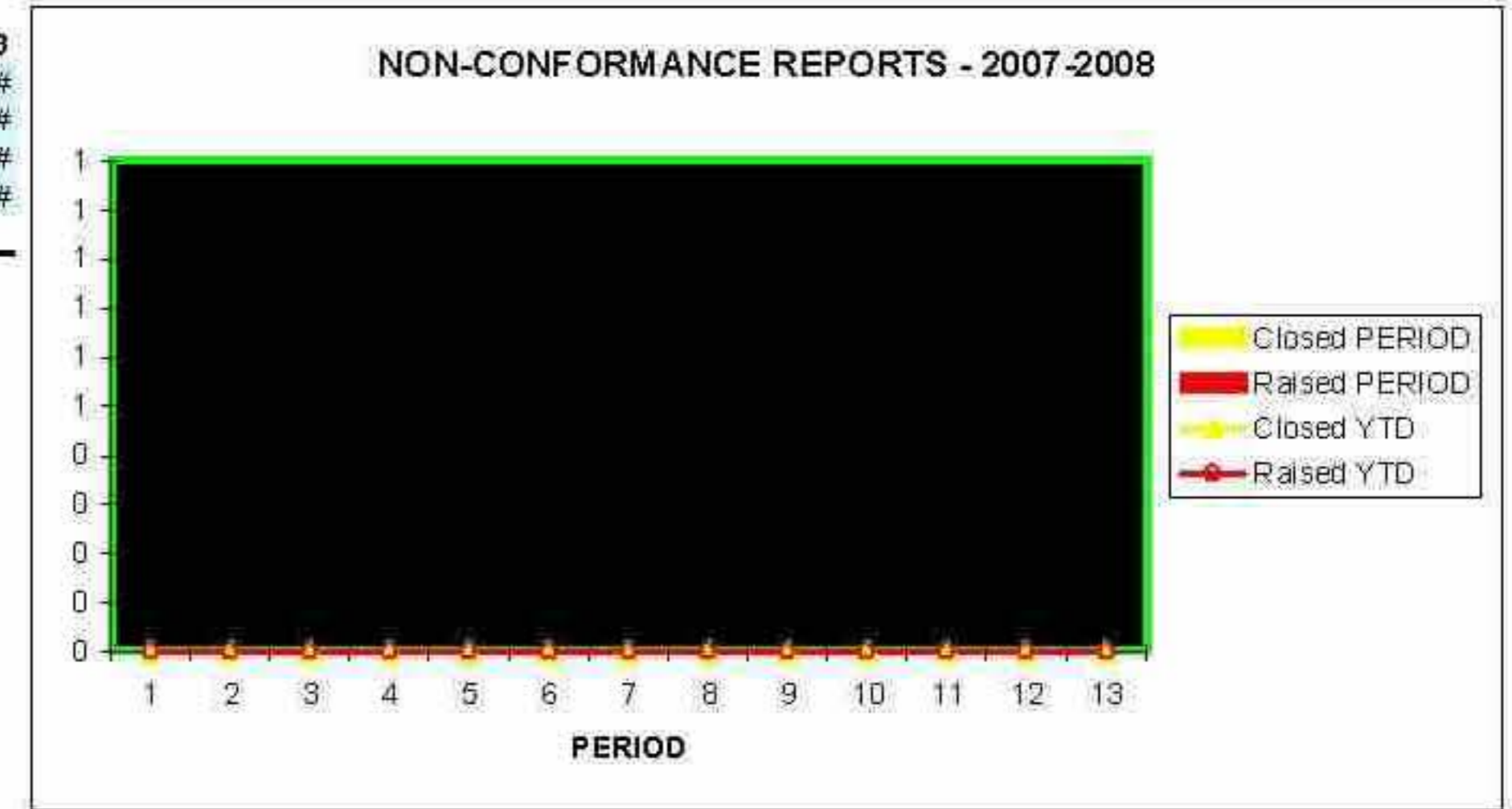
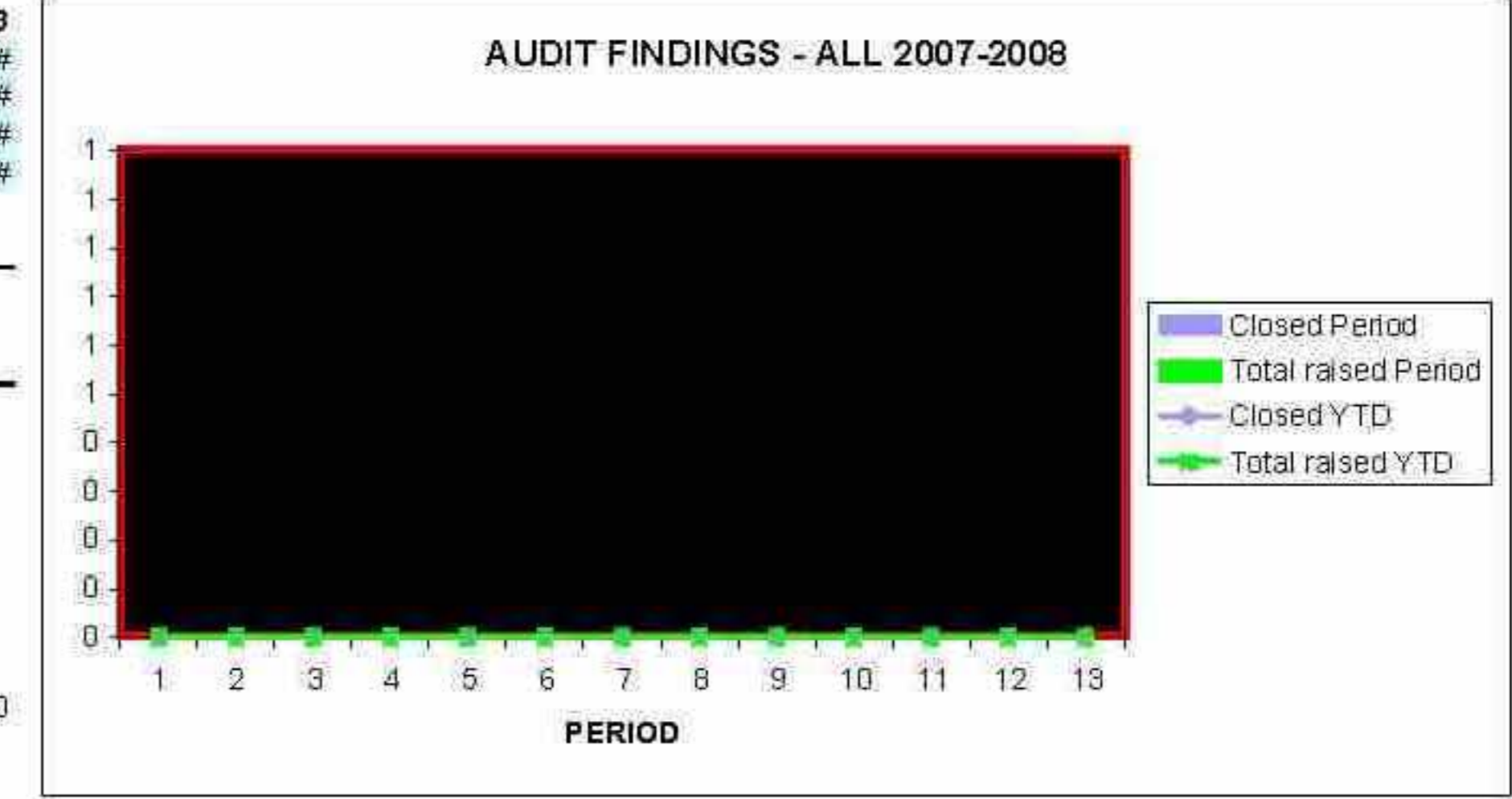
Not accepted by auditee	0	0	0	0	17	17	0	0	0	0	0	0	0
Awaiting actions from auditee	0	0	0	0	6	2	0	0	0	0	0	5	5
Accepted and signed by the auditee	0	0	0	0	0	0	20	18	18	18	0	0	0
Actions dates agreed with auditee	0	0	0	0	1	0	26	28	20	29	28		
Presented by auditee for closure	0	0	0	0	3	0	0	0	0	0	0	0	0
Closed	0	0	0	0	0	3	3	6	10	14	15		
Total Raised	0	0	0	0	23	23	23	47	47	48	48	0	0

