



## **Transport Edinburgh**

### **Edinburgh Trams**

### **Lothian Buses**

## **Tram Project Board Report on Period 02 Papers for meeting 2<sup>nd</sup> June 2010**

**09:30am – 12:00pm**

### **Distribution:**

#### **Members and attendees**

David Mackay (Chair)  
Marshall Poulton  
Bill Campbell  
Steven Bell  
Kenneth Hogg  
Cllr Ian Perry  
Ian Craig

Cllr Phil Wheeler  
Stewart McGarrity  
Cllr Allan Jackson  
Cllr Gordon Mackenzie  
Brian Cox  
Peter Strachan  
Mandy Haeburn-Little

Donald McGougan  
Richard Jeffrey  
Dave Anderson  
Graeme Bissett  
Alastair Richards  
Neil Scales  
Alasdair Sim (Secretary)

#### **In addition – for information only**

Cllr Maggie Chapman  
Andy Conway  
Norman Strachan  
Iain Coupar

Cllr Tom Buchanan  
Frank McFadden  
Alan Coyle  
Gregor Roberts

Dennis Murray  
Ailie Wilson  
Susan Clark  
Gill Lindsay

TRAM PROJECT BOARD

**Transport Edinburgh**

**Edinburgh Trams**

**Lothian Buses**

FOISA exempt

Yes

No

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**Agenda Tram Project Board**  
**Brunel Suite – Citypoint, 2<sup>nd</sup> Floor**  
**2<sup>nd</sup> June 2010 – 09.30am to 12.00pm**

**Attendees:**

David Mackay (Chair)	Cllr Phil Wheeler	Donald McGougan
Bill Campbell	Richard Jeffrey	Ian Craig
Steven Bell	Stewart McGarrity	Graeme Bissett
Kenneth Hogg	Cllr Allan Jackson	Alastair Richards
Cllr Ian Perry	Cllr Gordon Mackenzie	Neil Scales
Marshall Poulton	Brian Cox	Mandy Haeburn-Little
	Dave Anderson	Susan Clark
		Alasdair Sim (Minutes)

Apologies:

- 1 Review of Previous Minutes and Matters Arising (DJM)
- 2 5 Key Business Priorities (RJ)
  - 2.1 Building the Tram
    - Update on Progress with BSC (RJ)
    - Project Director Progress Report Period 02 (SB)
    - Change Requests & Risk Drawdown
  - 2.2 Preparing for Operations (AR)
  - 2.3 Building the Brand (MHL)
  - 2.4 Building the Team (RJ)
  - 2.5 Preparing for the Future (RJ)
- 3 AOB
- 4 Date of next meeting – 30 June 2010



**Edinburgh Tram Network Minutes**

**STRICTLY PRIVATE AND CONFIDENTIAL**

**Tram Project Board**

**5<sup>th</sup> May 2010 (09:30 to 11.40)**

**tie offices – Citypoint II, Brunel Suite**

<b>Members in Attendance:</b>			
David Mackay	DJM	Bill Campbell	WWC
Richard Jeffrey	RJ	Donald McGougan	DMcG
Cllr Gordon McKenzie (part time)	GMcK		
<b>In Attendance:</b>			
Brian Cox	BC	Andy Conway	AC
Steven Bell	SB	Kenneth Hogg	KH
Stewart McGarrity	SMcG	Cllr Phil Wheeler	PW
Graeme Bissett	GB	Cllr Ian Perry	IP
Alastair Richards	AR	Cllr Allan Jackson	AJ
Peter Strachan (by telephone)	PS	Ian Craig	IC
Marshall Poulton	MP	Mandy Haeburn-Little	MHL
Dave Anderson (part time)	DA	Julie Smith (minutes)	JS

**Apologies: Neil Scales, Alasdair Sim**

<b>1.0</b>	<b>Introduction, Review of Previous Minutes and Matters Arising</b>	
1.1	DJM welcomed the participants to the meeting and noted the apologies.	
1.2	DJM asked the TPB to declare and confirm any conflicts of interest; there being none, he went on to emphasise the absolute requirement for strict adherence to commercial confidentiality, both in regard to the specific matters discussed and to papers referred to in the meeting.	
1.3	The minutes of the TPB from 10 April 2010 were taken as read and accepted as a true record. The action relating to point 5.1 (glossary of construction and contract terms) is currently a work in progress and will be presented at a future TPB by MHL.	MHL
<b>2.0</b>	<b>Chief Executive's Update</b>	
2.1	RJ gave an overview of the options given at the last board and the progress made. He stressed that the information was commercially sensitive and confidential and should not be discussed outwith the Board. If any member of the Board felt there was a need to brief an individual then this should be noted to RJ. RJ confirmed that work continued on the favoured option and that progress would be reported to the board in due course.  <u>DRP Update</u> 1 awaiting referral to Adjudication by BSC – Depot Access Bridge 1 awaiting referral to Adjudication by tie – Baird Drive Retaining Wall. Revised	

	<p>Estimate received on 29/04/10 and under urgent review.                  Section 7 Drainage and Tower Place Bridge in Adjudication and expect decision by end of May                  MUDFA Rev 8 in adjudication – <b>tie</b> to submit their response to the referral by 5<sup>th</sup> May with a decision anticipated for the end of June.</p>	
<b>3.0</b>	<b>Building the Tram</b>	
3.1	<p>SB provided progress updates for Period 01 covering the following areas:</p> <p><u>HSQE</u>                  There has been 1 reportable accident during Period 1 - an incident on the Guided Busway. The rolling 13 period AFR is 0.12 well below the target of 0.24 for the project. Clancy and Farrans are still reporting Zero AFR.                  The frequency for Service Strikes for MUD contractors has increased from the previous period, however the 13 period rolling SFR is still decreasing and is 6.15 against a target of 10.0 strikes per 10,000hrs worked.  <b>tie</b> has carried out a Health and Safety audit on BSC compliance with the approved Network Rail Construction Phase Plan. 4 Major findings were agreed and BSC are in the process of closing out these findings. NR concerns remain regarding BSC's works under the Siemens Principal Contractor's License.                  Infrastructure assets are currently being logged and recorded on an Excel database. A presentation by Siemens on their preferred Asset Management Sytem was held on 28<sup>th</sup> April. Once the system is in place the information on Excel will be migrated across.</p> <p><u>Code of Construction Practice</u>                  Compliance has improved over period 92% to 95% for Period 1.                  There has been an improvement within the following areas – hours of work, notifications, notices – this is the first period that has shown 100% for the display of Tram signs and control of works near water.                  There has been a significant decrease in compliance in the noise related COCP requirements – this item is under review and actions to resolve have been identified.</p> <p><u>Utilities</u>                  Clancy Docwra completed the utilities diversions in the Haymarket area weekend of 1 May 2010. Planned reinstatement of traffic islands (using temporary flexible kerbing) and removal of wide area diversions are planned for weekend 8 May 2010. Tenders for Baltic Street utilities diversions underway but no decision will be taken before further debate with the Board.</p> <p><u>Infraco - Progress</u>                  The progress achieved in the period for INFRACO works was 0.3% against a plan of 3.2% and reflects the ongoing disappointing progress against plan being made by BSC for both on-street and off-street works. The Haymarket Viaduct deck pour was completed in period. Progress at the Depot Building was going well. Earthworks in the stabling area recommenced with suitable material being moved to Section 7.                  Section 7 Earthworks/Drainage work commenced between Culvert 3 and Park</p>	



	<p>&amp; Ride. Good progress was being made in fair weather conditions.</p> <p><u>Infraco – Issues</u> Infraco have refused to progress works on retaining walls 1A and 1C despite <b>tie</b> issuing Clause 22/65 letters for the sewer protection works, &amp; the alterations &amp; soft ground at 1A and the Sea wall at 1C. Works to complete the piling to east side of Tower Place Bridge were delayed during period 1 due to the requirement for a licence from Historic Scotland and the discovery of a service cable, both of which were successfully managed in Period 1 allowing BSC to progress the final piles. BSC have failed to commence On-Street Works and are refusing to progress works whilst Clause 80 Changes are being agreed.</p> <p>Commencement of On-Street Works are also being frustrated by the fact that although sites are available, BSC have failed to satisfy their contractual obligations to enable a permit to be issued. Furthermore, BSC do not accept <b>tie</b>'s position with respect to IDC and execution of sub contractors and a lack of construction programme information from BSC causing concern with respect to management of TM, stakeholders, safety and other works.</p> <p>Also, BSC have declined to carry out a review of Trackform in six areas. Lastly BSC are refusing to continue the works following Clause 22/Clause 65 letters. SB noted his disappointment and frustration at the lack of On-Street progress.</p>	
3.2	<p><u>Change Requests and Risk Drawdown</u> In Period 01, an additional £710,868 has been drawn down leaving a risk allowance of £11.19m. These changes were; Section 6A Street Lighting (COP217 - £2,049), CEC Recharges 2010/11 (COP254 - £625,231), Additional scope Edinburgh Park Private Utilities (COP276 - £54,284) and Balancing Change (COP321 - £29,304).</p>	
<b>4.0</b>	<b>Preparing for Operations</b>	
4.1	<p><u>Tram Progress</u> AR reported that along with the delivery of the first tram to Edinburgh as scheduled, 25 trams were now completed or in production. Trams 9, 10, 11 and 12 are in the finishing area. Tram 2 is undergoing final ride quality tests at the test track in Wildenrath. Trams 7 and 8 are currently undergoing factory acceptance testing and Tram 3, 4, 5 and 6 have completed their factory acceptance tests and are stored ready for delivery. AR noted that he will be visiting the completed Trams to ensure they were being store as required.</p> <p>Another success in the period is that the ICP and HMRI (ORR) no objection and letter of comfort for tram vehicle.</p>	
4.2	<p><u>Operations Preparation</u> BROR committee held and the group visited the tram and the depot; Stage 1 post submission dialogue sessions held on the revenue collection system and Stage 2 submissions now being prepared by bidders.</p>	
<b>5.0</b>	<b>Building the Brand</b>	
5.1	<p>MHL noted that the Tram on Princes Street was the most visited attraction in Edinburgh with many retailers keen to work alongside us to promote the businesses. The feedback from visitors to the Tram has been 96% positive with visitors commenting on its spaciousness and modern appearance. BC seconded this noting how well it fitted into the city's landscape.</p>	

## Transport Edinburgh

### Edinburgh Trams

#### Lothian Buses

FOISA exempt

Yes

No

	The photography for "The People who Built the Tram" book is almost complete and the City Arts Centre has agreed to manage a photography exhibition during the first year of the Tram running. MHL also presented the proposed design options for the Tram Stop. These blend with the Lothian Buses livery and include the madder and gold "swoosh".	
<b>6.0</b>	<b>Building The Team</b>	
6.1	No updates were reported to the Board.	
<b>7.0</b>	<b>Preparing for the Future</b>	
7.1	No updates were reported to the Board.	
<b>8.0</b>	<b>Governance</b>	
8.1	GB discussed with the Board the areas to be included with the Council Report.	
<b>9.0</b>	<b>AOB</b>	
9.1	No items were raised.	
<b>10.0</b>	<b>Date of Next Meeting</b>	
10.1	DJM thanked the Board for their participation and confirmed that the date of the next meeting will be <b>Wednesday 2<sup>nd</sup> June 2010</b> commencing at <b>09:30hrs</b> .	
10.2	The meeting closed at 11.40.	

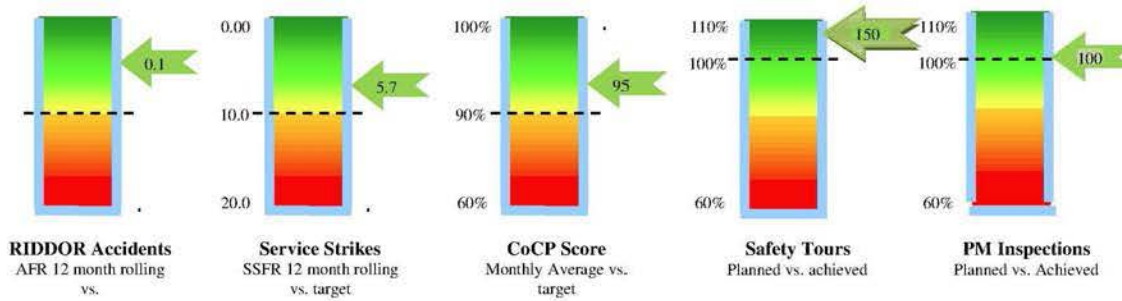
Prepared by Julie Smith, 5<sup>th</sup> May 2010

# Building The Tram Project Director Report - Period 02 [10/11]

## HSQE – Period 01

### Deliver a Tram Safety

HS&E ACCIDENTS and INCIDENTS SUMMARY											
Total	Total Hours	>3 day	Major	Injury	NM/Unsafe Condition	Service Damage	EN V	RTA	MOP	AFR	SFR
Period	118,591	0	0	1	12	3	2	1	10	0.00	2.53
13 period rolling	1,630,497	1	1	24	212	94	22	8	64	0.12	5.77



There have been no Reportable accidents during Period 2. The rolling 13 period AFR is 0.12 well below the target of 0.24 for the project. The frequency of service strikes for the project has improved marginally overall from the previous Period.

During Period 2 there was a potentially serious incident with BSC/Grahams at Haymarket Yards. A dumper tipped during an unloading operation. The driver voluntarily provided a D&A sample and tested positive for Cannabis. The driver was removed from site and discussions are underway with BSC regarding random testing and contractual requirements.

Further to the Period 11 BSC Rail Interface systems audit, which found 4 major findings within the BSC system, the audit has been closed out satisfactorily.

**tie** PM inspections continue to be carried out with the contractor. During Period 2, three of the 6 Safety Tours were carried out jointly between **tie** senior management and BSC senior management.

During Period 2, **tie** carried out an Environmental audit on BSC at Tower Bridge. The audit found 3 findings 1 minor, 2 observations, however, in general, the audit recorded some good standards from BSC's subcontractor, McKean.



**Deliver a Safe Tram (Quality)**

Section	Activity	Data Checked					
		IDC	Hazards	ITP's	Design Variation / Change	As Built's	Asset Register
Edinburgh Wanderers	Building Works	0.5	On Hold	0.5	1	1	N/A
Tower Bridge Place	ITP's & related Docs	0.5	On Hold	1	1	1	N/A
Edinburgh Park	Road Works	0.5	On Hold	1	1	1	N/A
Gogar Depot	Drainage	1	On Hold	1	1	1	N/A
<b>PD</b>	<b>Total (y)</b>	2.5	0	3.5	4	4	0
	<b>Max Possible Total (y)</b>	4	0	4	4	4	0
<b>Total</b>	<b>Percentage P1</b>	38%	69%	93%	77%	71%	50%
	<b>Percentage P2</b>	38%	69%	93%	79%	74%	50%

Four inspections carried out in the period, and these have highlighted significant improvements in the inspection results with IDC findings achieving a score of 63%, the first time since the inspections regime started that this element has scored over 50%. Overall assurance is slowly improving, but more work is to be done with BSC in this regard.

**Code of Construction Practice**

Compliance has remained constant over period at 95% for Period 1 to 2. There has been an improvement in compliance with the following areas:

- Fencing and Hoarding
- Litter and General Housekeeping

There has been a decrease / stable level of non compliance in the following areas:

- Hours of work
- Notices
- Noise
- Parking
- Dust control

A series of action plans have been identified and will be put in place to address these specific area.

**Progress**

The progress achieved in the Period for INFRACO works was 1.8% against a plan of 3.4%, this rate of progress is an improvement on that reported in previous periods, and reflects the level of activity underway primarily in the off-street sections. BSC are undertaking very limited on-street works in the Leith Docks area at present. This poor rate of on-street progress can substantially be attributed to the refusal of BSC to progress works whilst Clause 80 Changes are being agreed, and the fact that work cannot be started on-street where sites are available, as BSC have failed to satisfy their contractual obligations.

The total cumulative completion is **18.0%** in Period 2, against a Rev1 Contract Programme target of 86%.

The cost, programme and risk information in this Period 2 report continues to be based upon an unapproved forecast on the information reported in May 2009. This will be updated once agreement is reached with BSC on a new revised programme. An updated Revision 3 programme was submitted by Infraco during the Period, and this was rejected by **tie**.

**tie** are now in receipt of two independent experts' views and report on an attainable Rev3 programme proposals both of which indicate that Revenue Service is still achievable by late 2012, if a pro-active approach is taken by the Contractor.



**Dispute Resolution**

The Baird Drive dispute was resolved during the period without having to resort to formal adjudication. The Adjudicator's decision was provided on the Tower Bridge DRP. Both of these have been useful in reducing costs. In period 3 a decision is due on Section 7 drainage and the first hearing is being held on the MUDFA Rev 8 DRP.

**Design**

A series of Design Audits commenced on Monday 17<sup>th</sup> May 2010. Engagement by BSC has been frustrating with 2 sessions achieving very little so far. There is still little evidence of better management of SDS by BSC, and the lack of support in supplying the Design programme strengthens the evidence of poor design performance and management. Further meetings in early Period 3 are scheduled.

**Utility works**

Utility Diversions are now complete at Haymarket and York Place (with the exception of final snagging and the requirement for final Scottish Water tie-ins at York Place which are dependent on completions of SW works at the Mound). Utility Diversions continue to programme at Newhaven and Leith Docks with scheduled completion during June 2010.

The procurement process commenced for Baltic street works in Period 1, **tie** have received 3 notes of interest, all of whom will now be invited to tender - SDS are still to complete the IFA design which is expected imminently.

**Tramworks (INFRACO) Progress**

- Infraco recommenced works to Retaining Walls 1A and 1C (Lindsay Road) at the end of Period 2. RW1C was excavated and the formation reviewed. Soft spots were identified, excavated and filled with sub base and plate tests are to follow. Ground at Wall 1A in location of old steps requires temporary works and BSC to action, although access was denied by Farran SPN duct installations until 20th May 2010.
- Tower place Bridge – works progressing with completion of the piling works in Period 2.
- Good progress was made in Section 7 with the earthworks - aided by an extended dry period. Progress has been achieved despite soft ground being encountered in two areas.
- General Depot programme going well with various trades working within the Depot structure. Externally good progress continues to be made with OHL foundation construction commencing in the period (20% completed to date).
- Depot Access Bridge piling to North abutment completed in Period 2 with the platform prepared for the South Pile.
- Temporary king posts installed at A8 Underpass which now allows the excavation to portal works to commence on the North Side.
- Edinburgh Park Bridge is now ready to receive Tram Rails which should commence w/c 24th May.
- Gogarburn Bridge is now ready to receive Tram Rails which should commence w/c 24th May.
- Guided Busway trackwork completed in the period. Other works will be undertaken at a later stage.
- The deck at Haymarket Viaduct has been poured, and works are ongoing to construct the retaining walls at for the infill section of the structure.

# Transport Edinburgh

## Edinburgh Trams

### Lothian Buses

FOISA exempt

Yes

No



Tower Place Bridge Piling Works



Tower Place Bridge Piling Works



Gogar Depot External Works



Gogar Depot Control Room



Haymarket Viaduct Concrete Pour



Edinburgh Park Bridge

#### Issues in the Period

- BSC continue to refuse to act on **tie**'s instructions to progress the works whilst changes are being evaluated/agreed. In certain instances, BSC say they are progressing on the basis of goodwill.
- BSC have failed to commence On Street Works. BSC do not accept **tie**'s position with respect their failure to meet contracted obligations in regard to the permit to commence works; these being in regard to IDCs and the conclusion of sub contracts. Lack of construction programme information from BSC is causing concern with respect to management of TM, stakeholders, safety and other works.
- BSC have declined to carry out a review of Trackform in six areas.
- BSC refusing to continue the works following Clause 22/Clause 65 letters where unidentified utilities and ground conditions have been encountered and **tie** have instructed BSC to progress.



#### **Tram works (TRAMCO)**

Good progress continues to be made with delivery of the trams by CAF in accordance with the tram delivery schedule. Work is progressing at various stages on the production line on 25 trams, with the first 8 trams now complete and undergoing testing.

The tram on display on Princes Street remains a strong visitor attraction with more than 31,000 visitors to date. Edinburgh Trams livery has now been applied to the tram and a very positive response has been received from those members of the public who have visited.



#### **Cost**

We continue to reflect an outturn estimate of £533.3m, including £6.2m for the cancellation of Phase 1b. However, given the commercial uncertainties with Infracore and continuing delays to the project it is now considered unlikely that the full scope of Phase 1a will be completed within the available funding envelope of £545m. Until the key issues are resolved through the contractual and legal process, it will not be possible to accurately forecast a revised budget outturn.

Key cost related items to note in Period 2 are:

- COWD to date is £362.8m, with funding to date split to TS (£332.9m) and CEC (£29.9m).
- The budget for ETP in 2010/11, established in April 2010 is £142.2m (£153.3m 09/10). Transport Scotland funding for 2010/11 is £130.5m for ETP, with £11.7m funding available from CEC. See detailed cost report (section 3.1) for an explanation of budget and reforecast differences.
- Full year forecast for 2010/11 is held at £143.0m. This forecast is being held from P13, and includes a base PM forecast of £136.9m and unallocated risk of £6.1m. See detailed cost report for a breakdown of key risks to this forecast.
- **tie** have not yet certified the P1 Preliminary milestone payments as BSC have not complied with the contractual obligations to allow certification (value £1.46m in the period).

**Actual YTD P2 & forecast P3-P13 FY10/11**

<b>£m</b>	<b>YTD P2</b>	<b>Forecast P3-P13,10/11</b>	<b>Forecast FY10/11</b>
Infrastructure and vehicles	11.7	113.3	125.0
Utilities diversions	0.1	-5.0	-4.9
Design	0.3	2.0	2.3
Land and compensation	0.1	0.0	0.2
Resources and insurance	2.8	11.6	14.3
<b>Base costs</b>	<b>15.0</b>	<b>121.9</b>	<b>136.9</b>
Risk allowance	0.0	6.1	6.1
<b>Total Phase 1a</b>	<b>15.0</b>	<b>128.0</b>	<b>143.0</b>

- ETP COWD in FY10/11 for Period 2 is £15.0m against a re-aligned budget of £16.6m.
- As previously reported and agreed with CEC and TS, initial milestones under the Infraco and Tramco contracts in the aggregate amount of £24.2m, in respect of advance material purchases, have been classified as prepayments. These will be reclassified as expenditure against funding in the periods when the related materials are delivered to site and incorporated in the works. The release will occur on the achievement of trackwork and structures milestones in 2010/11 and future years.

**Risk & Opportunity**

There were five risk reviews held in the period. There were thirteen drawdowns on the risk allowance approved in the period totaling £5,064,921. These are detailed later in the report. Based upon the revised project risk allowance this leaves a risk balance of £6,121,129.

The Project Risk Allowance at financial close was £30,336,196. This was increased in Period 1 by £17,982,993. Drawdowns to the end of Period 2 10/11 now total £42,198,060. The remaining risk balance based on the approved QRA plus the additional funding is £6,121,129.

**Stakeholder & Communications**

Incoming media enquires for Period 2 have been relatively quiet in comparison to previous reported periods. Press coverage has been mainly proactive on our part where we notified local press of the removal of our traffic management in the city centre in order to give businesses and residents in the city some respite while negotiations on the dispute continue. The launch of the Leith Business Hub at the MacDonald Road Library also generated positive coverage locally and was unveiled by local businessman Sir Tom Farmer, who himself was born and raised in Leith.

Period 2 has been a busy four weeks with regards signage and branding on the project. Promotional signage and visuals have been placed at Ocean Terminal, and the Forth Ports Ferry Terminal to coincide with the launch of 2010 Cruise season.

Logistical support for businesses affected by our tram works have been scaled back during Period 2 from 4 to 3, due to the reduction in our on-street works. Members of the team have also helped out considerably in maintaining a presence on the tram vehicle while it is situated on Princes Street.

Currently there are 4 FOI reviews outstanding and in the process of being compiled. No new requests have been filed.

Correspondence has dropped by 40 contacts since last period, totalling 298 public enquiries. The main channels for incoming enquiries to the Customer Service team continue to be via email and phone calls, with Face to face meetings with businesses and stakeholders having now dropped significantly in light of the reduction of our worksites in the centre of Edinburgh.

FOISA exempt

- Yes
- No

## Period 02 2010/11 – Papers for Consideration



**Paper to: TPB****Meeting date: 2<sup>nd</sup> June 2010****Subject: Project Change Control Update – Period 02, 2010/11****Preparer: Mark Hamill****Summary**

This paper is to update the Tram Project Board with the current status regarding approved project change orders and their implications on the overall Tram Project Budget. To the end of Period 1, £37.13m had been drawn down from the project risk allowance. .

In Period 02, an additional £5,064,921 has been drawn down leaving a risk allowance of £6.12m.

The table below summarises the approved changes that have impacted the Project Risk Allowance.

<b>Description</b>	<b>Base cost</b>	<b>Risk</b>	<b>Total</b>
<b>Position at Financial Close (PCB)</b>	<b>481,680,811</b>	<b>30,336,196</b>	<b>512,017,007</b>
<b>Increase in budget</b>		<b>17,982,993</b>	<b>530,000,000</b>
Changes to end Period 1	37,133,139	-37,133,139	
<b>Position at end Period 1</b>	<b>518,813,950</b>	<b>11,186,050</b>	<b>530,000,000</b>
Period 02 Changes	5,064,921	-5,064,921	
<b>Position at end Period 2 (CAB)</b>	<b>523,878,872</b>	<b>6,121,129</b>	<b>530,000,000</b>

**Changes Approved in Period 02**Section 5C - Ground Improvement Works (COP183 - £930,159)

This change is for the evacuation, disposal and replacement of soft material. These works are a Specified Exclusion under clause 3.3 (c), Schedule Part 4 of the Infraco Contract.

The scope of works within this change also includes the installation of capping layer and the installation of starter layer within Section 5C Trackworks, both of which are excluded under Pricing Assumption Number 11, Schedule Part 4.

The value for this work is provisional and will be site checked and agreed as works proceed in accordance with the 'Procedure to carry out on-site testing to determine extent of soft ground' which has been developed by **tie** and agreed with BSC.

The ongoing assessment and proposed solutions have been independently challenged and reviewed by Donaldson Associates.

Section 7 - Ground Improvement Works (COP184 - £1,139,306)

See separate paper

Section 5B - Ground Improvement Works (COP193 - £1,048,154)

See separate paper



Adjustment to contingency (COP143, 234,280) (COP336 - £-81,263)

Book keeping exercise to correct previous change which had been funding from contingency that was coming from risk.

Supply of Pedestrian Marshalls (COP236 - £8,640)

**tie** instructed BSC to provide Pedestrian Marshalls due to the extent of disruption to pedestrians by the proposed traffic management switch at Lothian Road. This as a change as BSC were asked to provide an additional traffic management solution. This work was required as a result of a delay associated with Scottish Water Connections to Lothian Road Junction carried out under the MUDFA Contract.

Russell Road retaining wall - BDDI-IFC risk (COP244 - £1,461,857)

See separate paper

Variations for Section 1A (COP264 - £338,246)

This change incorporates a number of items pertaining to the works in Section 1A. These items include a BT scope reduction which was realised and the deployment of additional resources to maintain the programme completion date following delays in gaining access to ADM Milling land. Additionally, a dedicated design resource was employed to accelerate the Technical Queries process to the benefit of the programme.

Water of Leith Sewer Lining (COP333 - £59,709)

This change was to supply and install lining to an existing sewer to allow piling works to commence on site. This is a change because the protection of the sewer is a specified exclusion under Pricing Schedule Part 4.

A8 Underpass Phase 2 Piling Obstructions (COP343 - £9,481)

Below ground obstructions were encountered during the piling operations for Phase 2 of the A8 Underpass. This is a change as dealing with below ground obstructions is a specified exclusion under Pricing Schedule Part 4.

Carrick Knowe Bridge (COP345 - £130,000)

Changes to the design were determined at adjudication to be outwith normal development and completion of the designs. This was an interim change while final agreement on the value was sought. This has now been finalised at £138,000 and this change will be regularised at the next Change Panel.

White lining at Haymarket Station Car Park (COP348 - £3,843)

This is a change because it was necessary to replace the white lining in the car park following traffic management works in the area.

Newhaven Pedestrian Crossing (COP357 - £9,131)

Alterations to Newhaven Pedestrian Crossing were required to meet the expected additional footfall following the introduction of tram. This work extends beyond the boundary of the LOD. Despite construction works to an adjacent development being incomplete and therefore the developer having not fulfilled their obligations with CEC regarding this crossing, there would still be a requirement for a widening of the crossing as a consequence of tram.

Utilities Design - Crawley Tunnel Valve Arrangement (COP359 - £7,658)

This change is to fund the design of a Scottish Water mains valve at the Crawley Tunnel at The Mound. It is **tie**'s view that this work carries a factor of betterment for SW by providing

**Transport Edinburgh**

**Edinburgh Trams**

**Lothian Buses**

FOISA exempt

Yes

No

new valves and giving the SW network more flexibility during future maintenance periods. On this basis **tie** intends to recoup a percentage of the total cost to complete the works.

The Board should note that an additional change will also be necessary to design the tie-in detail i.e. breaking into the tunnel and connecting to the existing 15' main from the new valve arrangement. A separate design change order will be prepared accordingly and presented at a future Board meeting.

FOISA exempt

Yes  
 No

**Decision(s) / support required**

The TPB is requested to:

1. Note the Project Change Control status at Period 2
2. Note and approve the additional papers

**Proposed**

Name: Mark Hamill

Date: 2 June 2010

Title: Risk & Insurance Manager

**Recommended**

Name: Steven Bell

Date: 2 June 2010

Title: Tram Project Director

**Approved**

.....Date: .....  
David Mackay on behalf of the Tram Project Board

**Paper to: TPB**

**Meeting date: 2<sup>nd</sup> June 2010**

**Subject: Risk Drawdown for Section 5A - Ground Improvement Works (COP183 - £930,159**

**Preparer: Mark Hamill**

This change is for the evacuation, disposal and replacement of soft material. These works are a Specified Exclusion under clause 3.3 (c), Schedule Part 4 of the Infraco Contract.

The scope of works within this change also includes the installation of capping layer and the installation of starter layer within Section 5C Trackworks, both of which are excluded under Pricing Assumption Number 11, Schedule Part 4.

The value for this work is provisional and will be site checked and agreed as works proceed in accordance with the 'Procedure to carry out on-site testing to determine extent of soft ground' which has been developed by **tie** and agreed with BSC.

The ongoing assessment and proposed solutions have been independently challenged and reviewed by Donaldson Associates.

**Decision(s) / support required**

The TPB is requested to formally approve the drawdown from risk of £930,159

**Proposed**

Name: Mark Hamill

Date: 2 June 2010

Title: Risk & Insurance Manager

**Recommended**

Name: Steven Bell

Date: 2 June 2010

Title: Tram Project Director

**Approved**

.....

Date: .....

David Mackay on behalf of the Tram Project Board



**Paper to: TPB**

**Meeting date: 2<sup>nd</sup> June 2010**

**Subject: Risk Drawdown for Section 7 - Ground Improvement Works (COP184 -  
£1,139,306**

**Preparer: Mark Hamill**

This change is for the evacuation, disposal and replacement of soft material. These works are a Specified Exclusion under clause 3.3 (c), Schedule Part 4 of the Infraco Contract.

The scope of works within this change also includes the installation of capping layer and the installation of starter layer within Section 7A Trackworks, both of which are excluded under Pricing Assumption Number 11, Schedule Part 4.

The value for this work is provisional and will be site checked and agreed as works proceed in accordance with the 'Procedure to carry out on-site testing to determine extent of soft ground' which has been developed by **tie** and agreed with BSC.

The ongoing assessment and proposed solutions have been independently challenged and reviewed by Donaldson Associates.

**Decision(s) / support required**

The TPB is requested to formally approve the drawdown from risk of £1,139,306.

**Proposed**

Name: Mark Hamill

Date: 2 June 2010

Title: Risk & Insurance Manager

**Recommended**

Name: Steven Bell

Date: 2 June 2010

Title: Tram Project Director

**Approved**

.....

Date: .....

David Mackay on behalf of the Tram Project Board

**Paper to: TPB**

**Meeting date: 2<sup>nd</sup> June 2010**

**Subject: Risk Drawdown for Section 5B - Ground Improvement Works (COP193 - £1,048,154**

**Preparer: Mark Hamill**

This change is for the evacuation, disposal and replacement of soft material. These works are a Specified Exclusion under clause 3.3 (c), Schedule Part 4 of the Infraco Contract.

The scope of works within this change also includes the installation of capping layer, the installation of starter layer and the installation of a drainage layer within Section 5B Trackworks, both of which are excluded under Pricing Assumption Number 11, Schedule Part 4.

The value for this work is provisional and will be site checked and agreed as works proceed in accordance with the 'Procedure to carry out on-site testing to determine extent of soft ground' which has been developed by **tie** and agreed with BSC.

The ongoing assessment and proposed solutions have been independently challenged and reviewed by Donaldson Associates.

**Decision(s) / support required**

The TPB is requested to formally approve the drawdown from risk of £1,048,154

**Proposed**

Name: Mark Hamill

Date: 2 June 2010

Title: Risk & Insurance Manager

**Recommended**

Name: Steven Bell

Date: 2 June 2010

Title: Tram Project Director

**Approved**

.....

Date: .....

David Mackay on behalf of the Tram Project Board



**Transport Edinburgh**

**Edinburgh Trams**

**Lothian Buses**

FOISA exempt

Yes

No

**Paper to: TPB**

**Meeting date: 2<sup>nd</sup> June 2010**

**Subject: Russell Road Retaining Wall (COP244 - £1,461,857)**

**Preparer: Mark Hamill**

This change regularises the decision at adjudication to cover the civil engineering changes brought about by ground conditions.

Following additional ground investigations there was a change from an 'L' shaped gravity structure as depicted on the BDDI drawings to a cantilever wall on piles and changes to the size and number of piles on IFC drawings..

**Decision(s) / support required**

The TPB is requested to formally approve the drawdown from risk of £1,461,857

**Proposed**

Name: Mark Hamill

Date: 2 June 2010

Title: Risk & Insurance Manager

**Recommended**

Name: Steven Bell

Date: 2 June 2010

Title: Tram Project Director

**Approved**

.....

Date: .....

David Mackay on behalf of the Tram Project Board

## Primary risk register

FOISA exempt

Yes  
 No

1011 - Period 02 Primary Risk Register

ARM Risk ID	Cause	Event	Effect	Risk Owner	Significance	Black Flag	Treatment Strategy	Previous Status	Current Status	Due Date	Action Owner
343	General delay to programme with various causes e.g. failure to obtain approvals on time; contractor issues; access after completion of utility diversions	Delay to completion of project	Increased out-turn cost due to delay plus revenue loss	S Bell	High - 25.0%		Contractually assertive workstreams to progress programme	On Programme	On Programme	30-May-10	S Bell
							Clause 34 / 80.015	On Programme	On Programme	31-Aug-10	S Bell
							DRP Mufda Rev 8 response	On Programme	On Programme	31-Aug-10	S Bell
							Enhanced management focus on various workstreams and options relating to progress of the project	On Programme	On Programme	31-May-10	R Jeffrey
							Access Maps showing areas available	On Programme	On Programme	30-Nov-10	F McFadden
							Liaison between tie/BSC programme managers	On Programme	On Programme	30-Dec-11	T Hickman
							Programme Management Panel process	On Programme	On Programme	30-Dec-11	F McFadden
1077	Base Date Design Information to Issued For Constructions (BDDI-IFC). Lack of visibility of design changes between November 2007 and May 2008	Tramworks price based on a design which may have been altered. Unclear who authorised design change.	Additional cost and programme delay	S Bell	High - 25.0%		Continued DRP / Adjudication Process	On Programme	On Programme	31-Jul-10	S Bell
							Contract interpretation and technical expert witness work	On Programme	On Programme	31-Jul-10	S Clark
							Enhanced management focus on various workstreams and options relating to progress of the project	On Programme	On Programme	31-May-10	R Jeffrey
							Mediation resulted in no overall agreement on BDDI - IFC although it gave useful background information. Strategy paper to be presented to TPB on 29 July to seek approval for way forward including utilising necessary contract mechanisms (DRP, audit etc)	Complete	Complete	14-Aug-09	S Bell
							PA1 Challenge	On Programme	On Programme	31-Aug-10	S Bell
							Of the issues previously highlighted as going through DRP, 1 has been ruled in favour of tie, 2 have been agreed, 2 have been ruled in BSC's favour and this is being reviewed by tie. Further issues are due to enter DRP in December 09 and January 10.	Complete	Complete	31-Jan-10	S Bell
							Resolution Strategy approved - 1st DRP to go 10th August, audit requests to BSC for information going w/c 3.8.09	Complete	Complete	10-Aug-09	S Bell
							Deploy alternative utilities contractors to progress utilities	On Programme	On Programme	30-Nov-10	F McFadden
							Siemens 33 initiative to achieve Airport to Bankhead Drive	On Programme	On Programme	30-Jun-10	F McFadden
							1091	Excavation of soft, unsuitable material below Earthworks outline		Additional cost and programme delay	F McFadden
Enhanced management focus on various Extent of soft ground being investigated. External specialist advice deployed.	On Programme	On Programme	31-May-10	M Paterson							
Iterative testing approach in order to maximise value	On Programme	On Programme	31-Jul-10	C Neil							
Technical challenge against Donaldsons designs	On Programme	On Programme	31-Jul-10	C Neil							

1011 - Period 02 Primary Risk Register

Risk Description										
1101	Unreasonable behaviour of BSC commercial management	Unrealistic estimates being submitted for potential changes	Programme delay while disputes regarding estimates are resolved	F McFadden	High - 28.0%	Agreed with BSC for independant evaluation to get benchmark	Complete	Complete	30-Jul-09	M Paterson
						All estimates to be scrutinised by tie commercial team and, where appropriate, challenge made to BSC. Additional resource (T&I) being used to check estimates to reduce delay and other commercial resources on there areas	On Programme	On Programme	30-Dec-10	D Murray
						Enhanced management focus on various workstreams and options relating to progress of the project	On Programme	On Programme	31-May-10	D MacKay
						Legal challenge to Clause 80 and BSCs interpretation thereof	On Programme	On Programme	31-Jul-10	S Bell
						Clause 34/80 issues using DRP for disputed values	On Programme	On Programme	31-Aug-10	S Bell
1094		Roads throughout works require full depth reconstruction	Programme impact plus additional costs. £1.5m cap applies to only 4 areas. (PA 12) Also affects (PA 14)	F McFadden	High - 23.1%	Carry out surveys to confirm extent of roads requiring full depth reconstruction				
						Intensive engagement with CEC, palette of options, methodology being agreed	On Programme	On Programme	31-Jul-10	C Neil
						Suite of options from surveys to be reviewed and agreement reached	On Programme	On Programme	1-Jul-10	C Neil
						tie developed on-street proposal	On Programme	On Programme	31-Aug-10	M Paterson
52	Political and/or Stakeholder objectives change or require design developments that constitute a change of scope; Planning Department requires scope over and above baseline scope in order to give approval (may be as a result of lack of agreement over interpretation of planning legal requirements).	Amendments to design scope from current baseline and functional specification.	Programme delay as a result of re-work; Programme delay due late receipt of change requirements and lack of resolution; Scope/cost creep (dealt with through change process); Project ultimately could become unaffordable.	D Sharp	High - 22.0%	Change panel process to apply scrutiny to	On Programme	On Programme		
						Close working relationship with CEC and stakeholders	On Programme	On Programme	31-Jan-11	D Sharp
						Design task force	On Programme	On Programme	31-Aug-10	S Bell

1011 - Period 02 Primary Risk Register

1011 - Period 02 Primary Risk Register										
	Risk Description									
928	Major single safety incident (including a dangerous occurrence) during construction	Safety incident during construction	Delay (potentially critical) due to HSE investigation and rework. PR risk to life and stakeholders.	F McFadden	High - 30/00	All Site Staff to get CSCS or equivalent	On Programme	On Programme	30-Jan-11	B Cummins
						HSQE Audits, site inspections and Management Safety Tours to be carried out	On Programme	On Programme	31-Dec-10 31-Dec-10	B Cummins B Cummins
						Incident management process regularly updated and revisited	On Programme	On Programme	31-Dec-12	B Cummins
						Site Supervisors to be appointed by tie				
						TEL HSE committee overview applied	On Programme	On Programme	31-Dec-10	B Cummins
						The tie "Safety" bus is being used to deliver safety talks & culture surveys to the contractors workforce.	Complete	Complete	31-Dec-09	B Cummins
931	Utilities assets uncovered during construction that were not previously accounted for; unidentified abandoned utilities assets; known redundant utilities; unknown live utilities; unknown redundant utilities.	Unknown or abandoned assets impacts scope of Infracore work	Re-design and delay as investigation takes place and solution implemented; Increase in Capex cost as a result of additional works.	C Neil	High - 30/00	Obstructions and voids survey, establish ownership reduced delay on discovery.	On Programme	On Programme		
						Conflicts Register	On Programme	On Programme	31-Aug-10	C Neil
977	Legal challenge. Extension of statutory consultation process. Large number of objections. TRO process is subject to a public hearing process.	Delay in achievement of TRO(s) due to a large number of public objections and/or a legal challenge to using a TTRO to construct Infracore.	Requirement to start construction using TTROs	D Fraser	High - 30/00	Comms strategy to include provision of process and drawings on website for public viewing	Complete	Complete	30-Sep-09	S Clark
						Public deposit commenced 22nd Feb and the formal public consideration phase is underway and will be concluded on 22nd march at which point objections will be dealt with in the form of a formal report to the council for consideration.	On Programme	On Programme	30-Jun-10	A Sim
						Use of TTRO's to undertake construction of permanent works in advance of permanent TROs being approved	On Programme	On Programme	30-Jan-11	A Sim
1104	Design changes following utility diversions	Utilities affected by subsequent kerb realignments (primarily westside of Leith Walk)	Re-diverting of utilities with additional cost and programme delay	C Neil	High - 30/00	Following identification of conflicts potential solution such as protection measures to be identified	On Programme	On Programme	1-Jun-10	C Neil
						Utility conflicts being identified	On Programme	On Programme	1-Jun-10	C Neil
						Timetable for Utility conflicts resolution	On Programme	On Programme	31-Aug-10	C Neil

## **Period 02 Transport Scotland report Sections 2-7**

On following pages are Sections 2-7 of the Transport Scotland report (Section 1 is the Project Directors report).



## 2 Progress

### 2.1 Overall

The cost, programme and risk information in this Period 02 report continues to be based upon an unapproved forecast on the information reported in May 2009. This will be updated once agreement is reached with BSC on a new revised programme. The outputs of Rev3 were issued by BSC during Period 2, and supported by independent reviews, **tie** have formally rejected the submissions.

**tie** are now in receipt of two independent experts' views and report on an attainable Rev3 programme proposals both of which indicate that Revenue Service is still achievable by late 2012, if a pro-active approach is taken by the Contractor.

Overall the relationship with BSC is suffering in the following key areas:

- The refusal of BSC to progress works whilst Clause 80 Changes are being agreed;
- Work unable to start on-street where sites are available as contractual obligations are not satisfied;
- Resolution of the contractual interpretation on BDDI-IFC (pricing assumption 1), and
- Refusal by BSC to progress works under **tie** instruction in relation to Clauses 80/34/22/65

Linked to all of the above is the provision of a programme to completion capable of acceptance.