**HSQE Management System Audit Findings Status**

Not accepted by auditee	0	0	0	0	0	0	0	0	0	0	0	0	0
Awaiting actions from auditee	0	0	0	0	0	0	0	0	0	0	0	0	0
Accepted and signed by the auditee	0	0	0	0	0	0	0	0	0	0	0	0	0
Actions dates agreed with auditee	0	0	13	8	10	0	12	12	20	11	8	15	
Presented by auditee for closure	0	0	0	0	0	0	0	0	0	0	0	0	0
Closed	0	0	0	5	5	15	15	15	15	25	26	28	
Total Raised	0	0	13	13	15	15	27	27	35	36	36	43	0

**NCR's**

	1	2	3	4	5	6	7	8	9	10	11	12	13
Closed PERIOD	###	###	###	###	###	###	###	###	###	###	###	###	###
Raised PERIOD	###	###	###	###	###	###	###	###	###	###	###	###	###
Closed YTD	###	###	###	###	###	###	###	###	###	###	###	###	###
Raised YTD	###	###	###	###	###	###	###	###	###	###	###	###	###
Overdue													



## INJURED BODY PARTS

HEAD/NECK			
Period	YTD	13 Period	RIDDOR
0	0	0	0

BACK/TORSO			
Period	YTD	13 Period	RIDDOR
1	2	2	0

ARM			
Period	YTD	13 Period	RIDDOR
0	0	0	0

LEG			
Period	YTD	13 Period	RIDDOR
1	3	3	0



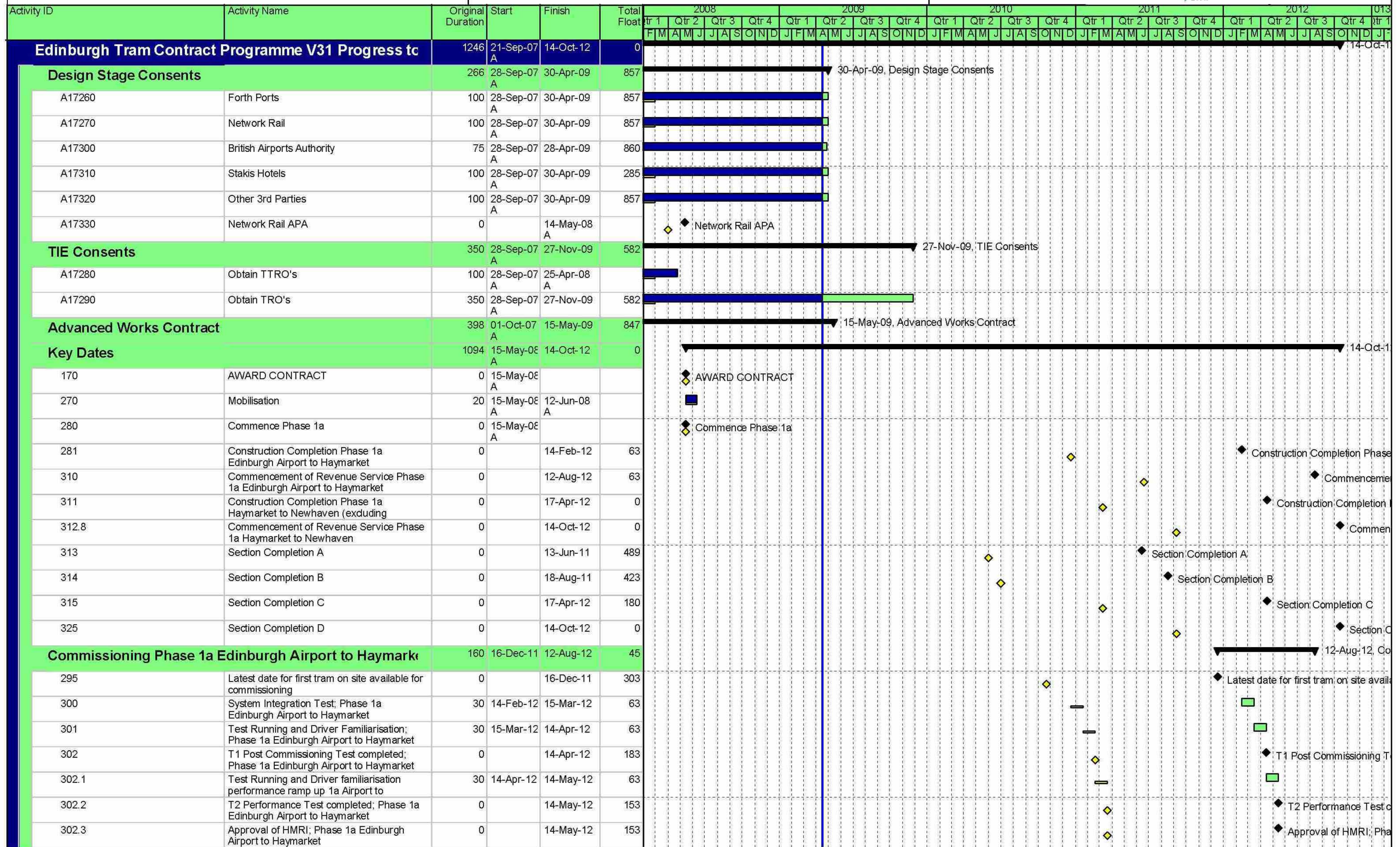
EYES			
Period	YTD	13 Period	RIDDOR
0	0	0	0