Progress remains behind the master programme, primarily due to:

- Finalisation of the agreement of change delaying the commencement of work even though instructed to progress by **tie**;
- Diminishing incomplete utility diversions in the On-Street sections caused in part by traffic management constraints;
- Contractual obligations not met to allow works to commence on street;
- Slow mobilisation of INFRACO, including lack of formal sub-contracts being in place;
- Failure of INFRACO to submit preparatory paperwork in a timely manner and of a suitable content i.e. Work Package Plans, Method Statements etc;
- Requirement for re-design of temporary works;
- Design slippage since novation of design to INFRACO (now recorded in v56 of the design programme);
- Design changes as a result of the Prior and Technical Approvals process; and
- Consortium integrated design programme and validation.

The **tie** live programme currently predicts an Open for Revenue Service date in early March 2013. This has suffered -21 days of slippage since period 01 as the delay to the on-street sections are impacting the Critical path.

There has been no further commencement of Infraco works on-street other than those already progressed with works restarting at Lindsay Road RW's and continuing at Tower Place bridge, due to a lack of agreement on programme going forward, suitable sub contractor arrangements implements and completion of final design assurance checks by BSC.

Section	Description	Contract Programme Rev.00	BSC Forecast (P02) Rev.01	BSC Movement in Period (Cal Days)	tie Live Forecast (P02) Rev.01**	tie Movement in Period (Cal Days)
Section A	Depot completion	25-Mar10	17-Aug-11	-9	27-May-11	26
Section B*	Test Track Available	23-Apr-10	06-Apr-12	-14	26-Mar-12	-21
Section C	All Phase 1a Construction complete	17-Jan-11	29-Nov-12	-14	04-Sep-12	-21
Section D	Open for Revenue Service	16-Jul-11	28-May-13	-14	03-Mar-13	-21

\*The interpretation is that Sectional Completion "B" means that Test Track is available for Tram movements.

\*\* V56 information used.

## 2.2. Dispute Resolution

### Dispute Resolution (Infraco)

The Baird Drive dispute was resolved during the period without having to resort to formal adjudication. The Adjudicator's decision was provided on the Tower Bridge DRP. Both of these have been useful in reducing costs. In period 3 a decision is due on Section 7 drainage and the first hearing is being held on the MUDFA Rev 8 DRP. A summary on the DRP process at the end of Period 02 and outcomes is presented below:

DRP No	Subject	Nature of Dispute	Launched or planned	PD Mtg	Position Papers	CEO Meeting	Referral	Decision
5a	Gogarburn	BDDI to IFC	√	√	√	√	√	Decision made - complete
5b	Carrick Knowe	BDDI to IFC	√	√	√	√	√	
5c(B)	Russell Road	BDDI to IFC	√	√	√	√	√	Decision made - complete
A	MUDFA Rev 8	Programme	√	√	√	√	√	Adjudication in Progress – 1 <sup>st</sup> hearing held and an interim decision due on 1 <sup>st</sup> June
5e	Tower Bridge	BDDI to IFC	√	√	√	√	√	Decision made and under review
5l	Section 7 Drainage	BDDI to IFC	√	√	√	√	√	Decision due 25 <sup>th</sup> May
5i	Baird Drive	BDDI to IFC	√	√	√	√		Agreement reached on Estimate without having to get to formal adjudication
5j	Balgreen Road	BDDI to IFC	√	√	√	√		Agreement reached on Estimate without having to get to formal adjudication
5o	Depot Access Bridge	BDDI to IFC	√	√	√	√		Still awaiting referral to adjudication by BSC

Launched by tie

Launched by BSC



A strategic review of commercial and contractual options is underway and is reported to the Tram Project Board each period.

**The contract with the BSC consortium prescribes a timetable for resolution of contractual disputes and it is expected that the budget and programme implications will become increasingly clear during 2010.**

**Regular briefings will be provided to both CEC and Transport Scotland to keep them updated on progress and implications for the project programme and finances of all the above matters.**

#### Commercial Update (MUDFA)

Further meetings with Carillion's MD have taken place as well as their new Financial Director and Carillion have indicated that they would like to agree the final account without referral to a third party. However, as yet, they have not amended their stance on monetary entitlement in respect of the major items of difference namely Enabling Works and Disruption Claim.

*Changes* – Further progress has been made in the period in respect of agreeing the value of changes and agreement will be reached in the period of all Changes where there is no dispute as to entitlement. It is still anticipated that entitlement issues will require senior management discussions with Carillion to conclude.

*Re-measurement of Works* – Carillion have now submitted revised drawings for work carried out. These are currently being checked and valued, however Carillion have also indicated that further revisions are to be submitted to **tie**. Re-measurement of Work Sections previously concluded will now require revaluation and discussion. At present the receipt of drawings from Carillion is driving the completion of agreement however it is hoped that conclusion of this element of the account can be reached within the next period.

*Enabling Works* – **tie** have held several meetings with Carillion demonstrating the inadequacy of Carillion's submission in respect of enabling works. Following issue of a report on the matter Carillion have now agreed to review their position and provide the information required by **tie** or forward a proposal on how to resolve the matter.

*Disruption Claim* – Further to discussions Carillion have indicated that they will resubmit their disruption claim taking into account comments made by **tie** on their original submission. However to date this resubmission has not been forthcoming.

## **2.3. Design**

### **IFC Design**

This report utilises information contained in SDS v56 Design Programme received on 22Apr10 and progressed to 15Mar10. The SDS v57 Design Programme has now been received and is progressed to 12Apr10. This was received too late for inclusion in this period report although specific comparison reports will be issued as required. Concerns remain regarding BSC's management of SDS, this demonstrated by the late receipt of the updated v56 updated programme which has limited **tie**'s ability to provide a comprehensive report on the impacts/implications of this programme. Formal written communication on this ongoing matter has been submitted to BSC.

v56 data has been used to inform the programme updates. **tie** are now in the process of including these into the live programme.

- IFCs – Phase 1a: 155 issued out of 233
- 56 Prior Approvals are included in v56 (reduction in PAA count due to removal of Murrayfield TS RW and 1a3 roads from the SDS programme) – 53 of which have been submitted, and 52 granted – these include the RBS Gogarburn Tramstop,

Modifications to Murrayfield TS retaining Wall, Gogar Interchange, Canopy & Boundary Treatment at Airport Kiosk, Final Tram Stop location drawings and OLE pole locations.

- There was a reduction in the number of Technical Approvals from V51a (due to a decrease in the number of activities in the SDS v55 programme (4 remaining to be submitted 16 left to be granted in v56);
- Roads approvals - One area remains outstanding for Technical Approval in Phase 1a (1C2- Picardy Place to St Andrew Square);
- Scottish Water has sent formal acceptances to BSC for all sections with the exception of 1C2 (Picardy Place to St Andrew Square) & 1C1 (McDonald Rd to Picardy Place).
- Sections 1B, 1D, 1C3, 5B & 5C close reports have been signed off by CEC, subject to BSC concluding any concessions included in the reports during construction. CEC are reviewing all other sections based on the prioritisation list provided by BSC.

Design approvals status in Period 02 is summarised below:

Phase only	1a Number Required				Number	
	V26	v31	V55	V56*	Submitted	Granted
Prior Approvals	44	49	56	56	53	52
Technical Approvals	53	71	91	92	88	76
IFC	71	81	231	233		155

\* Any alterations to the Approvals from V56 have been included in the above count and the changes are now being included in the live report.

A series of Design Audits commenced on Monday 17<sup>th</sup> May 2010. Engagement by BSC has been frustrating with 2 sessions achieving very little so far. There is still little evidence of better management of SDS by BSC, and the lack of support in supplying the Design programme strengthens the evidence of poor design performance and management. Further meetings in early Period 3 are scheduled.

Reasons for design slippage are being reviewed and recorded twice monthly at the design taskforce meeting, which is focused on resolving the outstanding design issues. **tie** is identifying and implementing opportunities to mitigate the impacts of this slippage. It should be noted that this is a consortium issue to manage, and **tie** will provide support in this respect.

**tie** has implemented an extensive programme of site based monitoring to validate & verify the installation of works in line with an integrated design assured construction.

## ***2.4. Utility works***

Utility Diversions are now complete at Haymarket and York Place (with the exception of final snagging and the requirement for final Scottish Water tie-ins at York Place which are dependent on completions of SW works at the Mound). Utility Diversions continue to programme at Newhaven and Leith Docks with scheduled completion during June 2010.

The procurement process commenced for Baltic street works in Period 1, **tie** have received 3 notes of interest, all of whom will now be invited to tender - SDS are still to complete the IFA design which is expected imminently.

Utility works in Picardy Place are pending, with **tie** in the process of developing a programme for completion. The required remedial and snagging works in Leith Walk are compounding the delay caused to Infracore on the Northbound side, with the Southbound side currently available, however BT are continuing with telecoms re-cabling activities, although the forecast completion has slipped considerably during the period, from July to September 2010. This is



due to BT identifying an additional fibre optic cable to be connected & staff safety problems working overnight in parts of the city.

The delay of telecoms cabling work in St Andrew Square will impact upon the commencement of Tram works which were programmed to start in Jun 2010. Detailed programme reviews continue, and weekly Traffic Management Interface meetings are in place & **tie** are meeting with BT regularly to try to identify opportunities to hand over part sections of the route to BSC for Infraco works, the review of which continues.

#### Progress in Period 2:

- Clancy Docwra completed the utilities diversions (excluding snagging works) in Haymarket & York Place - Annandale Street in Period 2.
- BT cabling works on Lindsay Road were completed in Period 2 (excluding duct works linked to ongoing works on the Old Port Road)
- Clancy Dowry completed the private utility diversion works in Edinburgh Park area in Period 2.
- Farrans utilities diversions in Section 1A continue, with completion in sites 1 & 3 anticipated in Period. Telecoms cabling work will follow on from this.
- The recovery of the 33kV cables at Edinburgh Park has now been completed and final reinstatement of footpaths and verge completed on 17<sup>th</sup> May 10

### ***2.5. Tramworks (INFRACO)***

The progress achieved in the Period for INFRACO works was 1.8% against a plan of 3.4% this rate of progress is an improvement on that reported in previous periods, and reflects the level of activity underway, primarily in the off-street sections. BSC are undertaking very limited on-street works in the Leith Docks area at present. The total cumulative completion is 18.0% in Period 2.

#### **ON-STREET**

<b>Item</b>	<b>Period 01 % Comp</b>	<b>Period 02 % Comp</b>
Lindsay Rd RW's	2.0%	2.0%
S17 Tower Place bridge	0.3%	4.2%
1B Leith Walk (Foot of the Walk – McDonald Rd)	1.3%	1.3%
1D Princes Street to Haymarket	42.1%	42.1%

#### Progress in Period 2

- Infraco recommenced works to Retaining Walls 1A and 1C (Lindsay Road) at the end of Period 2. RW1C was excavated and the formation reviewed. Soft spots were identified, excavated and filled with sub base and plate tests are to follow. Ground at Wall 1A in location of old steps requires temporary works and BSC to action, although access was denied by Farran SPN duct installations until 20th May 2010.
- Tower place Bridge – works progressing with completion of the piling works in Period 2.

#### **OFF-STREET**

Progress Off-street has continued or commenced at the following locations: Note that the (%) completion estimates relate to the full structure.

Item	Period 01 % Comp	Period 02 % Comp
S19 Haymarket viaduct	51.9%	58.4%
Trackwork Haymarket to Roseburn junction	0.6%	0.6%
Russell Road Retaining Walls	19.4%	19.4%
Murrayfield Wanderers Clubhouse Accomodation Mods	80.0%	80.0%
S23 Carricknowe bridge	47.8%	55.0%
Trackwork Balgreen to Saughton	27.6%	27.6%
Trackwork Saughton to Bankhead (Guided Busway)	66.3%	72.4%
Trackwork Bankhead to Edinburgh Park Station	43.5%	43.5%
Trackwork Edinburgh Park Stn to Edinburgh Park Central	9.5%	9.5%
S27 Edinburgh Park viaduct	91.2%	92.4%
Trackwork Edinburgh Park Central to Gyle Centre	10.2%	10.2%
A8 underpass (Excluding utilities works)	10.5%	10.5%
S32 Depot Access bridge	1.7%	5.0%
Trackwork Depot Stop to Gogarburn	7.4%	7.4%
Depot Earthworks	78.8%	96.0%
Depot building.	23.9%	35.8%
Depot Sub-station	0.0%	3.0%
Depot Access Roads	11.0%	33.0%
Depot in totality	24.6%	36.8%
Gogarburn Bridge	90.0%	98.5%
W14A (Only) Gogarburn RW	90.0%	90.0%
Trackwork Ingliston Park & Ride to Edinburgh Airport	4.1%	8.3%

#### Progress in Period 2

- Good progress was made on Section 7 earthworks - aided by an extended dry period. Progress has been achieved despite soft ground being encountered in two areas.
- General Depot programme going well with various trades working within the Depot structure. Externally good progress continues to be made with OHL foundation construction commencing in the period (20% completed to date).
- Depot Access Bridge piling to North abutment completed in Period 2 with the platform prepared for the South Pile.
- Temporary king posts installed at A8 Underpass which now allows the excavation to portal works to commence on the North Side.
- Edinburgh Park Bridge is now ready to receive Tram Rails which should commence w/c 24th May.
- Gogarburn Bridge is now ready to receive Tram Rails which should commence w/c 24th May.
- Guided Busway trackwork completed in the period. Other works will be undertaken at a later stage.
- The deck at Haymarket Viaduct has been poured, and works are ongoing to construct the retaining walls at for the infill section of the structure.

#### Issues in the Period

- BSC continue to refuse to act on **tie**'s instructions to progress the works whilst changes are being evaluated/agreed. In certain instances, BSC say they are progressing on the basis of goodwill.
- BSC have failed to commence On Street Works. BSC do not accept **tie**'s position with respect their failure to meet contracted obligations in regard to the permit to commence works; these being in regard to IDCs and the conclusion of sub contracts. Lack of construction programme information from BSC is causing concern with respect to management of TM, stakeholders, safety and other works.
- BSC have declined to carry out a review of Trackform in six areas.



- BSC refusing to continue the works following Clause 22/Clause 65 letters where unidentified utilities and ground conditions have been encountered and tie have instructed BSC to progress.

Progress is being monitored against the Revision 1 programme. The summary milestones against the agreed INFRACO contract and the short term Rev 1 programme milestones are shown in the table below.

Milestones	Period 02		Cumulative (Short-Term)		Contract Planned to P02
	Planned	Actual	Planned	Actual	
Prelims	2	0	71	69	71
Construction	9	12	130	135	962

The Revision 1 programme incorporates the agreed 38 business days (seven weeks plus three days) EOT variation to the contract programme as in the table below. As had been the case in the contract programme progress, the common denominator in the Revision 1 programme remains that every activity in the programmes has a work content generated against it which translates into a weighting, allowing accurate reporting of progress.

Period 02 2010-11	Period		Delta	Cumulative		Delta
INFRACO PERIOD 02 PROGRESS (Contract Rev.01 Programme)	Plan	Actual		Plan	Actual	
Section 1a Newhaven to Foot of the Walk	4.7%	0.3%	-4.3%	69.7%	0.5%	-69.3%
Section 1b Foot of the Walk to McDonald Road	7.6%	0.0%	-7.6%	73.0%	1.3%	-71.7%
Section 1c McDonald Road to Princes Street West	6.4%	0.0%	-6.4%	63.1%	0.0%	-63.1%
Section 1d Princes Street West to Haymarket	2.6%	0.0%	-2.6%	99.8%	42.1%	-57.7%
Combined Sections 1A-1B-1C-1D (On-Street) Newhaven Road to Haymarket	5.3%	0.1%	-5.1%	74.1%	8.1%	-66.0%
Section 2 Haymarket to Roseburn Junction	0.0%	2.7%	2.7%	100.0%	25.4%	-74.6%
Section 5a Roseburn Junction to Balgreen Road	3.1%	0.0%	-3.1%	83.0%	5.9%	-77.1%
Section 5b Balgreen Road to Edinburgh Park Central	1.8%	1.4%	-0.5%	100.0%	40.2%	-59.8%
Section 5c Edinburgh Park Central to Gogarburn	2.8%	0.3%	-2.5%	92.6%	6.5%	-86.1%
Section 6 Gogar Depot	0.0%	12.2%	12.2%	100.0%	36.8%	-63.2%
Section 7a Gogarburn to Edinburgh Airport	4.6%	0.1%	-4.5%	96.9%	33.1%	-63.8%
Combined Sections 2A-5A-5B-5C-6A-7A (Off-Street) Haymarket to Edinburgh Airport	2.1%	3.1%	1.0%	94.6%	25.1%	-69.5%
FULL ROUTE PHASE 1A NEWHAVEN ROAD TO EDINBURGH AIRPORT	3.4%	1.8%	-1.6%	86.0%	18.0%	-68.0%

Section	Commentary
Section 1a Newhaven to Foot of the Walk	Tower Bridge piling works completed and works progressing.
Section 1b Foot of the Walk to McDonald Road	No Infraco works have started on this section
Section 1c McDonald Road to Princes Street West	No Infraco works have progressed on this section
Section 1d Princes Street West to Haymarket	No Infraco works have progressed on this section
Section 2 Haymarket to Roseburn Junction	<p><u>Haymarket Viaduct</u> Work on the east abutment walls and access stair walls continued during the period. Work to the tramstop retaining walls recommenced during the period. BSC/Grahams still waiting for SDS to complete the redesign of the internal retaining wall.</p> <p><u>Haymarket Yards</u> BSC currently preparing an Estimate for the soft ground Change. Track drainage works now started final week in this</p>

Section	Commentary
	period.
Section 5a Roseburn Junction to Balgreen Road	<p>Temporary &amp; permanent works re-design along with commercial resolution delaying various structures. All required consents in place for track installation.</p> <p><u>Russell Road Bridge</u> No works carried out during the period. Temporary works design for the soil nails now due to be submitted week ending 21 May 2010. BSC still progress agreement of the 24" gas main protection methodology with SGN. Actual works now likely to start September 2010.</p> <p><u>Russell Road Retaining Wall W4</u> No piling work carried out during the period. BSC [Expanded] commenced installation of shear connectors to the pile caps on units 10 and 11 during the period. No pile cap constructed to date due to the continuing outstanding issue with the pile cap reinforcement – BSC/SDS to resolve this issue. Murrayfield Wanderers Clubhouse Accommodation works – works commenced w/c 05/01/10 and continued during the period</p>
Section 5b Balgreen Road to Edinburgh Park Central	<p>Temporary &amp; permanent works re-design along with commercial resolution delaying various structures.</p> <p><u>Carrick Knowe Bridge</u> Constructed of the wingwalls continued during the period. Installation of the deck slab reinforcement and construction of the bridge diaphragms delayed during the period due to an issue with the deck slab levels. Work on the deck slab resumed 17 May 2010. Construction of the north approach ramp commenced during the period.</p> <p><u>Guided Busway</u> Track work completed during the period.</p> <p><u>Bankhead Drive</u> No works by BSC during the period.</p> <p><u>Edinburgh Park Busgate</u></p> <ul style="list-style-type: none"> <li>• Works are progressing to the road and footpath formation. Progress has been significantly affected by the number of unforeseen utility conflicts affecting various elements of the works and these have now all been instructed to Infracore.</li> <li>• The instruction for the design of the MP PE gas main diversion has been issued to SDS however the SDS Change Estimate has not yet been submitted to Infracore.</li> </ul> <p><u>Edinburgh Park Bridge</u> Construction of the north approach ramp continued during the period. Construction of the south approach ramp continued during the period</p>
Section 5c Edinburgh Park Central to Gogarburn	<p><u>A8 Underpass</u> Phase 1: Kingpost arrangement installed and excavation underway for bridge deck and portal works. Phase 2: BT support system completed with kingpost system installed to south side of phase 2. Phase 4: All cables slewed by 23rd April 2010. Piling platform completed 14<sup>th</sup> May 2010. Sewer grouting CCTV works completed. Date for grouting sewer to be confirmed following final walk through survey.</p> <p><u>Depot Access Bridge</u> Piling works to north abutment and central pier completed 20<sup>th</sup> April 2010. Piles trimmed and east and west wing wall reinforcement completed. South Abutment: Excavation for kingpost installation commenced 14<sup>th</sup> May 2010.</p>
Section 6 Gogar Depot	<p><u>Depot Building works:</u> Accommodation area 1<sup>st</sup> Fix M&amp;E completed with blockwork and partition walls progressing well. Workshop area road 1 and 3 maintenance pits completed. General Building works wall cladding 85% completed. External works: Excavation for stabling area completed 23<sup>rd</sup> April 2010. Drainage works 75% complete. OLE foundations commenced 5<sup>th</sup> May 2010 and 20% complete by period end.</p>



Section	Commentary
Section 7a Gogarburn to Edinburgh Airport	<p><u>Gogarburn Bridge</u>: Bridge available for Siemens track laying squads by period end.</p> <p><u>EAL Construction Phase A</u>: Retaining wall W14 and W15 commenced 15<sup>th</sup> February 2010. Works progressing well with structures substantially completed by period end.</p> <p>Soft ground remediation commenced from Culvert 3 south on 12<sup>th</sup> April 2010. Soft ground remediation in Embankment areas from Gogarburn Bridge to Eastfield Avenue completed by period end.</p> <p>Culverts 1,2 and 3 have been completed.</p> <p>Hilton Hotel Car Park: Phase 1 Works completed.</p>

### ***Tram construction (Tramco)***

Good progress continues to be made with delivery of the trams by CAF in accordance with the tram delivery schedule. Work is progressing at various stages on the production line on 25 trams, with the first 8 trams now complete and undergoing testing.

The tram on display on Princes Street remains a strong visitor attraction with more than 31,000 visitors to date. Edinburgh Trams livery has now been applied to the tram and a very positive response has been received from those members of the public who have visited.

Draft Operations and Maintenance manuals have been received and are being reviewed.

### ***2.6. Preparing for Operations***

tie are working on a joint initiative with TEL and are focussed on getting ready for the Testing & Commissioning phases as well as the operational introduction of trams. As part of the process, the Benefits Realisation & Operational Readiness was formed and is reporting to the TPB, and an integrated programme has been developed.

The process for acceptance of the Edinburgh Tram Project is designed to ensure that it is delivered in an acceptably safe, compliant and efficient manner. The objectives of the process are to ensure that the system performance, integrity, reliability, availability and safety are rigorously tested and that throughout all stages of the delivery process the many sub-systems and the overall system are validated and verified against the requirements and applicable standards.

The BROR committee continues to provide the governance for these activities, which has seen good progress in the planning and undertaking of the relevant activities, and the OJEU procurement launched for the ticketing equipment for the tram system, to link it with the existing Lothian Buses ticketing system. Significant effort is being made on programming and planning the preparing for operations activities, including recruitment and training of both operations and maintenance staff. The maintenance of completed infrastructure assets is being worked on with the BSC maintenance representatives.

Planning for commissioning of the Depot workshop, the plant and equipment and the trams is being discussed and planned. This is leading the prioritisation of elements of the delivery works in order to optimise the testing and commissioning period.

Work to refine the tramstop shelters and associated equipment to minimise barriers to use by passengers is also underway.

**Interface with other projects**

The following table identifies the other projects ongoing within the city which may impact on the Tram project. This is reviewed on an ongoing basis both internally and in conjunction with TS to identify conflicts and mitigations.

External Projects	Promoter	Project Description	Potential Conflict	Tram Contract Dates		Project Dates		Comments
GREEN - No conflict anticipated but being monitored. AMBER - Managing any conflict. RED - Conflict which causes programme concern / unknown effect on tram programme.				Start	Finish	Start	Finish	
New Hotel adjacent Ocean Terminal	Ocean Points Development Limited	New build hotel	Potential conflict with Infraco dependent on timescales. To be monitored.	Jun-10	Jun-12	TBA	TBA	To be monitored.
Movement of Abnormal Loads	Sinclair Knight Merz	Transportation of turbines and 45 metre blade sections for <i>Fallago rig</i> wind farm via road transporters from Leith docks along Ocean Drive via Ocean Terminal frontage to Commercial Street, then East through Great Junction Street/Duke Street junction to Salamander Street	Conflict with tram works along required transportation route. Disruption to construction activities.	Mar-10	Jun-12	Jun-11	Dec-11	Works commenced at Tower Place bridge Mar-10  2 complete turbine movements expected each week for approx. 6 months
Former Bus & Tram Depot nr Shrub Place	Fraser & Neave	Transformation of former Tram and Bus Depot into 121 room serviced apartments.	None identified. Dependent on timescales.	Sep-10	Aug-11	TBA	TBA	To be monitored. Utilities complete. Potential TM interface dependent on Infraco proposals
Shrubhill House	Unite	Transformation of former council social work headquarters into 200 bed hotel	None identified. Dependent on timescales.	Sep-10	Aug-11	TBA	TBA	Awaits planning consent. To be monitored. Utilities complete. Potential TM interface dependent on Infraco proposals
Baxter Place Development	Fitzpatrick Hotel Group	Conversion of existing building adjacent Greenside Lane and with frontage onto Leith Street	Proposal to divert existing utilities through basement of building. Also potential TM interface issues with Picardy Place construction.	Oct-10	Feb-12	TBA	TBA	

St.James Centre Re-development	CEC / Henderson Global	Redevelopment of existing shopping centre.	Interface with Picardy Place junction re-construction and Cathedral Lane sub-station	Oct-10	Jun-12	2011	2016	Downgraded from red to amber as commencement of this project is now indicated towards the completion of Tramworks and therefore interfaces should diminish.
National Portrait Gallery		Major building construction and refurbishment. The renovation of the external facade, the overhauling of the existing windows, the renewal of the existing roof lights and roof covering. Additionally, it is proposed that an external ramp is formed to the front main entrance to allow disabled access.	Interface with Infraco works on St Andrew Street / York Place	Oct-10	Sep-11	Oct-09	Nov-11	
St.Andrew Square Development	CEC	Demolition of existing buildings bordering South Side St.Andrew Square, South St David Street and Meuse Lane	Infraco Programme	May-10	Mar-11	TBA	TBA	Infraco activities will not commence until May2010
Waverley Steps	Transport Scotland	Refurbishment of existing Waverley Steps with inclusion of new escalators and elevators	<b>PRINCES STREET</b> Traffic management issues when Infraco in Princes Street should this project require deliveries, craneage or Traffic management in same time period	Complete	Complete	Jun-10	May-12	No conflicts expected.
Waverley Steps	Transport Scotland	Refurbishment of existing Waverley Steps with inclusion of new escalators and elevators	<b>ST.ANDREW STREET</b> Traffic management issues when Infraco in Princes Street should this project require deliveries, craneage or Traffic management in same time period	May-10	Mar-11	Jun-10	May-12	No conflicts expected.
Waverley Station Re-roofing	Transport Scotland	New roof and general upgrade to station interior	May be Traffic Management issues	May-10	Mar-11	Apr-10	Apr-14	No conflicts expected.
New Hotel in Haymarket	Tiger Developments	New build hotel		May-10	Jul-11	ON HOLD	ON HOLD	No issue as Project cancelled as Planning Application rejected October 2009.



Haymarket Interchange	First Scotrail	Capacity Increase Project - Installation of new lifts and walkways from Haymarket Terrace	Utility diversions continue until late Jan.2010. Potential Interface with Infraco works at Haymarket junction commencing Jan.2010	May-10	Jul-11	Dec-11	Dec-12	No conflicts expected.
Haymarket Station Re-furbishment	Network Rail/Scotrail	Main Building refurbishment works	Any external works could conflict with TM for either or both MUDFA and Infraco and could conflict with Infraco construction works. Bridge to be installed from Haymarket terrace to Platform 0 to comply with DDA	May-10	Jul-11	Aug-09	Complete	Complete.
Haymarket Station	First Scotrail	Installation of new lifts and walkways from Haymarket Terrace	Construction of Haymarket viaduct	May-10	Jul-11	TBA	TBA	
Haymarket Terrace	DTZ Surveyors	Common Repairs to buildings at 2-4-6-8-68 & 74 Haymarket Terrace	Scaffolding and external repairs	May-10	Jul-11	May-09	ASAP	Scaffold erected and building repairs underway between Infraco TM phases.
Airdrie - Bathgate	Transport Scotland	New track installation	Tram possessions mainly "piggy-backed" on A2B possessions which could be altered / cancelled.	TBA	TBA	Mar-09	Mar-10	Various possessions and RotR workings
New Hotel	NEL (New Edinburgh Park Ltd) / Whitbread	120 Bedroom Premier Inn Hotel	Construction traffic TM Interface	TBA	TBA	TBA	TBA	The site, located at the southern end of Edinburgh Park, is opposite the Park's dedicated railway station and tram stop.
RBS Tramstop - Gogarburn	RBS	Design by RBS - Build by Infraco	Design and consents not in place in a timely manner to allow Infraco to build to programme	Jun-11	Sep-11	TBA	TBA	Design and approvals progressing to programme. Confirmed that this will now be a generic tram stop design
Gogar Surface Station	Transport Scotland	New station to east of Gogar Depot	Interface with Tram Construction works	Apr-10	Jul-11	Jul-10	Jul-11	Gogar Interchange Programme reviewed and updated in conjunction with both NR and TS

Colour code

Green	No conflict anticipated but being monitored
Amber	Managing any conflict
Red	Conflict which causes programme concern / unknown effect on tram programme



This has been sent to TS for their input for projects they are sponsoring and will continue to be reviewed by **tie** to identify any potential impacts on the Tram programme as early as possible in order to manage them. A wash-up session of the TS projects was carried out late December09 with TS. The next session will be arranged for after Rev 3 Programme agreements are in place.

## **Other**

### **Gogar Interchange – Update for Period 2**

#### Approvals

A change in policy by CEC which now requires all Prior Approvals to be submitted to the Planning Committee will lead to a delay in achieving IFC. It is anticipated that the committee will now review the scheme on 23<sup>rd</sup> June 2010. Efforts will be made to recover the delay associated with this by seeking to accelerate production of IFC once the Prior Approval has been granted. This will depend on availability of the SDS design team, which is a separate team from the core ETN team. The IFC date is in line with Network Rail's anticipated date for Planning permission being granted.

#### Legal Agreements

A meeting between the Head of Legal's has now been arranged for 4 June 2010. Network Rail has now tabled the promised draft list of agreements to TS but this does not cover all agreements required as it only covers agreements to which NR is party. It also does not include the likely scope as originally promised. **tie**, on 23<sup>rd</sup> April 2010, provided Transport Scotland with a list of the agreements we believe to be required. **tie** cannot accept responsibility for any delay associated with agreements not being reached in line with the needs of the construction programme given Network Rail's lack of positive engagement on this issue. The land transfer from CEC to Network Rail cannot proceed ahead of other agreements being substantially complete because the land transfer needs to include servitudes in favour of **tie**/TEL to allow access to and through this land for the operation and maintenance of the ETN. Transport Scotland have proposed an exercise be carried out to identify where agreements can be integrated to reduce this work scope. **tie** supports this approach. The scope of **tie** works does not include any external legal costs in relation to land or agreements and it is likely that **tie** will need legal advice in relation to agreements with Network Rail. **tie** expects that the extent of this will become clearer once Network Rail tables some draft agreements for review. Note that to date, no draft agreements have been received from Network Rail.

Other agreements required include TEL/First ScotRail and Scottish Water Section 21's (Both for **tie** and NR).

#### Overall design co-ordination

Project management meetings have continued between **tie**, TS and NR and fortnightly conference calls have taken place between **tie**, NR and the respective designers.

Design co-ordination is now largely dealing with detailed engineering issues rather than issues of principle. However, during Period 1 Mott MacDonald & Network Rail raised a new significant issue by proposing a double skin EFTE roof rather than the existing single skin. This issue has been resolved with respect to ETN design and scope, and no change is required.

#### Tram design issues

BSC previously identified a need to discuss the reduced headroom for the OLE through the tramstop with the Independent Competent Person. The **tie** engineering team have discussed this further with BSC and have received verbal confirmation that this is no longer an issue. Final confirmation will be sought during the Design Review.

#### Design progress

**tie** have agreed to take responsibility for a revised road drainage design at the A8 which has arisen from Network Rail's sewer design. This is due to the optimum solution being likely to overlap with

BSC construction activity. Discussions are continuing as to the scope of this work which will require a change in funding from Transport Scotland. A meeting was held with Scottish Water, where SW have agreed to pro-actively seek a more effective solution.

BSC now include a narrative on Gogar Interchange (Design and Construction staging activity) within their period report for Period 1. The content and quality of reporting is limited. **tie** will seek to have this improved upon.

BSC has notified **tie** that the systems elements of the design will be complete in June 2010. **tie** challenged June 2010 as the delivery date at meeting on 26 March, however Siemens were not prepared to commit to an earlier delivery. **tie** still await Siemens programme justifying their position. **tie** will consider potential mitigation measures if the systems design cannot be completed in line with the SDS design.

SDS were due to submit an estimate for the revised scope to BSC on 25 March, but this has been delayed due to the requirement for the sewer protection wall being introduced to **tie** by Transport Scotland / Network Rail. The Estimate was received on 21<sup>st</sup> April and a review with BSC is currently underway. The Estimate appears to be within the anticipated range. **tie** met Transport Scotland on 28<sup>th</sup> April to discuss the Estimate further.

At the end of Period 2 **tie** assesses the design phase as 80% complete for the increased scope.

#### Forecast Cost to Complete Design

Siemens revised Estimate for design has been reviewed. £309k of the £327k Estimate has been agreed. A letter instructing Siemens to progress the design will be issued by w/e 21 May 2010. The value of revised Siemens design remains within the value previously agreed with Transport Scotland. The remaining £18k relates to commercial management costs which may be covered by consortium overhead. Costs associated with a redesign of the A8 road drainage are provisional within this forecast. This will be undertaken by **tie**, having arisen as a result of Network Rail having to divert the main 1500 sewer.

- Forecast outturn remains at £1,042k against an original £880k:

#### £880k Breakdown

SDS	£400k
JRC	£ 30k
<b>tie</b>	£100k
Siemens	£350k

#### £1,042k Breakdown

SDS	£540k
JRC	£ 45k
<b>tie</b>	£100k
Siemens	£327k
Const. Staging	£ 30k

#### Cost reporting

A meeting was held on 19<sup>th</sup> May 2010 between **tie**, Transport Scotland and Network Rail to review overall cost estimates with an objective of identifying any gaps in scope/ estimate between the parties, particularly in physical and management interfaces. A number of minor areas require updating, but no major issues were identified.



CEC have received an updated grant letter authorised the increase from £30k to £45k for the JRC scope of work. Currently, CEC/**tie** have a confirmed grant totalling £945k. CEC will seek an updated grant letter to allow **tie** to commit to the extra costs involved in completing the design. An updated grant letter will be needed within 2 weeks of **tie** supplying a full revision of the cost estimate, which will be provided w/e 28 May 2010.

Cost of work done to date is £830k versus the £880k originally forecast and the £1042k revised AFC.

#### Period 2 progress

Finalisation of the sewer location has allowed the design to progress again. The Prior Approval application was completed and submitted on 18 March 2010. CEC raised 4 key issues on 12 April 2010. Of these 4 issues, three have proposals that should resolve the issue, and discussions are taking place on the fourth with a view to agreeing a final proposal.

SDS has submitted revised runtime analysis incorporating the Gogar Interchange. The runtime analysis will be used to support revised patronage calculations for the Edinburgh Tram Network. **tie** have received Transport Scotland approval to progress this with JRC.

Detailed design continued for the tram stop structure and the northern retaining wall. SDS now estimates that design will be complete by 11 June ready to be submitted for Technical Approval. CEC has agreed to review the design as a priority but it is not realistic for that review to be complete within 3 weeks. SDS now forecast 14<sup>th</sup> July for IFC (TBC).

#### Programme

An initial appraisal of impact on programme has been carried out. In the last period **tie** advised Transport Scotland that the potential impact of Gogar Interchange programme to ETN could be in the region of 6 months. Transport Scotland have sought and been given an assurance that this appraisal was one of several scenarios to be tested that **tie** will be investigating further scenarios with a view to improving this outcome.

Programme milestones are as follows:

Activity	Planned	Period 6 forecast	P2 forecast / Actual
Complete prelim design of additional tram stop	10/8/09	18/9/09	30/9/09 (A)
Submit Structures Technical Approval application	19/11/09	8/1/10	11/6/10
Submit Prior Approval application	26/11/09	15/1/10	18/3/10 (A)
Receive Prior Approval	5/2/10	12/3/10	30/6/10
Receive Structures Technical Approval	5/2/10	8/3/10	9/7/10
IFC by SDS of civils design and outline systems design	26/2/10	22/3/10	14/7/10
IFC by Siemens of detailed systems design	-	-	June 2010



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#### Long-lead items / abortive works

**tie** has reviewed the long-lead items/abortive works previously identified against latest programme forecasts and presented a paper to Transport Scotland on options for dealing with long lead items and associated costs and risks. Transport Scotland has confirmed that **tie** should take steps to minimise the abortive costs on the basis that the Gogar Interchange will go ahead. CEC and Transport Scotland require to agree term of a grant extension that will also cover abortive costs.

**tie** has confirmed to BSC the OLE pole heights to be ordered through the Gogar Interchange area in order to minimise abortive costs.

BSC has notified **tie** that a decision is needed on the design of the switches & crossings for the east entry to the Depot by June 2010. **tie** will confirm the revised design requirement to BSC.

Drainage for the earthworks at the Depot is currently being installed to the west of the Depot Access Bridge. There is no option that does not involve some abortive cost if Gogar Interchange goes ahead as drainage must **tie** into the sewer that will be relocated by Network Rail. **tie** has identified ways of minimising the cost of those abortive works.

**tie** is continuing with the implementation of the existing ETN scheme unless otherwise instructed by Transport Scotland.

#### Construction Staging

Following submission of the design for Technical Approval, the construction staging programme will be focussed upon during Period 3 to help determine the most appropriate sequencing of the works.

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### **Other Reporting Streams Progress**

The following sections describe progress on other areas of the project during Period 2.

#### **Temporary traffic regulation orders (TTROs)**

- A review of traffic management arrangements across the City Centre is now underway, this to return the City Centre (as much as is feasible) to the pre-tramworks arrangements, using temporary kerbing. To date, the Haymarket area has been reinstated with works scheduled for the West End, Charlotte and St Andrew Square and Leith Walk during Period 3.

#### **Traffic regulation orders (TROs)**

- A Report is being prepared for submission to Council on 27 July regarding the recommendation to make TRO1 as submitted. Should any modifications be required, these to be picked up in a future TRO.

#### **Network Rail**

- The Immunisation Calculations Study has now being reviewed by NWR.
- BSC study confirms that 14 off FETR will be required for the immunisation solution.
- NR Signalling Immunisation (EMC) Test Plan will be developed to include all verification and validation tests that will evidence that there is no significant safety issue for NR assets failing 'wrong side'. Initial draft has been informally reviewed and commented. BSC has not yet given an indication of when formal issue of the plan will happen.
- These documents will be compiled into the Case for Safety – Signalling. Expected for delivery to ISRP in June 2010 for an ISRP on 01/07/2010.

#### **Murrayfield**

- A meeting was held on 14<sup>th</sup> May with the SRU, Souters and the floodlight sub-contractor to consider options to implement and resolve the over-heating issue. It was agreed that Souters should arrange to meet with the protective padding supplier and consider if the pads could be adapted, by hanging on an independent frame, to provide air circulation between the cabinets and the padding. The floodlight contractor agreed to assist and then carry out further monitoring trials to assess the temperature and effectiveness of the solution. A report is expected in one week's time from STRI, who recently carried out a further pitch inspection to assess and monitor the grass sward growth and the nutrient level in the soil.

#### **Burnside Road Realignment**

- The monitoring by RCL/Newgate ceased on 14<sup>th</sup> May 10. BAA will report any issues to **tie** up to 28<sup>th</sup> May 10 at which time the system will be handed over to BAA, provided the documentation has been agreed.
- BAA resolved the problems with its existing payment control system which has improved the performance of the barriers.

#### **MUD Works at Edinburgh Airport**

- The amendments to the format of the final documentation, requested by BAA, were submitted to BAA on 17<sup>th</sup> May 10.

#### **Cemetery Wall on Constitution Street**

- Works by **tie** to the Cemetery Wall completed for the time being in Period 2

### 3 Headline cost report

#### Current financial year

	FY 10/11			FY 10/11			FY 10/11			COWD To Date	Costs To Go	Total AFC
	COWD Period			COWD Year To Date			COWD Full Year Forecast					
	Actual	Budget	Variance	Actual	Budget	Variance	Forecast	Budget	Variance	Actual	Forecast	Forecast
Total Project COWD	5.055	6.714	-1.659	14.976	16.635	-1.659	143.011	142.245	0.766	362.818	170.491	533.309
Other Funding	0.417	0.554	-0.137	1.237	1.374	-0.137	11.808	11.745	0.063	29.957	14.077	44.035
Demand on TS	4.638	6.160	-1.522	13.739	15.261	-1.522	131.203	130.500	0.703	332.860	156.414	489.274

We continue in this report to reflect an AFC outturn estimate of £533.3m. However, as previously reported, given the continuing commercial uncertainties with the Infraco and continuing delays to the project it is considered unlikely that the full scope of Phase 1a will be completed within the available funding envelope of £545m. It is not however possible at the present time to accurately forecast a reliable outturn cost until the key commercial issues are resolved through the contractual and legal process.

Regular briefings are being provided to both CEC and Transport Scotland to keep them updated on progress and implications for the project programme and finances of all the above matters. Latest AFC Update 18<sup>th</sup> March 2010.

tie are now escalating all key issues to Dispute Resolution Procedure (DRP) and other contractual measures following the failure of mediation to provide an acceptable outcome. COWD to date is £362.8m, with funding to date split to TS (£332.9m) and CEC (£29.9m).

For the purposes of clarity of the 2010/11 figures:

A forecast of £139.7m was presented to TS in Jan-10 with a range of +£35m/-£30.5m according to a range of specified assumptions. The budget included in the Headline cost report is the £142.2m, which was based upon the forecast as at the end of Period 12. The current forecast is £143.0m, which is the Q1 2010/11 forecast set as at the end of Period 13 - 09/10. This forecast is updated quarterly with risk to forecast highlighted in the report.

Risks identified in relation to the latest Infraco forecast are anticipated to give TS funding headroom in the Q1 forecast update (period 3). Risks are identified in the 'Profile' section 3.2 (below).

#### Actual YTD P2 & forecast P3-P13 FY10/11

£m	2010/11 to P2	Forecast P3-P13,10/11	Forecast FY10/11
Infrastructure and vehicles	11.7	113.3	125.0
Utilities diversions	0.1	-5.0	-4.9
Design	0.3	2.0	2.3
Land and compensation	0.1	0.0	0.2
Resources and insurance	2.8	11.6	14.3
<b>Base costs</b>	15.0	121.9	136.9
Risk allowance	0.0	6.1	6.1
<b>Total Phase 1a</b>	15.0	128.0	143.0

Note: Tram COWD Full Year ended 09/10 was £113.8m against budget £150.1m (excl 1b).

YTD 2010/11 COWD is £15.0m in period 2, -£1.6m behind the period 1 forecast profile.

Full year forecast for 2010/11 is held at £143.0m. This forecast is being held from P13, and includes a base PM forecast of £136.9m and unallocated risk of £6.1m.

tie have not yet certified the P1 Preliminary milestone payments as BSC have not complied with the contractual obligations to allow certification (value £1.46m in the period).



Key Risks to the £143.0m forecast for 2010/11 are currently assessed at -£24.9m. At risk, and forecast in P2 2010/11 are:

- On-street Milestones for sections 1a & 1b (-£8.0m),
- On-street change forecast (-£1.2m),
- Prelims realignment (-£2.7m),
- Milestones, change and other movements into 2011/12 (-£6.9m), and;
- Unallocated risk (-£6.1m).