FACE			
Period	YTD	13 Period	RIDDOR
0	0	0	0

HAND/WRIST			
Period	YTD	13 Period	RIDDOR
1	2	2	0

FOOT/ANKLE			
Period	YTD	13 Period	RIDDOR
0	0	0	0

## **10.2 Programme Update**

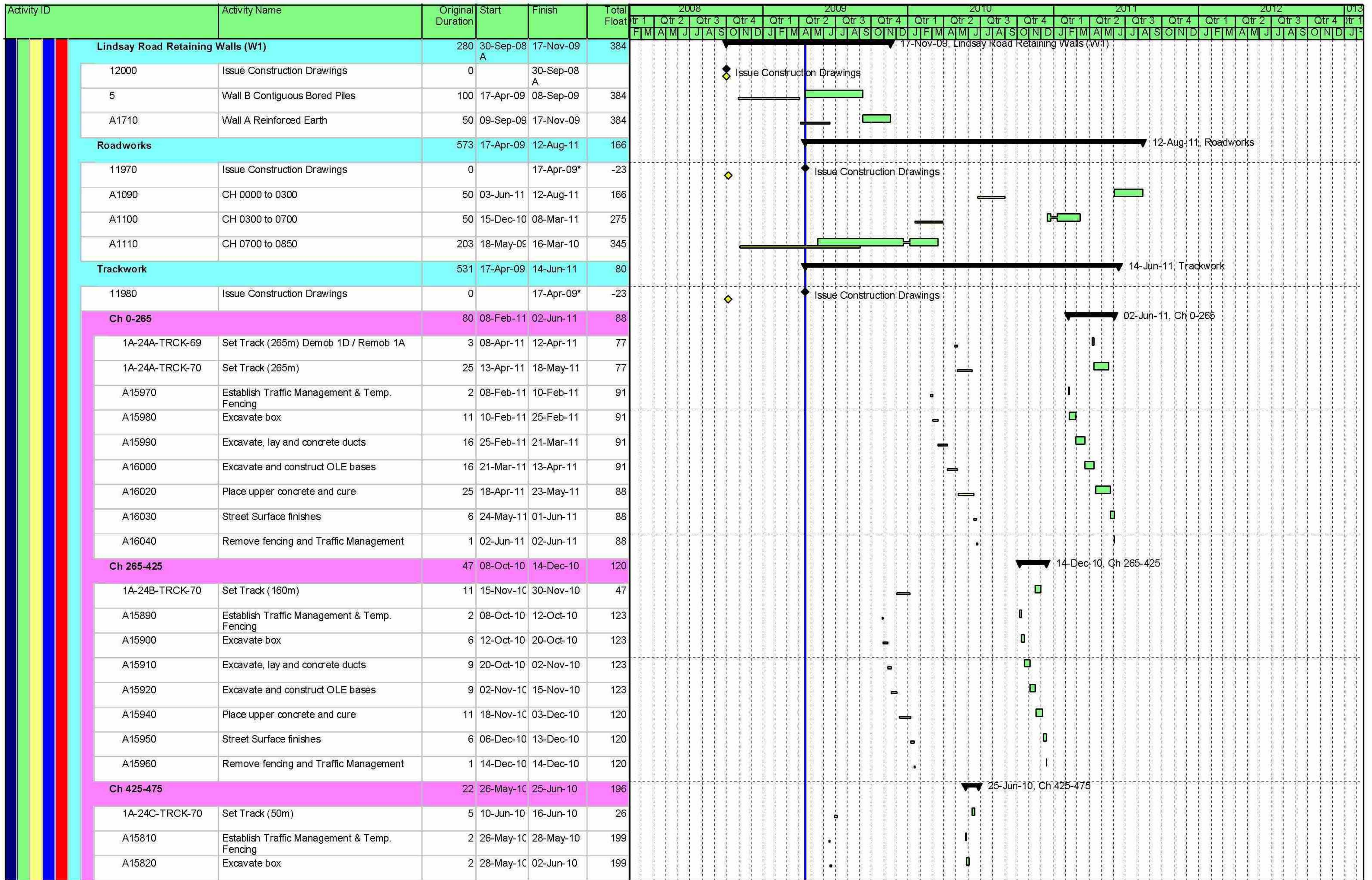


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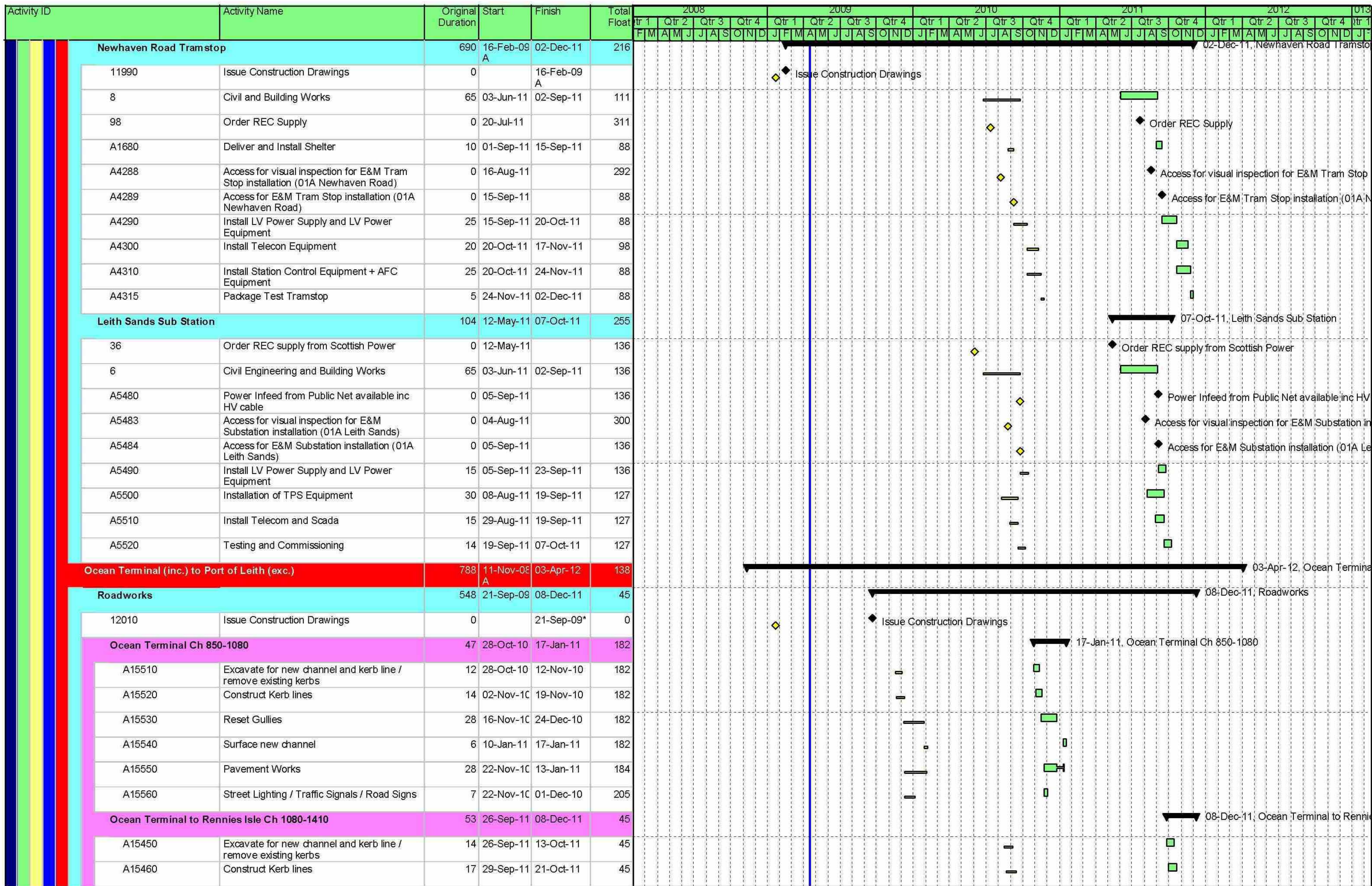
Date	Revision	Checked	Approved
10-Apr-09		scs	

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— V31 Baseline    
— Remaining Work    
◆ V31 Baseline Milestone    
— Critical Remaining Work    
◆ Milestone    
▶ Summary

CEC00971600\_0043





Date	Revision	Checked	Approved	Page 6 of 56	V31 Baseline          Remaining Work          V31 Baseline Milestone          Milestone          Summary
10-Apr-09		scs			Actual Work          Critical Remaining Work          Milestone

CEC00971600\_0045