As previously reported and agreed with CEC and TS, initial milestones under the Infraco and Tramco contracts in the aggregate amount of £24.2m, in respect of advance material purchases, have been classified as prepayments. These will be reclassified as expenditure against funding in the periods when the related materials are delivered to site and incorporated in the works. The release will occur on the achievement of trackwork and structures milestones in 2010/11 and future years.

### Current financial year profile

#### Profile for FY10/11

£m	Q1 (p1-3)	Q2 (p4-6)	Q3 (p7-10)	Q4 (p11-13)	Total FY10/11
Infrastructure and vehicles	16.5	25.4	50.3	32.8	125.0
Utilities diversions	-0.2	-2.9	-1.8	0.0	-4.9
Design	0.5	0.6	0.7	0.6	2.3
Land and compensation	0.1	0.0	0.0	0.0	0.2
Resources and insurance	3.9	3.0	4.0	3.4	14.3
<b>Base costs</b>	20.8	26.1	53.2	36.8	136.9
Risk allowance	0.0	1.4	2.7	2.0	6.1
<b>Total Tram</b>	20.8	27.5	55.9	38.8	143.0

- Costs for 2010/11 are forecast at £143.0m. This forecast is sensitive to the key risks as identified above, and will be updated for Q2 (in the period 3 report).
- The latest forecast includes a range of assumptions and sensitivities and was informed by linking the latest tie PM view to Infraco construction milestones and taking a best view of what is likely to be achieved in the year. The realigned base costs and risk were then linked against this.
- **The current agreed budget for 2010/11 is £142.3m, with TS share of the budget £130.5m.**

### Total project anticipated forecast cost

#### Re-baselined Phase AFC and profiling

£m	Cum FY07/08	Actual 08/09	Actual 09/10	FY 10/11	FY 11/12	AFC
Infrastructure and vehicles	30.6	45.2	83.5	125.0	29.1	313.4
Utilities diversions	18.4	33.4	10.6	-4.9	0.0	57.5
Design	24.4	4.7	2.1	2.3	0.6	34.2
Land and compensation	16.8	1.7	1.6	0.2	0.0	20.3
Resources and insurance	42.9	16.0	15.9	14.3	12.7	101.8
<b>Base costs (inc 1b)</b>	133.1	101.0	113.8	136.9	42.5	527.2
Risk Allowance	0.0	0.0	0.0	6.1	0.0	6.1
<b>Total</b>	133.1	101.0	113.8	143.0	42.5	533.3

Note: Base costs include £6.2m for ph 1b.

The TEL board have approved a risk allowance within the current funding arrangements of up to £48.2m, which takes the current agreed budget up to £530.0m. **tie** continue to forecast £533.3m in this report as an AFC.

## 4 Time schedule report

### Report against key milestones

The agreed baseline programme reference for this project is that at Financial Close leading to revenue service in July 2011. The table below reflects the milestones set out against the Rev1 programme.

Milestones	Baseline programme date	Actual / current forecast date tie live prgm
Approval of DFBC by CEC	21 Dec 06A	21 Dec 06A
MUDFA – commencement of utility diversions	02 Apr 07A	02 Apr 07A
TRO process commences	14 Dec 07A	10-Dec-07A
Approval of FBC by TS – approval and funding for INFRACO / Tramco	09 Jan 08	Dec 07A
Princes Street closed	03-Feb-09	22-Feb-09A
Tramco / INFRACO – award following CEC / TS approval and cooling off period and SDS novation.	28 Jan 08	14 May 08A
Construction commences	14-Apr-08	14-May-08A
First track installation commences – on street	03-Nov-08	Jun 2009A
Carrick Knowe Bridge commences	21-Aug-08	19-Aug-08A
A8 underpass commences	08-Aug-08	28-Aug-08A
Haymarket viaduct commences	08-May-08	01-Sep-08A
Edinburgh Park viaduct commences	06-Aug-08	01-Sep-08A
Tram mock-up delivered	Oct 2008	Nov 2008A
Demolition of Wanderers clubhouse	25-Aug-08	05-Jan-10A
Edinburgh Park viaduct complete	24-May-09	Jul-10
Princes Street re-opened	01-Aug-09	29-Nov-09A
NR immunisation complete	Nov 2009	Dec-10
Utilities works complete (including telecoms)	Nov 2008	Nov-10
All demolition work complete (S21C)	22-Aug-08	Oct-10
All Issue for Construction (IFC) drawings delivered (inc Gogar interchange design)	21-Jan-09	Dec-10
Haymarket viaduct complete	08-Dec-08	Nov-10
All consents and approvals granted	18-May-09	Dec-10
Design assurance complete	20-Jan-09	Dec-10
1 <sup>st</sup> Tram delivered	09-Apr-10	25-Apr-10A
Carrick Knowe bridge complete	11-May-09	Nov-10
A8 underpass complete	14-Jul-09	Apr-11
Roseburn viaduct commences	20-Jan-09	Sep-10
TRO process complete	01-Dec-09	Jul-10
Recruitment commences (SMC staffing)	July 2010	Sep-10
1 <sup>st</sup> OHL installed (Commence Section 2)	11-Dec-09	Apr-11
1 <sup>st</sup> section (other than depot) complete ready for energisation (2)	25-June-10	Jun-11
Commission Section 2 (Haymarket to Roseburn junction)	11-Jan-10	Nov-11
Final tram delivered	17-Jan-11	Feb-11
Commission Section 6 (depot)	25-Mar-10	Oct-11
Roseburn viaduct complete	20-Apr-10	Sep-11
Test track complete (Ready for tram testing)	23-Apr-10	Mar-12
Commission Section 7 (Gogar to Edinburgh Airport)	25-June-10	Oct-11 to Mar-12
Commission Section 1 (Newhaven to Haymarket)	11-Mar-11	Oct-11 to Jul-12



Milestones	Baseline programme date	Actual / current forecast date tie live prgm
Commission Section 5 (Roseburn junction to Gogar)	09-Nov-10	Apr-11 to Sep-12
Driver training commences (excludes depot)	Nov 2010	Jun-12
System testing complete off street	09-Dec-10	Oct-12
Construction Line 1a complete	17-Jan-11	Sep-12
System testing complete on street	16-Feb-11	Oct-12
Letter of "no objection" from Independent Competent Person to commence tram running	17-Apr-11	Dec-12
Shadow running starts	18-Apr-11	Dec-12
Shadow running complete	July 2011	Mar-13
Letter of "no objection" from Independent Competent Person to commence revenue service	July 2011	Mar-13
Open for revenue service	July 2011	Mar-13

\*BSC Rev 2 programme is not an agreed Contract programme

**Guidance for Completion:**

Legend for colouring of Actual / forecast date text

<b>Green:</b>	Actual / forecast date is ahead or in line with baseline
<b>Yellow:</b>	Slight slippage – readily recoverable with action.
<b>Pink:</b>	Significant slippage but expect recovery can be achieved
<b>Red:</b>	Notable / significant slippage – difficult to recover, even with action.

**Key issues affecting schedule**

BSC have submitted the following programmes in the period

- Period 3-2 Progress Report.
- Rev 3A Programme (Rev 3 Step 4 plus additional mitigation)
- Rev 3B Programme (Rev 3 Step 5 including BSC identified acceleration)

Neither of the Rev 3A/3B programmes demonstrate what mitigation or acceleration has been considered, what the individual impacts are and what are the associated costs.

The continued Utilities diversionary works are restricting access to on-street areas although this is diminishing week on week. The inability to agree a way forward for the On-street works is severely hampering the programme. BSC's slow progress in available sections is frustrating progress. **tie** continue to advise BSC formally on a weekly basis of areas that are accessible to commence works.

**12-Week look-ahead**

Until the revised programme is in place the forecast for the next 12 weeks continues to be generated from the **tie** Live programme including latest updated information from both BSC and **tie** Project Managers.

Milestones	Actual / current forecast date
6 – Complete Depot Earthworks	07-May-10A
6 – Commence Depot Sub-station	12-May-10A
1D - Complete Utility diversions Haymarket to Shandwick Place	21-May-10A
1B – Telecoms Works Jane Street to Foot of the Walk	21-May-10F
1A1 - Continue S-E-Ms Bernard Street to Foot of the Walk	24-May-10C
1A3 – S17 Construction Works Tower Place bridge	24-May-10C
5C - S32 Depot Access bridge	24-May-10C
1A4 - Lindsay Rd Retaining Wall A+C	24-May-10C

<b>Milestones</b>	<b>Actual / current forecast date</b>
1A4 – Newhaven Rd to Ocean Terminal – ch 0000-0160 – Roadworks	24-May-10S*
1A4 – Newhaven Rd to Ocean Terminal – ch 0000-0160 – Trackworks	24-May-10S*
1A4 – Newhaven Road Tramstop	24-May-10S*
1D – Haymarket ch 1250-1125 – Roadworks Phase 1	24-May-10S*
5A - Construct New Scotrail Carpark	24-May-10S
5C - W16 Commence Gyle Stop RW	24-May-10S
5B – Edinburgh Park Stn – Edinburgh Park Central Trackworks	24-May-10C
1B – Telecoms Works Jane Street to McDonald road	24-May-10C
2A –Trackworks Haymarket to Roseburn Junction -1135m	24-May-10S
2A – Haymarket viaduct	24-May-10C
5A - W3 Russell Road retaining wall	24-May-10C
5A - W4 Russell Road retaining wall	24-May-10C
5B - S23 Carricknowe bridge	24-May-10C
5A - Demolition of Wanderers Clubhouse continues	24-May-10C
5B - Trackworks Balgreen Rd Saughton Road North	24-May-10C
5C - A8 Underpass	24-May-10C
5C - Trackworks Depot Stop to Gogarburn	24-May-10C
6 - Depot Building Pits	24-May-10C
7 – Gogar Landfill	24-May-10S
7 - W14/W15 Gogarburn RW	24-May-10C
1D - Shandwick ch 850-440 - Trackworks Phase 1	24-May-10S*
5B – Trackworks Bankhead to Edinburgh Park Station	24-May-10C
1C1 - Utility Diversions McDonald Rd to Picardy Place	30-May-10F
1C1 - Telecoms - BT Installation Works 1C07 - (Greenside Lane to Gayfield Street South)	01-Jun-10S
1C1 - Telecoms - BT Installation Works 1C08 - (Annandale Street to Montgomery Street)	01-Jun-10S
5B - Bankhead Drive TS	01-Jun-10S
1C3 – Track works Waverley bridge junction to South St Andrew Square	07-Jun-10S
1D - Shandwick ch 850-440 - Roadworks Phase 1	07-Jun-10S*
5B - Saughton Rd TS	16-Jun-10S
1D – Shandwick Place Tramstop	25-Jun-10S
1D – Telecoms cabling Haymarket to Crescents	26-Jun-10F
5A - Murrayfield Stadium Accommodation Works (excludes clubhouse)	29-Jun-10S
7A - S29 Gogar Underbridge	30-Jun-10F
5C – Trackworks Edinburgh Park to Gyle	05-Jul-10S
1A4 – Telecoms Newhaven to Ocean terminal	05-Jul-10S
5B - Trackworks Saughton Rd to Bankhead (incl Guided Busway)	06-Jul-10F
5A - W18 Murrayfield TS RW	09-Jul-10S
5C - Complete S27 Edinburgh Park Station bridge	10-Jul-10F

<b>Milestones</b>	<b>Actual / current forecast date</b>
1A3 - Telecoms Ocean Terminal to Victoria Dock	14-Jul-10S
1A3 - Continue Utility Diversions Ocean Terminal to Port of Leith	14-Jul-10F
1A4 - Continue Utility Diversions Newhaven to Ocean Terminal	14-Jul-10F
1A4 – Newhaven Rd to Ocean Terminal – ch 0700-0850 – Roadworks	14-Jul-10S*
1A4 – Newhaven Rd to Ocean Terminal – ch 0600-0700 – Trackworks	14-Jul-10S*
1C3 – Telecoms Works St Andrew Square to Princes Street West	16-Jul-10F
1C – Leith Walk – ch 0-375 – Roadworks	20-Jul-10S*
1C2 - Telecoms Works Picardy Place to St Andrew Square	20-Jul-10F
5A - S20 Russell Road bridge	03-Aug-10S
5B – S26 South Gyle Access bridge	03-Aug-10S
1C1 – Telecoms Works McDonald Rd to Picardy Place	13-Aug10F

\* Subject to agreement on OSSA

A = Actual date

S = Forecast Start Date

F = Forecast Finish date

C = Continuing Works



## 5 Risk and opportunity

### *Review of risk register*

#### Summary

There were five risk reviews held in the period. There were thirteen drawdowns on the risk allowance approved in the period totaling £5,064,921. These are detailed later in the report. Based upon the revised project risk allowance this leaves a risk balance of £6,121,129.

#### Risk and Opportunity Reviews

The following reviews took place in the period:

Date	Format of review	Attendees	Comments
18/5/10	Depot Risk Review	Project Risk Manager Project Manager	Risks and Treatment Plans Reviewed
18/5/10	Signalling, Communication and Control (SCC) Risk Review	Project Risk Manager Project Manager	Risks and Treatment Plans Reviewed
18/5/10	Structures Risk Review	Project Risk Manager Project Manager	Risks and Treatment Plans Reviewed
18/5/10	NR Immunisation Risk Review	Project Risk Manager Safety Assurance & Immunisation Manager	Risks and Treatment Plans Reviewed
20/5/10	Infraco Risk Review	Project Risk Manager Infraco Construction Director	Risks and Treatment Plans Reviewed

#### Risk Register

The Primary Risk Register is attached at Appendix D. The Primary Risk Register contains those high impact risks which are impacting (or have the potential to impact) the project at this moment in time. In addition, the potential risks identified in regard to programme slippage are being reviewed periodically and will form part of the updated QRA. There are 44 risks in the risk register. The top five project risks are listed on the following pages.

1011 - Period 02 Top 5 Risks

ARM Risk ID	Cause	Risk Description Event	Effect	Risk Owner	Significance	Black Flag	Treatment Strategy	Previous Status	Current Status	Due Date	Action Owner
343	General delay to programme with various causes e.g. failure to obtain approvals on time; contractor issues, access after completion of utility diversions	Delay to completion of project	Increased out-turn cost due to delay plus revenue loss	S Bell	High (3.5/5)		Contractually assertive workstreams to progress programme	On Programme	On Programme	30-May-10	S Bell
							Clause 34 / 80.015 DRP Mucta Rev 8 response	On Programme	On Programme	31-Aug-10	S Bell
							Enhanced management focus on various workstreams and options relating to progress of the project	On Programme	On Programme	31-May-10	R Jeffrey
							Access Maps showing areas available	On Programme	On Programme	30-Nov-10	F McFadden
							Liason between tie/BSC programme managers	On Programme	On Programme	30-Dec-11	T Hickman
							Programme Management Panel process	On Programme	On Programme	30-Dec-11	F McFadden
							Weekly tie/BSC commercial meetings	On Programme	On Programme	30-Dec-11	M Paterson

1011 - Period 02 Top 5 Risks

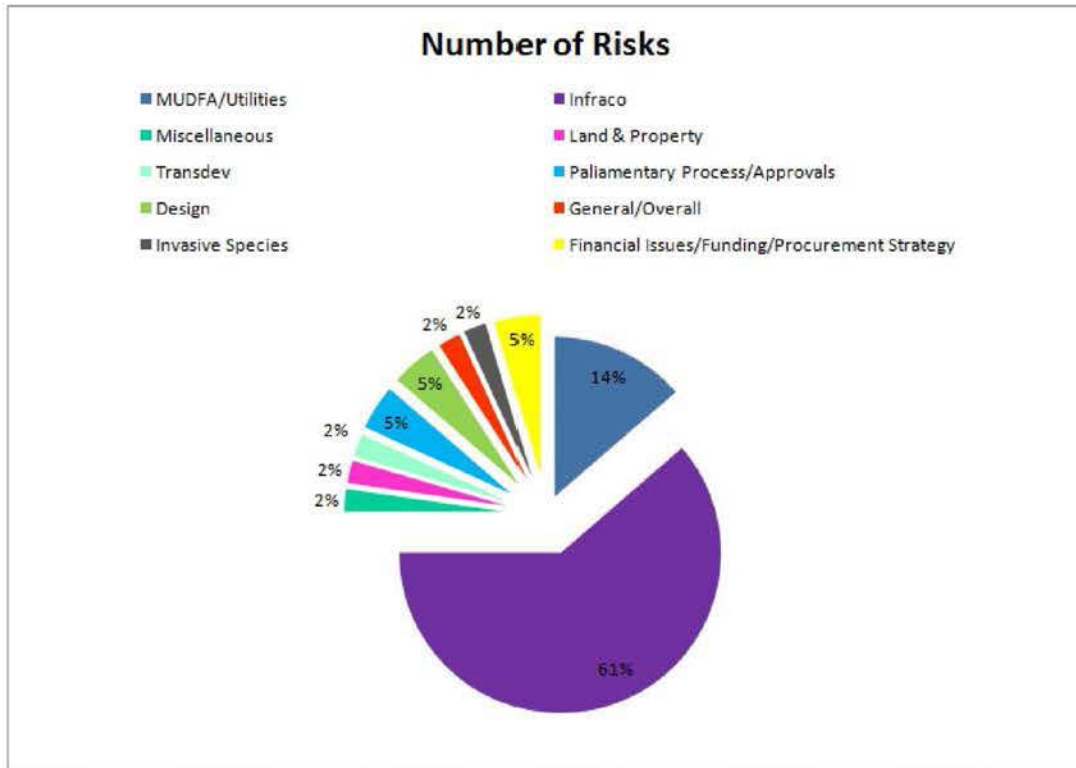
ARM Risk ID	Cause	Risk Description Event	Effect	Risk Owner	Significance	Black Flag	Treatment Strategy	Previous Status	Current Status	Due Date	Action Owner
1077	Base Date Design Information to Issued For Constructions (BDDI-IFC). Lack of visibility of design changes between November 2007 and May 2008	Tramworks price based on a design which may have been altered. Unclear who authorised design change.	Additional cost and programme delay	S Bell	High (3.8)		Continued DRP / Adjudication Process	On Programme	On Programme	31-Jul-10	S Bell
							Contract interpretation and technical expert witness work	On Programme	On Programme	31-Jul-10	S Clark
							Enhanced management focus on various workstreams and options relating to progress of the project	On Programme	On Programme	31-May-10	R Jeffrey
							Mediation resulted in no overall agreement on BDDI - IFC although it gave useful background information. Strategy paper to be presented to TPB on 29 July to seek approval for way forward including utilising necessary contract mechanisms (DRP, audit etc)	Complete	Complete	14-Aug-09	S Bell
							PA1 Challenge	On Programme	On Programme	31-Aug-10	S Bell
							Of the issues previously highlighted as going through DRP, 1 has been ruled in favour of tie, 2 have been agreed, 2 have been ruled in ESC's favour and this is being reviewed by tie. Further issues are due to enter DRP in December 09 and January 10.	Complete	Complete	31-Jan-10	S Bell
							Resolution Strategy approved - 1st DRP to go 10th August, audit requests to BSC for information going w/c 3.8.09	Complete	Complete	10-Aug-09	S Bell
							Deploy alternative utilities contractors to progress utilities	On Programme	On Programme	30-Nov-10	F McFadden
Siemens 33 initiative to achieve Airport to Bankhead Drive	On Programme	On Programme	30-Jun-10	F McFadden							



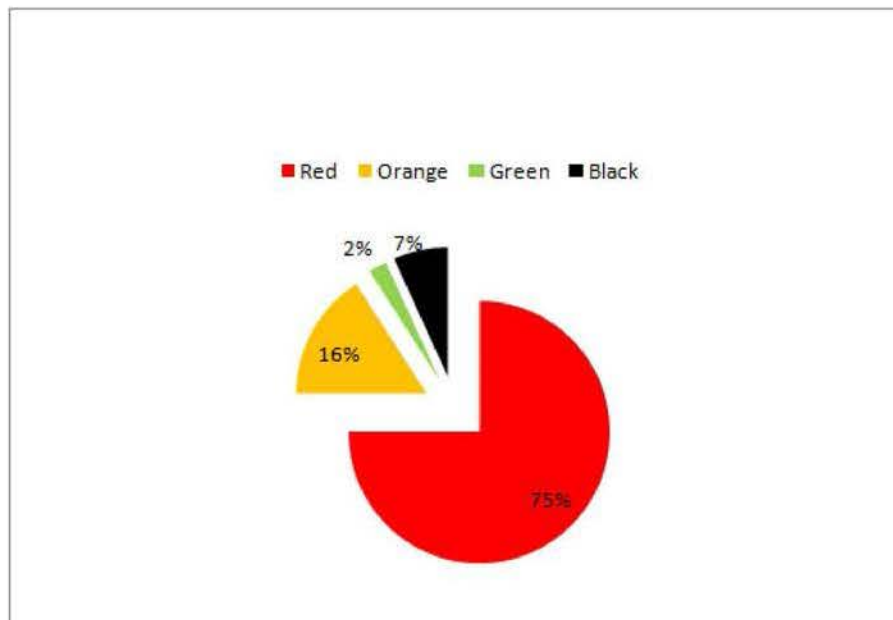
1011 - Period 02 Top 5 Risks

ARM Risk ID	Cause	Risk Description Event	Effect	Risk Owner	Significance	Black Flag	Treatment Strategy	Previous Status	Current Status	Due Date	Action Owner
1091		Excavation of soft, unsuitable material below Earthworks outline	Additional cost and programme delay	F McFadden	High - 25.00		Donaldsons to carry out surveys	Complete	Complete	30-Jul-09	C Neil
							Enhanced management focus on various workstreams and options relating to Extent of soft ground being investigated. External specialist advice deployed.	On Programme	On Programme	31-May-10	D MacKay
							Interative testing approach in order to maximise value	On Programme	On Programme	31-Jul-10	C Neil
							Technical challenge against Donaldsons designs	On Programme	On Programme	31-Jul-10	C Neil
1101	Unreasonable behaviour of BSC commercial management	Unrealistic estimates being submitted for potential changes	Programme delay while disputes regarding estimates are resolved	F McFadden	High - 25.00		Agreed with BSC for independant evaluation to get benchmark	Complete	Complete	30-Jul-09	M Paterson
							All estimates to be scrutinised by the commercial team and, where appropriate, challenge made to DGC. Additional resource (T&T) being used to check estimates to reduce delay and other commercial resources on these areas	On Programme	On Programme	30-Dec-10	D Murray
							Enhanced management focus on various workstreams and options relating to progress of the project	On Programme	On Programme	31-May-10	D MacKay
							Legal challenge to Clause 80 and BSCs interpretation thereof	On Programme	On Programme	31-Jul-10	S Bell
1094		Roads throughout works require full depth reconstruction	Programme impact plus additional costs. £1.5m cap applies to only 4 areas. (PA 12) Also affects (PA 14)	F McFadden	High - 21.00		Carry out surveys to confirm extent of roads requiring full depth reconstruction	Complete	Complete	30-Jun-09	C Neil
							Intensive engagement with CEC, palette of options, methodology being agreed	On Programme	On Programme	31-Jul-10	C Neil
							Suite of options from surveys to be reviewed and agreement reached	On Programme	On Programme	1-Jul-10	C Neil
							tie developed on-street proposal	On Programme	On Programme	31-Aug-10	M Paterson

The risks within the Project Risk Register are categorised below.



The ratings of the risks are illustrated below.



**New risks and concerns**

# Transport Edinburgh

## Edinburgh Trams

### Lothian Buses

FOISA

exempt

Yes

No

The Project Risk Manager, in conjunction with the relevant director, agrees which concerns are escalated to risks and are added to the Project Risk Register.

### Infraco

The following five items were added to the Infraco Concerns Register in the period.

Risk Number	Cause	Risk Event	Effect
127	NR may refuse to 'Note and Support' the technical argument for the immunisation solution	Additional assurance required	Delay to the immunisation works resulting in not being able to apply traction power to ETN
128	BSC cost estimate for immunisation solution design/implementation is conditional on the assumption that there are no significant delays.	NR delay supply of relevant design documents NR enforced site delays.	Additional costs associated with Volker Rail management costs for progressing the delay
129	BSC 'Piggy Back' possessions strategy for Immunisation works fails	Costs associated with possessions are included in the price, however they assume that Volker Rail can 'piggy back' on Balfour Beatty possessions in the area	Additional cost and delay if Balfour Beatty withdraw from their possession
130	Test and commissioning costs may increase	BSC assumption that the works are minor may be incorrect	Increased cost for T&C for the Immunisation Solution

### Risk action plan for next three periods

The following treatment plans are due for completion in the next three periods.

Action Owner	Risk ID	Action ID	Action Name	Due	Active	Complete	Late	Next 3 periods
A Sim	977	712	Public deposit commenced 22nd Feb and the formal public consideration phase is underway and will be concluded on 22nd march at which point objections will be dealt with in the form of a formal report to the council for consideration	30/06/2010	Yes	No	No	Period 04
C Neil	931	681	Obstruction and voids survey, establish ownership reduced delay on discovery.	31/05/2010	Yes	No	No	Period 03
C Neil	1104	700	Utility conflicts being identified	01/06/2010	Yes	No	No	Period 03
C Neil	1104	701	Following identification of conflicts potential solution such as protection measures to be identified	01/06/2010	Yes	No	No	Period 03
C Neil	1091	705	Technical challenge against Donaldsons designs	31/07/2010	Yes	No	No	Period 05
C Neil	1091	706	Iterative testing approach in order to maximise value	31/07/2010	Yes	No	No	Period 05
C Neil	1094	672	Carry out surveys to confirm extent of roads requiring full depth reconstruction	30/06/2010	Yes	No	No	Period 04
C Neil	1094	673	Suite of options from surveys to be reviewed and agreement reached	30/07/2010	Yes	No	No	Period 05
C Neil	1094	708	Intensive engagement with CEC, palette of options, methodology being agreed	31/07/2010	Yes	No	No	Period 05
D Burns	869	644	Length of Line 1a to be re-surveyed on regular basis	30/06/2010	Yes	No	No	Period 04
D MacKay	343	713	Enhanced management focus on various workstreams and options relating to progress of the project	31/05/2010	Yes	No	No	Period 03
D MacKay	1077	715	Enhanced management focus on various workstreams and options relating to progress of the project	31/05/2010	Yes	No	No	Period 03
D MacKay	1091	716	Enhanced management focus on various workstreams and options relating to progress of the project	31/05/2010	Yes	No	No	Period 03
D MacKay	1101	717	Enhanced management focus on various workstreams and options relating to progress of the project. Workstreams	31/05/2010	Yes	No	No	Period 03
D Sharp	279	634	Fortnightly meetings of Approval Task Force	31/07/2010	Yes	No	No	Period 05
D Sharp	279	635	Monitoring and tracking through the 3rd party rep	30/06/2010	Yes	No	No	Period 04
D Sharp	1106	714	Use of additional resources to apportion accountability for delay in issuing of IFC	31/05/2010	Yes	No	No	Period 03
D Sharp	271	559	Assure the quality and timing of submissions	31/07/2010	Yes	No	No	Period 05
D Sharp	271	637	Fortnightly meetings of Approval Task Force	31/07/2010	Yes	No	No	Period 05
M Blake	1102	696	Obtain reduction from SUCs	01/06/2010	Yes	No	No	Period 03
M Blake	1102	697	Where relaxation cannot be obtained replace plastic with steel	01/06/2010	Yes	No	No	Period 03
M Blake	1105	699	Examine possibility of additional protection being used rather than additional diversion utilities	01/06/2010	Yes	No	No	Period 03
M Paterson	1091	667	Extent of soft ground being investigated. External specialist advice deployed.	31/05/2010	Yes	No	No	Period 03
S Bell	343	702	Contractually assertive workstreams to progress programme	30/05/2010	Yes	No	No	Period 03
S Bell	1077	703	Continued DRP / Adjudication Process	31/07/2010	Yes	No	No	Period 05
S Bell	1077	724	Siemens 33 initiative to achieve Airport to Bankhead Drive	30/06/2010	Yes	No	No	Period 04
S Bell	1101	707	Legal challenge to Clause 80 and BSCs interpretation thereof	31/07/2010	Yes	No	No	Period 05
S Clark	1077	704	Contract interpretation and technical expert witness work	31/07/2010	Yes	No	No	Period 05
W Biggins	911	628	Liase with Scottish Power to agree and approve method of crossing tunnel.	31/07/2010	Yes	No	No	Period 05



## Transport Edinburgh

Edinburgh Trams

Lothian Buses

FOISA

exempt

Yes

No

### Cost Quantative Risk Analysis

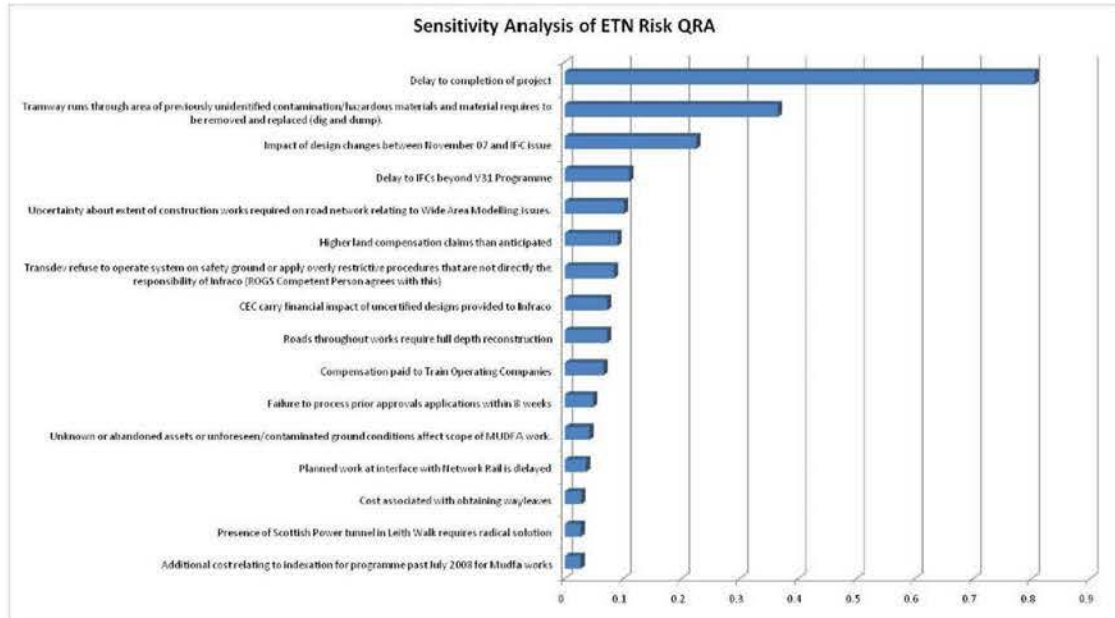
The Project Risk Allowance at financial close was £30,336,196. This was increased in Period 1 by £17,982,993. Drawdowns to the end of Period 2 10/11 now total £42,198,060. The remaining risk balance based on the approved QRA plus the additional funding is £6,121,129.

#### Risk drawdown

The following table illustrates the drawdown applications on the project risk and contingency allocations in Period 02.

Description	Owner	Value (£)
Section 5C - Ground Improvement Works	Mike Paterson	930,159
Section 7 - Ground Improvement Works	Mike Paterson	-1,139,306
Section 5B - Ground Improvement Works	Mike Paterson	-1,048,154
Adjustment to contingency (COP143,234,280)	Mark Hamill	81,263
Supply of Pedestrian Marshalls	Mike Paterson	-8,640
Russell Road retaining wall - BDDI-IFC risk	Mike Paterson	-1,461,857
Misc Variations for Section 1A	Mike Paterson	-338,246
Water of Leith Sewer Lining	Mike Paterson	-59,709
A8 Underpass Phase 2 Piling Obstructions	Mike Paterson	-9,481
Carrick Knowe Bridge	Mike Paterson	-130,000
White lining at Haymarket Station Car Park	Mike Paterson	-3,843
Newhaven Pedestrian Crossing	Damian Sharp	-9,131
Utilities Design - Crawley Tunnel Valve Arrangement	David Carnegie	-7,658
	Total	-5,064,921

Sensitivity analysis of approved cost QRA.



The above chart highlights those component risks which are correlated most closely with the overall risk allocation. These risks are the ones which, if changed in terms of probability or impact, would have the most significant effect on the final output.

**Schedule QRA**

**tie** is currently working with the supplier of Active Risk Manager (ARM – the risk management software which **tie** uses) with a view to integrating Primavera and ARM so that a schedule risk analysis can be developed. A schedule QRA will be created following agreement of the recalibrated programme.

**Opportunities**

Opp number	Event	Opp rating	Open?	Treatment plan	Owner	Due date	Review Comments
1	Original forecast value for incantisation was £400k. In-line with performance it is tie management view that the SDS incantisation cannot be fully justified, with £400k the worst case	15	Open	tie PM to manage SDS KPI agreement to ensure that the maximum incantisation paid out should be £305k	Damian Sharp		Any savings expected to materialise in Period 6
3	Within the current forecast figures is a cost of £947k for the additional cost of Land Value over and above the market rate when the project budgeted. £162k of the benefit has already been taken to AFC leaving an opportunity of £785k	19	Open	AS to lay out a timetable as to when land savings can be crystallised. In light of the stagnated property market it is unlikely that the additional £785k built into forecast or the duplication of cost in risk will be utilised.	Alastair Sim		Being managed by A Sim. Still regarded as possible saving
4	Opportunity to claw back £230k of costs directly to Transport Scotland on the back of the Scotrail settlement.	11	Open	AS to lay out plan/ timetable as to how specifically these costs can be passed onto TS.	Alastair Sim		SB and AS to meet with TS
6	TEL have submitted a paper to the TPB justifying an additional recharge of £1,571k resource costs for the rest of the project. This was approved in principle by TPB. SB identified that a potential six figure sum could be reduced from this recharge cost. Action and target reduction TBC.	1	Open	SMcG to speak to David McKay - tbc	Stewart McGarthy with Alastair Richards		TEL costs have been rescheduled and now provide up to December 2011 at a reduced figure of £98k.
7	TEL have identified that it is likely that an additional £375k of tram marketing costs will need to be spent to get the tram geared up and ready for operation. The debate is to be had as to who should bear these costs accounting for the fact that that this line was taken out of the Capital budget at final business case.	6	Open	SMcG to agree with David McKay who should take the marketing costs with a potential mechanism for capitalisation and amortisation for TEL of these costs over the useful economic life of the project.	Stewart McGarthy with Alastair Richards		TEL believe these costs could be met from the Commis budget. To be discussed.
12	Tapered Poles cost of £176k in budget (T19.01.33)	6	Open	Do not incur cost.	Frank McFadden		Any saving would be used to offset tie charge for pole bases
13	View of Picardy Place Provisional Sums (Utilities) and major provisional sums to be taken	23	Open	Picardy Place utility diversions provisional sums felt to be extremely high at £3m. SB guidance that this should be ballpark more like £1m. Dennis Murray action to give a best and measured view of how accurate this provisional sum is, and then to provide this to SB for review within the current month. £2m opportunity.	Frank McFadden with Dennis Murray		£1.65m saving taken into account already against an original allowance of £2.65m
14	View of Picardy Place Provisional Sums (Revised Junction alignment) and major provisional sums to be taken	21	Open	Picardy Place infra works provisional sums felt to be high at £3m. SB guidance that this should be ballpark more like £2m. Dennis Murray action to give a best and measured view of how accurate this provisional sum is, and then to provide this to SB for review within the current month. £1m opportunity.	Frank McFadden with Dennis Murray		Current saving currently standing at £390k.
21	Programme allows for full depth road reconstruction. If this is not necessary there will be a programme time saving	11	Open	C Neil managing through development workshop	CN		
29	50metre radius curve at Gogar - at the moment the trackform will be embedded. Opportunity to convert to ballasted	17	Open	tie/BSC to examine possibilities	WB/BB	30/03/2010	P7 - BSC are redesigning with ballasted track. Saving will be in moving from slab to ballasted but maintenance cost will increase P9 - design underway. P12 - BSC are issuing as Infra-co-down change. However they believe this will increase costs (maintenance £90k v £6k)
31	Utilise Scottish Central Procurement of Local Authority Power instead of direct procurement of commissioning power by tie	17	Open	Liason with CEC procurement team to ensure Tram commissioning power is eligible using CEC rates.	AR	30/12/2009	This option is being used Overall saving still to be confirmed.
32	Potential saving on £3m budget for NR immisation (split 3 ways with tie, BSC and NR)	13	Open	BSC are making a case for doing no modifications to NR and are producing a contingency design if the "do nothing" approach is rejected (Option rejected by BSC following quantified assessment)  BSC quantified assessment requires 14 off track circuit modifications using Feed End Track Relays	CK	30/11/2010	BSC has instructed the initial design works (11/11/09)  BSC has not yet finalised the contract for implementation of the immisation solution
34	ERs identified 43 sets of breathers and expansion joints around structures throughout network. BSCs proposal is to install 5 sets. Saving of cost of 38 sets.	17	Open	tie have received BSC's proposal on longitudinal expansion and expansion around structures. Technical meeting arranged in P3 to review tie's return comments on BSC's proposal	WB/BB	30/04/2010	BAM review has confirmed 5 sets only can work however SDS disagree. WB to arrange workshop to progress final number  P7 - BSC not agreeing to change due to loss of profit in BB cml works.  P9 - Siemens installing to their design which removes need for 38 sets of breathers. Resubmitted design proposal with design calcs and this is being reviewed. Saving of approximately £12k x 38. Actual saving to be agreed in P10.  P12 - SDS have accepted Siemens' design proposal. tie need to issue change.



# Transport Edinburgh

## Edinburgh Trams

### Lothian Buses

FOISA

exempt

Yes

No

Opp number	Event	Opp rating	Open?	Treatment plan	Owner	Due date	Review Comments
35	The depth of excavation (for S21b and S21d and W8) could be reduced thereby providing a cost/time saving. To do this the design needs to be revisited. (BSC did additional SI in this area in summer 2008 which could be used to review designs)	1	Open	tie would need to instruct BSC to revisit design as BSC have indicated they will not do so unless instructed.	TC/CN	30/06/2010	TC and CN to manage P12 - being discussed between tie and BSC as part of programme mitigation P2 awaiting outputs of additional SI
36	£250k cabling programme planned for Hope St junction. IF BT can be convinced to leave in situ then this will represent a saving.	1	Open	Meeting taking place with BT on 14 Oct to present proposal to BT	GB/CN	31/06/2010	Meeting still to happen but opportunity still 'live' P9 - BT rejected proposal. G Barclay to meet BT P11 - GB raised again with BT and when infraco start their works in this area the possibility of leaving as is will be re-examined. (Agreement needs to be reached on on-street works)
38	Potential to make programme savings once systems programme has been received.	1	Open	BB and GB to review programme once received	GB/BB		Programme still outstanding
40	Change rail section in all tramstops (in the off street section) from grooved to S49 rail. This would provide a cost and productivity saving. This would negate the need for transition rails. Saving would be circa £250k	1	Open	Consortium issue in removing work from civils to systems as the need for a transition slab is removed.	WB/BB		Siemens have submitted proposal for S49 through tram stops. P9 - S49 now being installed through tram stops. (production saving) P12 - INTC issued to BSC which includes trackform changes and tram halts at Edin Pk
42	Section 5Y (within 5B) - opportunity to remove asphalt, which has been noted as a requirement by CEC planner in the section from east side of Edinburgh Pk tram halt to Edinburgh Pk viaduct approach, and continue the S49 on track ballast from the pedestrian crossing to the approach to Edinburgh Pk viaduct. (removes 100m of grooved rail with crossover and 2 transition slabs and improves productivity)	1	Open	This has been discussed with Siemens who will write to tie proposing these changes.	WB/BB		Siemens progressing with design change and ordering switches and crossings based on S49 P9 - opportunity accepted by Siemens and being carried out. (Production saving)
43	Re-railing points - 15 no identified in ERs for the depot area. These could be removed with resultant saving in cost and productivity	1	Open	tie to decide if these are required. If not then BSC to be instructed.	WB/BB		WB to discuss with Siemens P12 - Siemens agree with but will not propose changes but this will need to be generated by tie
44	Ground Improvement layer - adopt BAM's preliminary design for the floating slab developed to incorporate the noise and vibration measures.	1	Open	tie, BAM and SDS to discuss.	WB/BB		BAM still working on design for ground improvement layer P1 - Outline design received for noise and vibration slab. No mention of ground improvement layer so tie have queried. WB to take forward
45	Edinburgh Pk green track - soft ground through Edin Pk limits what can be installed. Opportunity is to change trackform to ballasted. Substantial cost saving as civils cost will be less.	1	Open	Edin Pk/CEC agreement required.	WB/BB		P9 - tie saving to be calculated. Proposal needs to be made to Edinburgh Park P12 - INTC issued to BSC detailing sections to change from greentrack to ballast. Meetings arranged with NEP Ltd to discuss changes. P1 - meeting expected with NEP in Period 2 to discuss amended trackform.
46	Eliminate soil nailing in preference for 1:2 batter. This would provide a mitigated cost increase	1	Open	AR/SS/FMF have agreed to reduce clearances in the depot stabling area. BSC to confirm conditions can meet 1:2 slope.	AS		
47	Advance Siemens commencement by 6-9 months as contract programme showing completion prior to handover to Siemens	1	Open	Programme team to be made aware of opportunity and attempt to negotiate with BSC	AS		

**Transport Edinburgh**  
**Edinburgh Trams**  
**Lothian Buses**

FOISA  
 exempt  
 Yes  
 No

Opp number	Event	Opp rating	Open?	Treatment plan	Owner	Due date	Review Comments
48	Obtain agreement with CEC to adopt a different road construction methodology thereby saving time and money.	1	Open		CN		
49	Opportunity to amend to standard foundations in off-street section which would reduce cost.	1	Open		CN		
51	Carry out a joint tender with BSC for future supplemental agreements in order to generate more competitive price	1	Open	Future supplemental agreements being discussed	CNMP		
52	Selling of land which has been purchased but is no longer required	1	Open		A Sim		
53	Recovery of costs from Siemens for recovery of stray current monitoring costs	1	Open		CK/BB		
54	Opportunity to convert from direct fix to Rheda City C trackform at: Approach to South Gyle Access Bridge (49m) East side of Bankhead Stop (33m) Eastern ramp at Edinburgh Park Station Bridge (72m) East Side of Castle Gogar Access Rd (679m) - instructed redesign Departure side of IPR stop (104m) Gyle Tramstop to south side of A8 (165m) - instructed redesign	1	Open	WB liaising with Siemens to agree proposals. Production saving to be made	WB		P9 - Approach to South Gyle Access Bridge (49m) - becoming Rheda City C from Direct Fix (Production saving) East side of Bankhead Stop (33m) - becoming Rheda City C (Production saving) Eastern ramp at Edinburgh Park Station Bridge (72m) - becoming Rheda City C (Production saving) East Side of Castle Gogar Access Rd (679m) - From A8 to Depot this can become ballasted throughout (200m to be Rheda City C and 479m to be ballasted) Potential cost/production savings Departure side of IPR stop (104m) - becoming Rheda City C (Production saving) Gyle Tramstop to south side of A8 (165m) - convert from greentrack to ballasted, agreed with CEC planner. Potential £350 per metresaving
57	The installation of transition welds rather than transition rails at structures would save circa £100k	1	Open	tie would need to instruct BSC.	WB		
58	As we will have possession of the top half of the shuntline there is a possible opportunity to reduce the requirement for extensive temporary works to retain the NR embankment during the construction of the new embankment associated with the new tram structure.	1	Open	Initial meetings have taken place regarding this and TC/WB will continue to pursue this option.	TC/WB		P1 - Scotrail and NR have agreed to this proposal in principle. Revised estimate for s21d on basis of the above from BSC received.  P2 - to be revisited following outputs of SI

Progress

No.29 – proposal going ahead but agreement re costs need still outstanding

No.34 – tie still to issue change

No.35 – No progress in period, TC managing.

No.36 – GB progressing

No.40 – WB progressing

No.43 – tie would need to issue change

No.44 – WB progressing and included in Blair Anderson report

No.45 – WB and CN meeting NEP in Period 2 to progress

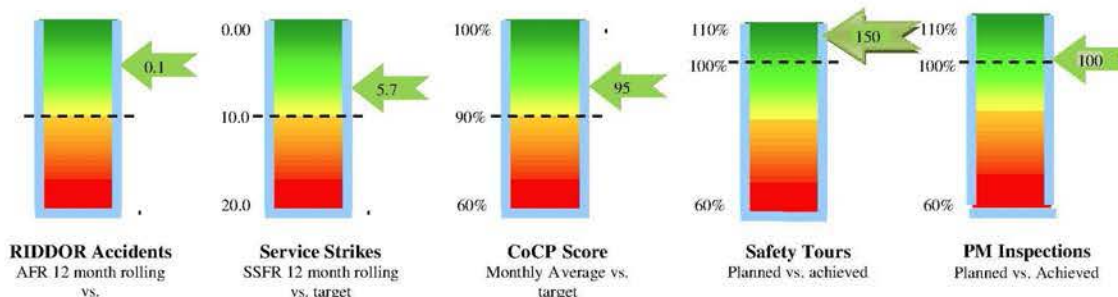
No.57 – WB progressing

No.58 - Scotrail and NR have agreed to this proposal in principle. Revised estimate for s21d on basis of the above from BSC received has reduced from £1.3m to £450k. Work progressing to reduce this further.

## 6 Health, safety, quality and environment

### H&S accidents and incidents, near misses, other or initiatives

HS&E ACCIDENTS and INCIDENTS SUMMARY												
Total	Total Hours	>3 day	Major	Injury	NM/Unsafe Condition	Service Damage	EN V	RTA	MOP	AFR	SFR	
Period	118,591	0	0	1	12	3	2	1	10	0.00	2.53	
13 period rolling	1,630,497	1	1	24	212	94	22	8	64	0.12	5.77	



There have been no Reportable accidents during Period 2. The rolling 13 period AFR is 0.12 well below the target of 0.24 for the project. The BSC report on the RIDDOR incident which occurred on the Guided Busway during Period 1 has been reviewed by **tie**. 3 management and control failings have been identified and further remedial action has been identified from the **tie** review. These have been discussed with BSC and dates for the close out of actions have been agreed. A Senior Management meeting between **tie** and BSC will be held in June to discuss further.

During Period 2 there was a potentially serious incident with BSC/Grahams at Haymarket Yards. A dumper tipped during an unloading operation. The dumper was attempting to “ride over” a large stone when it tipped. The driver was secured to the seat by the seat belt and prevented from being thrown out and crushed. The driver voluntarily provided a D&A sample and tested positive for Cannabis. The driver was removed from site and discussions are underway with BSC regarding random testing and contractual requirements.

The frequency of service strikes for the project has improved marginally overall from the previous Period, however, the BSC service strike frequency has increased to some extent over the period. A major fibre optic service was damaged but not reported until discovered by the Utility Company. BSC have investigated and their subcontractor, Expanded, has removed the supervisor and operative from site for breach of safe digging practises and failure to report an incident.

Further to the Period 11 BSC Rail Interface systems audit, which found 4 major findings within the BSC system, the audit has been closed out satisfactorily. A copy of the audit and close out actions will be passed to Network rail at the next Network Rail interface meeting.

**tie** PM inspections continue to be carried out with the contractor. During Period 2, three of the 6 Safety Tours were carried out jointly between **tie** senior management BSC senior management.



## Environment

During Period 2 **tie** carried out an Environmental audit on BSC at Tower Bridge. The audit found 3 findings 1 minor, 2 observations, however, in general, the audit was recorded some good standards from BSC's subcontractor, McKean. There has been no response from BSC regarding the **tie** environmental audit that was carried out during Period 12.

Meeting held with TCM, BSC and **tie**. Issues resolving BSC and their subcontractors' understanding of the advanced works now appear to have been resolved. BSC advised to deal with Invasive Species in line with the requirements detailed in their Invasive Species Management Plan and the standard guidelines in place.

BSC Environmental Management Plan Revision 4 was reviewed and commented on. Status remains at Level C (resubmit) as the Construction Site Drainage Plan supplied by BSC does not meet requirements. Still awaiting issue of updated Invasive Species Plan currently Level B, to include TCM guarantee information.

Complaints received regarding dust/debris airborne pollutant control near to the Ingliston Park and Ride area. BSC advised to ensure they have a robust system in place for dealing with dust and that they ensure all material loads leaving site are covered in line with the requirements of the CoCP.

## Deliver a Safe Tram

Section	Activity	Data Checked					
		IDC	Hazards	ITP's	Design Variation / Change	As Built's	Asset Register
Edinburgh Wanderers	Building Works	0.5	On Hold	0.5	1	1	N/A
Tower Bridge Place	ITP's & related Docs	0.5	On Hold	1	1	1	N/A
Edinburgh Park	Road Works	0.5	On Hold	1	1	1	N/A
Gogar Depot	Drainage	1	On Hold	1	1	1	N/A
<b>PD</b>	<b>Total (y)</b>	2.5	0	3.5	4	4	0
	<b>Max Possible Total (y)</b>	4	0	4	4	4	0
<b>Total</b>	<b>Percentage P1</b>	38%	69%	93%	77%	71%	50%
	<b>Percentage P2</b>	38%	69%	93%	79%	74%	50%

**Key - Y = Evidence exists (1) N = No evidence exists (0) NA = Not applicable (-) P = Part evidence in place (0.5)**

Four inspections carried out since last period report – Edinburgh Wanderers, Tower Bridge Place, Edinburgh Park, and Gogar Depot. Period 2 inspections highlight significant improvements in the inspection results with IDC findings achieving a score of 63%, the first time since the inspections regime started that this element has scored over 50%. Overall assurance is slowly improving, but more work is to be done with BSC in this regard.

A template will be developed by the end of Period 3 allowing the compilation of evidence to provide assurance for the Design, Construction and subsequent Test and Commission of a Safety Critical Element of the Tram System, including Infrastructure. The Element Template will be tested on Princes St track design and installation initially then used to gain assurance at the depot prior to the relocation of the tram vehicle.

A **tie** Supervisors check sheet has been developed which will focus on monitoring the quality of contractors' construction. The Check sheet will be formally trialed by the HSQE team/Site Supervisors during period 3.

Inspection and Test Plan for Building Fixings formally issued by BSC to **tie**, currently being reviewed. Comments to be collated and ROR issued during period 3.

Meeting held with BSC on the 20<sup>th</sup> April 2010 to review all actions outstanding from the previous DaST inspections; encouraging commitment given, follow up meeting scheduled to take place 18<sup>th</sup> May 2010. Meetings will now be held on a monthly basis.

# Transport Edinburgh

## Edinburgh Trams

### Lothian Buses

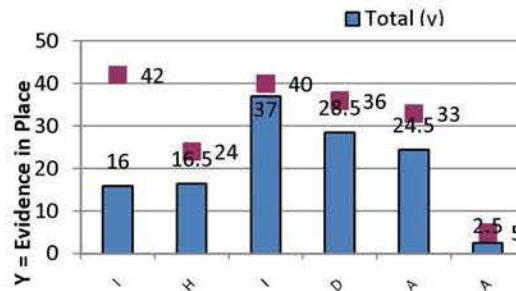
FOISA  
exempt  
□ Yes  
□ No

New Utility Handover Procedure; Work Site Release Procedure and associated forms promulgated to contractors currently working on the MUD contract, tie Site Supervisors and Project Managers (5<sup>th</sup> May 2010 and 19<sup>th</sup> May 2010). All relevant documentation now available on the HSQE webpage.

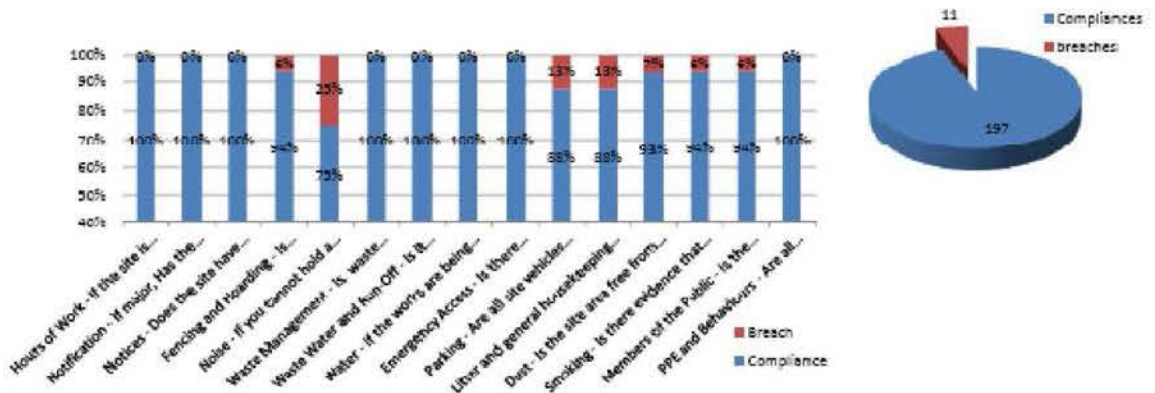
TQA/BSC/03/2010 ITP Audit at Gogar Depot carried out 11<sup>th</sup> May 2010. 5 minor findings/observations were identified. Actions agreed with BSC. Report formally issued to BSC week 4 /period 2.

#### Action to Be Taken

- Finalise tie Site Supervisors Check sheet and communicate to relevant staff.
- Run Princes Street wheel rail interface through the tie Safety Verification Scheme.
- S. Smith/C. Kerr to finish updating SVS procedures and add to HSQE website.
- Review and close out actions previously raised during DaST inspections – detail findings in period 3 report.
- tie to meet with BSC to discuss the progress of the Project Asset Register



#### Code of Construction Practice Period 2 compared to Period 1



#### Movement in Period

Compliance has remained constant over period at 95% for Period 1 to 2  
There has been an improvement in compliance with the following areas:

- Fencing and Hoarding
- Litter and General Housekeeping

There has been a decrease / stable level of non compliance in the following areas:

- Hours of work
- Notices
- Noise
- Parking
- Dust control

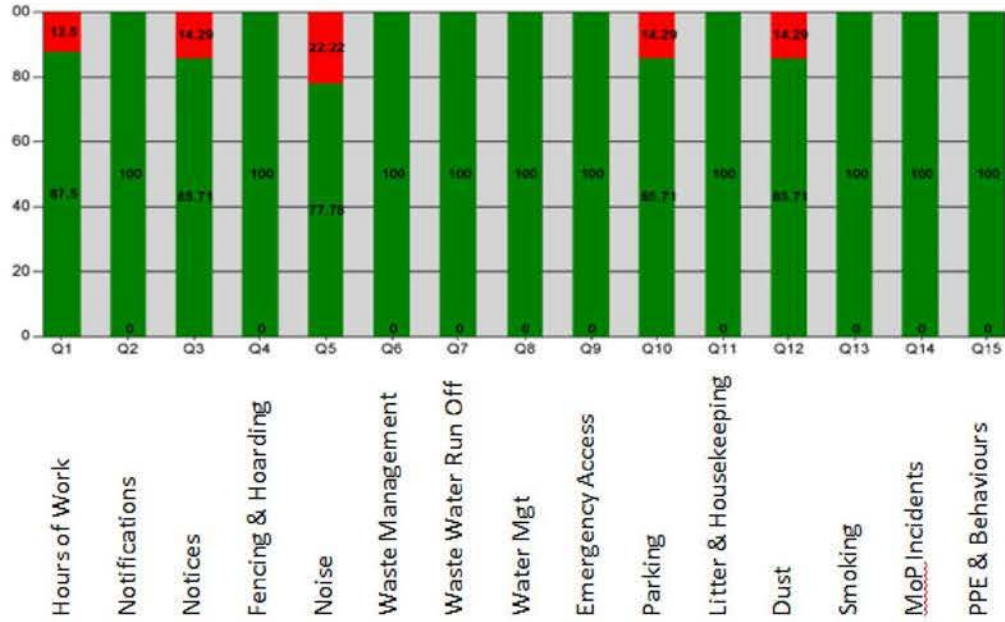
# Transport Edinburgh

Edinburgh Trams

Lothian Buses

FOISA  
exempt  
 Yes  
 No

## Period 2 Statistics



## Actions

HSQE and Construction Director will discuss issues with Project Mangers and disseminate information to sites and highlight where additional measures are required. This month's targets will focus on notifications, noise and dust compliance. Period 3 compliance will specifically focus on the MUD contract.



## 7 Stakeholder and Communications

### Media / Press Activity

Incoming media enquires for Period 2 has been relatively quiet in comparison to previous reported periods. Press coverage has been mainly proactive on our part where we notified local press of the removal of our traffic management in the city centre in order to give businesses and residents in the city some respite while negotiations on the dispute continue. The launch of the Leith Business Hub at the MacDonald Road Library also generated positive coverage locally and was unveiled by local businessman Sir Tom Farmer, who himself was born and raised in Leith.

The media team has been working several external articles for the City of Edinburgh Council's Outlook paper as well as an advertorial piece for the Chambers of Commerce on the economic benefits of the trams. A large article was also commissioned for Eurotransport Magazine as an overview of the project's progress which is due to be published early this summer.

### Public Information Planning

Period 2 has been a busy four weeks with regards signage and branding on the project. Promotional signage and visuals have been placed at Ocean Terminal, and the Forth Ports Ferry Terminal to coincide with the launch of 2010 Cruise season.

In collaboration with key partners including City of Literature, DEMA and Festivals Edinburgh, banners have been designed for Princes Street to promote the city during the festivals. Banners are also due to be installed on the Overhead Line poles on Princes Street which advertise a selection of the upcoming festival events and such as Edinburgh Mela, This is My Edinburgh, alongside Edinburgh Trams banners.

Artwork at Starbucks has been updated outside their Haymarket Branch. Regular branding group meetings have also taken place throughout Period 2 in order to discuss further promotion of the project through gateway signage along the tram route.

### Partner and Stakeholder Communications

During Period 2 notifications were issued for works in the following areas:

- Constitution Street – Side Entry Manhole work
- Haymarket Junction area – removal of traffic management
- Lindsay Road and Hawthornvale – Closure of Hawthornvale
- Leith Harbour/Lindsay Road/Portland Row – Water Outage

A number of school visits are being prepared at the moment for the coming four weeks at the request of the school in order to inform the pupils of why we are building the tram route in Edinburgh. Napier University also requested a presentation to Civil Engineering students in response to the high number of email requests for information over the past few months.

The May Photo update was completed and sent to the printers and features pictures of the Gogar Depot, bridge work at Tower Place and also pictures of the official opening of the tram vehicle on Princes Street. The update has been distributed electronically to internal staff and to a list of stakeholders as well as being posted on our website.

Communication continues on a regular basis between businesses and residents to keep them informed of the progress being made on the project and of any works due to commence in their area.

## **Transport Edinburgh**

### **Edinburgh Trams**

### **Lothian Buses**

FOISA  
exempt  
 Yes  
 No

Meetings or presentations were given to the following groups during the previous four week period:

- Lothian Assessors
- Cockburn Association
- Napier University
- Association of Project Managers AGM

#### **Website / Internet Communications**

There has been an increase to 703 facebook 'fans' and 709 twitter followers. Links to new content on [www.edinburghtrams.com](http://www.edinburghtrams.com) posted on social media sites remains one of the most effective ways of connecting people with information quickly.

Social media activity remains an important tool for drawing users to the site. While social media links are a popular entry point for [www.edinburghtrams.com](http://www.edinburghtrams.com) there is a high incidence of users subsequently browsing information thereafter, typically checking local updates before leaving. These components are an essential part of the user journey into more detailed information on the project and have the greatest overall impact on site traffic. "Local Updates" on construction work, traffic management and the route alignment remain in first place for RSS alerts this period.

#### **Logistics**

Logistical support for businesses affected by our tram works have been scaled back during Period 2 from 4 to 3, due to the reduction in our on-street works. Members of the team have also helped out considerably in maintaining a presence on the tram vehicle while it is situated on Princes Street.

The logistics team have been primarily centred around Picardy Place, Broughton Street and the Haymarket area and have successfully assisted in the transference of nearly 9000 boxes, 1200 bags over 700 kegs during the four week period.

#### **Freedom of Information Requests**

Currently there are 4 FOI reviews outstanding and in the process of being compiled. No new requests have been filed.

#### **Customer Service Activity**

Correspondence has dropped by 40 contacts since last period, totalling 298 public enquiries. The main channels for incoming enquiries to the Customer Service team continue to be via email and phone calls, with Face to face meetings with businesses and stakeholders having now dropped significantly in light of the reduction of our worksites in the centre of Edinburgh.

Regarding the subject of enquires Information Requests still continue to log the overwhelming majority of incoming calls and emails with 259 of enquiries during Period 2 being recorded. A number of calls relating to Business Support, COCP Complaints and Employment on the project logged the highest interested after Information Requests, with 10, 9 and 8 contacts respectively. The remaining 12 enquiries were split between the following subjects, Complaints (4) Land and Property (2), Building fixings (2), Insurance Claims (1) and Positive Comments (3).

**Customer Service Figures**

a) Transport Scotland - Monthly Customer Service Report 26/04/2010 - 21/05/2010

Item	Volume Month	Volume (Cumulative from 21/11/08)	Performance (Month)	Performance (Cumulative)	Target Performance
Telephone response	198	4465	91	97	90% in 30 seconds
Telephone Same day resolution	190	4294	96	96	Info only
Email acknowledgement	131	2639	100		100% acknowledged within 24 hours
Email response			100	99	90% resolution in 7 days
Email same day resolution	122	2404	92	91	Info only
Letter acknowledgement	5	185	100		100% acknowledgement within 24 hours
Letter response			100	95	100% resolution in 7 days
Total Enquiry Volumes	334	7289			
Website update	47	1437	100	100	Weekly

b) Out of Standard/Work in Progress statement at month end 21 May 2010

		Volume of WIP @ m/end	Oldest date	Oldest Issue	Handled By
M/e 21 May 2010	Email	0	N/A	N/A	N/A
	Letters	1	21/05/2010	Various questions on tram	Alastair Richards/Tom Wynn
	Calls	0	N/A	N/A	N/A

c) Monthly Notifications Performance 26/04/2010 to 21/05/2010 and Cumulative from 21 November 2008

0 Major notifications



**Transport Edinburgh**  
**Edinburgh Trams**  
**Lothian Buses**

FOISA  
 exempt  
 Yes  
 No

12 Minor notification – 9 in standard and 3 out of standard.  
 0 Emergency notifications

Notification Type		Work Site	Notifications	% in Standard
Major works	Month	Notifications	0	
		In Standard	N/A	N/A
	Cumulative	Notifications	15	
		In Standard	6	67
Minor Works	Month	Notifications	12	
		In Standard	12	100
	Cumulative	Notifications	182	
		In Standard	148	81
Emergency	Month	Notifications	0	
		In Standard	N/A	N/A
	Cumulative	Notifications	14	
		In Standard	14	100

Section	Activity	Data Checked					
		IDC	Hazards	ITP's	Design Variation/Change	As Built	Asset Register
Edinburgh Wanderers	Building Works	0.5	On Hold	0.5	1	1	N/A
Tower Bridge Place	ITP's & related Docs	0.5	On Hold	1	1	1	N/A
Edinburgh Park	Road Works	0.5	On Hold	1	1	1	N/A
Gogar Depot	Drainage	1	On Hold	1	1	1	N/A
<b>PD</b>	<b>Total (y)</b>	2.5	0	3.5	4	4	1
	<b>Max Possible Total (y)</b>	4	0	4	4	4	0
<b>Total</b>	<b>Percentage P1</b>	36%	69%	93%	77%	71%	50%
	<b>Percentage P2</b>	38%	69%	93%	79%	74%	50%

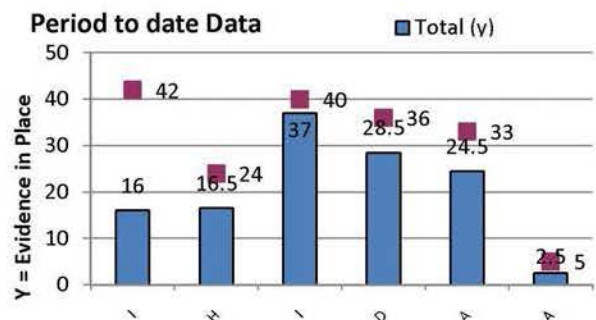
**Key - Y = Evidence exists (1) N = No evidence exists (0) NA = Not applicable (-) P = Part evidence in place (0.5)**

### 1.0 Deliver a Safe Tram Key Metrics

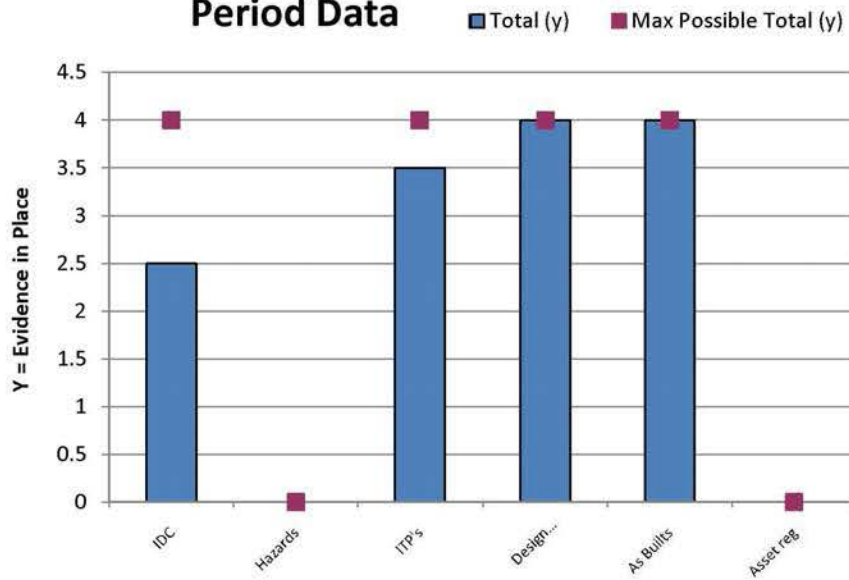
- Four inspections carried out since last period report – Edinburgh Wanderers, Tower Bridge Place, Edinburgh Park, and Gogar Depot. Period 2 inspections highlight significant improvements in the inspection results with IDC findings achieving a score of 63%, the first time since the inspections regime started that this element has scored over 50%.
- A template will be developed by the end of Period 3 allowing the compilation of evidence to provide assurance for the Design, Construction and subsequent Test and Commission of a Safety Critical Element of the Tram System, including Infrastructure. The Element Template will be tested on Princes St track design and installation initially then used to gain assurance at the depot prior to the relocation of the tram vehicle.
- A **tie** Supervisors checksheet has been developed which will focus on monitoring the quality of contractors construction. The Checksheet picks an activity then looks at the competency of the individual involved, the availability of the correct specification, the completion of the Inspection and Test Plan and the appropriate supervision. The Checksheet will be formally trialed by the HSQE team/Site Supervisors during period 3.
- Inspection and Test Plan for Building Fixings formally issued by BSC to **tie**, currently being reviewed. Comments to be collated and ROR issued during period 3.
- Meeting held with BSC on the 20<sup>th</sup> April 2010 to review all actions outstanding from the previous DaST inspections; encouraging commitment given, follow up meeting scheduled to take place 18<sup>th</sup> May 2010. Meetings will now be held on a monthly basis.
- New Utility Handover Procedure; Work Site Release Procedure and associated forms promulgated to contractors currently working on the MUD contract, **tie** Site Supervisors and Project Managers (5<sup>th</sup> May 2010 and 19<sup>th</sup> May 2010). All relevant documentation now available on the HSQE webpage.
- TQA/BSC/03/2010 ITP Audit at Gogar Depot carried out 11<sup>th</sup> May 2010. 5 minor findings/observations were identified. Actions agreed with BSC. Report formally issued to BSC week 4/period 2.

### 1.1 Deliver a Safe Tram – Required Action

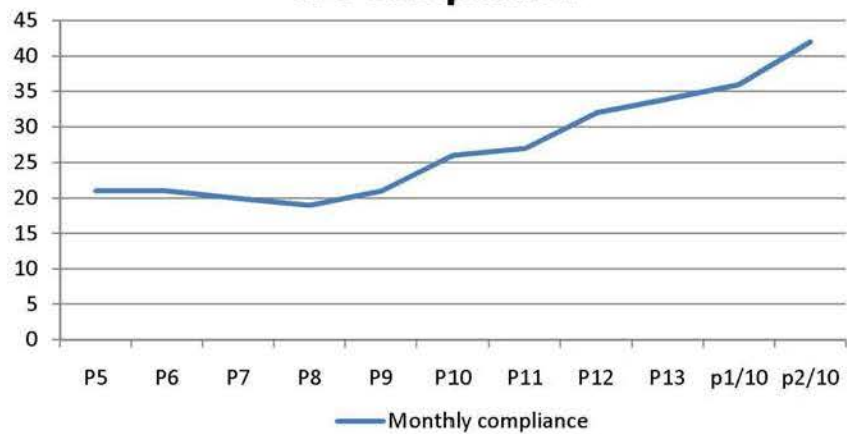
- Finalise **tie** Site Supervisors Checksheet and communicate to relevant staff.
- Run Princes Street wheel rail interface through the tie Safety Verification Scheme.
- S. Smith/C. Kerr to finish updating SVS procedures and add to HSQE website.
- Review and close out actions previously raised during DaST inspections – detail findings in period 3 report.
- tie** to meet with BSC to discuss the progress of the Project Asset Register



### Period Data



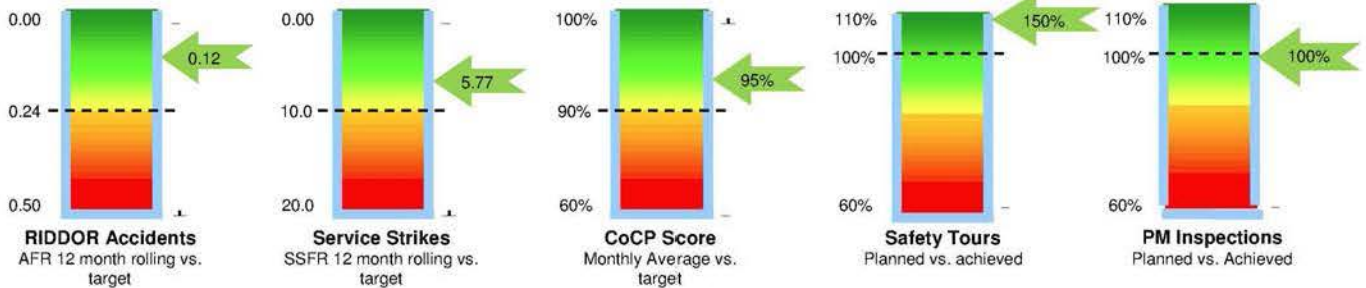
### IDC Compliance





### HS&E ACCIDENTS and INCIDENTS SUMMARY

Total	Total Hours	>3 day	Major	Injury	NM/Unsafe Condition	Service Damage	ENV	RTA	MOP	AFR	SFR
Period	118,591	0	0	1	12	3	2	1	10	0.00	2.53
13 period rolling	1,630,497	1	1	24	212	94	22	8	64	0.12	5.77
<b>BSC</b>											
Period	81,395	0	0	1	4	1	0	0	6	0.00	1.23
13 period rolling	967,351	0	1	15	78	31	10	2	32	0.10	3.20
<b>Other Tram including MUD2</b>											
Period	18,749	0	0	0	8	2	2	1	2	0.00	10.6
13 period rolling	160,173	1	0	0	77	21	10	2	8	0.62	13.1
<b>Carillion</b>											
Period	913	0	0	0	0	0	0	0	1	0.00	0.00
13 period rolling	265,689	0	0	9	57	42	2	4	23	0.00	15.8



### EXECUTIVE SUMMARY

There have been no Reportable accidents during Period 2. The rolling 13 period AFR is 0.12 well below the target of 0.24 for the project. The BSC report on the RIDDOR incident which occurred on the Guided Busway during Period 1 has been reviewed by **tie**. 3 management and control failings have been identified and further remedial action has been requested from the **tie** review. These have been discussed with BSC and dates for the close out of actions has been agreed. A Senior Management meeting between **tie** and BSC will be held in June to discuss further.

Potentially serious incident with BSC/Grahams at Haymarket. Dumper tipped during an unloading operation. The dumper was attempting to “ride over” a large stone when it tipped. The driver was secured to the seat by the seat belt and prevented from being thrown out and crushed. The driver voluntarily provided a D&A sample and tested positive for Cannabis. The driver was removed from site and discussions are underway regarding random testing and contractual requirements. The frequency of service strikes for the project has improved marginally overall from the previous Period, however, the BSC service strike frequency has increased to some extent over the period. A major fibre optic service was damaged but not reported until discovered by the Utility Company. BSC have investigated and their subcontractor, Expanded has removed two persons from site for breach of safe digging procedure and failure to report an incident.

Further to the Period 11 BSC Rail Interface systems audit, which found 4 major findings within the BSC system, the audit has been closed out satisfactorily. A copy of the audit and close out actions will be passed to Network rail at the next Network Rail interface meeting.

**tie** PM inspection continue to be carried out with the contractor. During Period 2, three of the 6 Safety Tours were carried out jointly between **tie** senior management BSC senior management.



### HS&E INSPECTIONS SUMMARY (a summary of significant inspection findings can be found in appendix B)

Project Running Totals	HS&E Tours	HS&E PM Inspection
Number planned	4	11
Number achieved	6	11

### HSQ&E KEY ACHIEVEMENTS

- Q & E team carried out training on the **tie** procedure to ensure that necessary documentation is in place to allow the statutory undertakers to accept completed utility diversions and allow completed MUDFA areas of project to be released to Infracore or CEC.
- Site Access arrangements with BSC working well. **tie** now carrying out BSC inductions to **tie** staff.
- Successful removal of work site traffic management in Haymarket.

### HS&E KEY ISSUES/ AREAS OF CONCERN/ GENERAL NOTES

- The **tie** review of the Reportable accident at the Guided Busway highlighted additional required actions to those identified within the BSC report. These consist of – a) Review organisational control arrangements, i.e. supervisory provision and competency. b) Review how inspections and checks on the safety of lifting operations are covered within active monitoring arrangements. (Actual site practices v theory). c) Ensure incident review findings are appropriately shared with all BSC sub-contractors involved (Border Rail, Vital- Rail & Hydrex), so that immediate actions and identified management failures are understood and addressed. d) BSC to brief IP on return to work on incident findings and confirm that they re-assess the IP as competent to carry out machine controller operations. These actions have been formally communicated to BSC and requested to be complete by the end of May 2010.
- Potentially serious incident with BSC/Grahams at Haymarket. Dumper tipped during an unloading operation. The dumper was attempting to “ride over” a large stone when it tipped. The driver was secured to the seat by the seat belt and prevented from being thrown out and crushed. The driver voluntarily provided a D&A sample and tested positive for Cannabis. The driver was removed from site and discussions are underway regarding random testing and contractual requirements.
- Serious cable strike on a fibre optic cable adjacent to the Gogar roundabout. BSC and Expanded have carried out investigations into the event which has highlighted that there were adequate procedural controls in place but that these were not implemented by site teams. As a result of the investigation the site supervisor and operative have been removed from site.
- A Near Miss involving a Road Rail Vehicle was reported by BSC. The 2 of the vehicles wheels lifted from the rail during a lifting operation. Initial investigation has highlighted some deficiencies in the management of the maintenance regime of the vehicle. A full investigation is underway and more information will be available next period.
- Following the issues with pedestrian management at York Place and Lindsay Road a meeting was held with Ian Woodcock of CEC/SFC, and as a result a review of pedestrian management after installation is now being formally carried out by **tie** and the relevant Contractor. A recent review carried out after the commissioning of traffic management at Haymarket resulted in a small number of improvements.
- Tram Contractors Safety Alliance meeting No. 2 took place and discussed **tie** on call and AIIR review processes. The members discussed the vehicle edge protection system used on Graham's site and offered it up to the members as best industry practice.
- Works Section Plans trial ongoing at depot. A review of **tie's** input into the section plan process was carried out in Period 2. The trail has received favorable comments, however, BSC must formally issue **tie** with a 4 week look ahead to allow **tie** to identify the method statements and risk assessments it wishes to review.

### SIGNIFICANT RISKS FOR THE NEXT PERIOD

RISK	ACTION
<ul style="list-style-type: none"> <li>• Piling operations close to a vulnerable cast iron Gas Main in Russell Road.</li> <li>• Completion of Utility Works at Haymarket</li> <li>• Completion of Utility Works at York Place</li> <li>• New batch of NR possessions by Siemens will continue in Period 2.</li> <li>• Continued ramping up of resources and contractors in depot area.</li> <li>• Utility works at the Bus Gate, Edinburgh Park</li> </ul>	<ul style="list-style-type: none"> <li>• Safe Systems in place by contractors, <b>tie</b> safety monitoring execution of works periodically.</li> <li>• TMRP approval in place</li> <li>• TMRP approval in place</li> <li>• <b>tie</b> 3<sup>rd</sup> party rep and NR interface/possession meetings continuing</li> <li>• Section plan trail ongoing as well as BSC interface meetings.</li> <li>• Ensure BSC are aware of the SUC requirements for safety and quality including handover and site release.</li> </ul>



### ENVIRONMENTAL SUMMARY

*List any significant environmental events, initiatives, breaches etc*

- EN/BSC/02/10 Tower Bridge audit carried out on the 11<sup>th</sup> May 2010. Report sent to BSC. 3 findings recorded. 1 minor, 2 observations.
- Meeting held with TCM, BSC and **tie**. Issues resolving BSC and their subcontractors' understanding of the advanced works now appear to have been resolved. BSC advised to deal with Invasive Species in line with the requirements detailed in their Invasive Species Management Plan and the standard guidelines in place.
- BSC Environmental Management Plan Revision 4 was reviewed and commented on. Status remains at Level C (resubmit) as the Construction Site Drainage Plan supplied by BSC does not meet requirements. Still awaiting issue of updated Invasive Species Plan currently Level B, to include TCM guarantee information.
- There has been no response from BSC regarding the **tie** environmental audit that was carried out during Period 12.
- Complaints received regarding dust/debris airborne pollutant control near to the Ingliston Park and Ride area. BSC advised to ensure they have a robust system in place for dealing with dust and that they ensure all material loads leaving site are covered in line with the requirements of the CoCP.

### QUALITY SUMMARY

*List any significant quality events, initiatives, breaches etc*

- During Start up Meeting carried out with Land Engineering, **tie's** handover and area release procedure was issued. Start date for side entry manhole planned for week commencing 24/05/2010. Joint quality inspection planned.
- TQA/BSC/03/10 Gogar Tram Depot ITP audit carried out on the 11<sup>th</sup> May 2010. Report issued to BSC. 5 observations recorded.
- Briefings given to Site Supervisors and Project Managers regarding the implementation and use of the Utility Handover Procedure and Work Area Release Procedure. All relevant staff have now been briefed. Trials currently being carried out regarding the implementation of the Site Supervisors Checksheet.
- Review of Part C Documentation for MUD Works at the airport carried out by **tie** and Farrans. This will be issued to BAA for review and acceptance.
- 2 audits carried out – Quality audit at Tram Depot relating to collation of ITP and supporting records – 5 observations made and closed out accordingly by BSC. Environmental audit carried out in Section 1 – Tower Bridge – 2 observations made and closed out by BSC. 1 minor finding relating to BSC site SHE inspections – awaiting close out
- Work on or Near the Tramway presentation by ETL for Scottish Water. First delivery from Edinburgh Trams aimed at preparing SW for the risks associated with working near Tramways. Utility companies will be required to prepare standard procedure for planned, routine and emergency works.
- For tenders, **tie's** quality requirements need to be included.

### BEST PRACTICE

*List any significant quality events, initiatives, breaches etc*

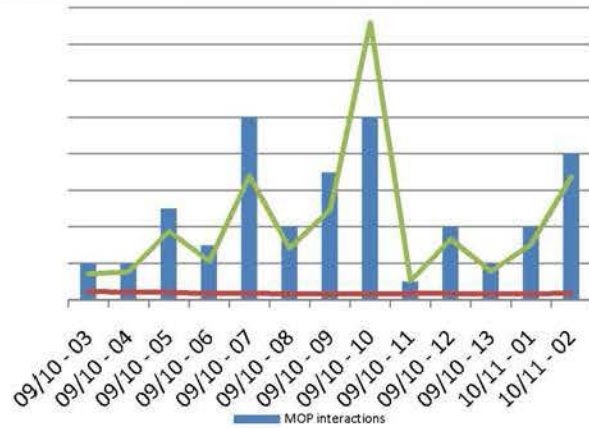
- During audit EN/BSC/02/10, **tie** HSQE Advisor noted that BSC and McKean have a robust system in place for noise and vibration monitoring.
- After consultation with CEC, during the evening of 11/05/2010 a Static Load Test was carried out at the west abutment of Tower Bridge. Agreement was reached for no CoCP relaxation as this is unobtrusive with no excessive related noise.
- BSC have commenced a bespoke one day Cat and Genny and Cable Avoidance Training for 80 personnel over the whole Consortium. The BSC course has both theoretical and practical 'hands on' training



### MEMBER OF PUBLIC INTERACTION SUMMARY

List any significant interactions with members of the public, including RTA's, alleged incidents

- There has been an increase in the number of MOP incidents this Period, The claims are unconnected ranging from complaints regarding noisy works to insurance claims for damaged paint work to a car. This information will be provided to contractors.
- Complaints about noise within the Ocean Terminal area were received when carrying out critical operations. The works could only be completed outwith core trading hours (8pm-8am)
- 2 MoP complaints received after jacket ripped by Heras fencing at South St Andrews Street. (Carillion Works)
- MoP complained about fumes caused by a contractor using a thermal lance while undertaking work for Clancy/Class One in Atholl Place, Edinburgh. Lancing stopped by the contractor.
- Caller concerned about signage at Lindsay Road opposite Hawthornvale.
- MoP drove over large pot hole sustaining damage to front passenger alloy wheel and front passenger tyre.
- Damage to bonnet of car was caused by grit blown off the back of a truck.



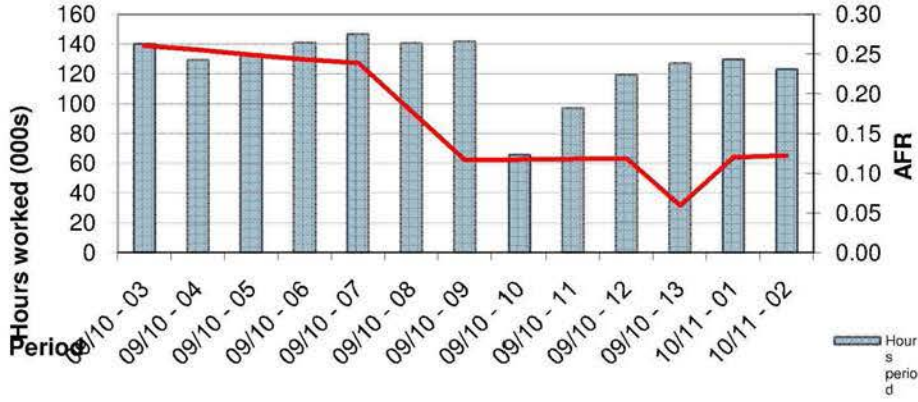
### CDM Compliance

List any significant quality events, initiatives, breaches etc

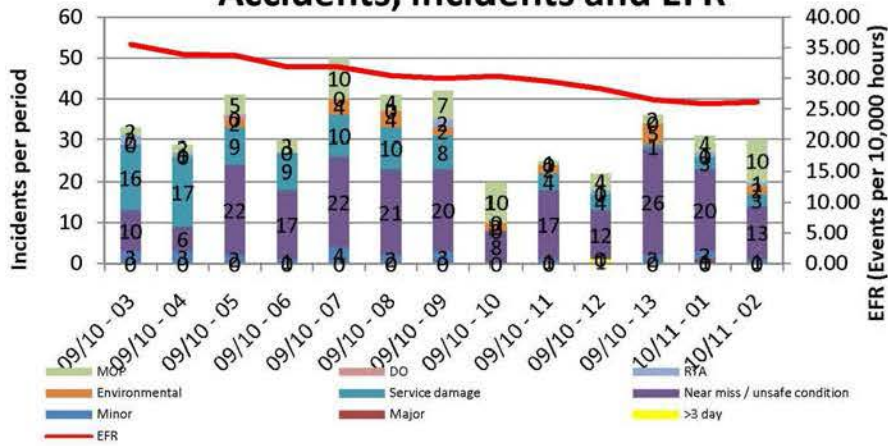
- Approved contractor list has been expanded to accommodate additional tender candidates. The list now extends to 41 companies.
- Pre-construction info packs have been prepared and issued for tenders:
  - Road 7 & 8 pre-construction information pack
  - South Gyle Access Bridge sewer diversion
- Meeting held with SRU to discuss CDM requirements of Murrayfield and ensure that SRU agent Jones Lang LaSalle are in a position to confirm **tie's** protocols and system are symbiotic to SRU's.
- BAA handover of documents for Burnside Road contract and BAA MUD. Utility diversions are nearing completion – **tie** have met with BAA and presented some information and to this date no major adverse comments received on documents submitted.
- A tracker of actions observed through the inspections has been produced which will help to demonstrate monitoring and continued improvement of the discharge of CDM. A number of CDM audits on the **tie** system have been carried out in Period 2.

### GRAPHS

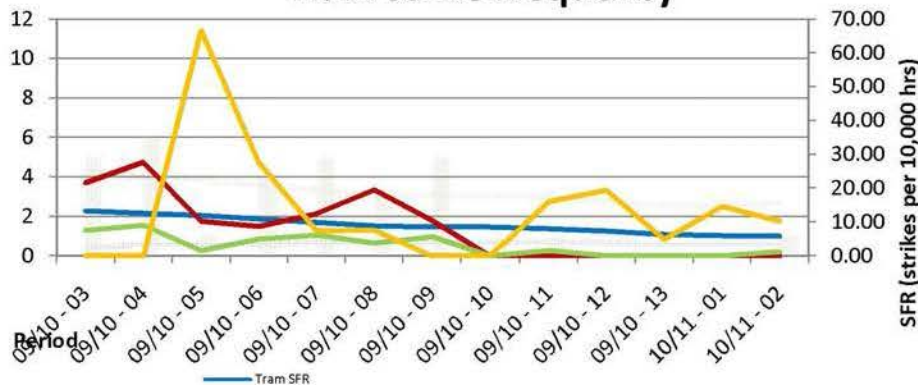
#### Hours worked and AFR over time



#### Accidents, incidents and EFR



#### Tram strike frequency





### APPENDIX A SIGNIFICANT ACCIDENT / INCIDENT

AIIR Ref:	AIIR01229	Serious/Significant	Yes	Action taken by tie (if required):
Contr Ref:		Description:		
Project	Infraco	While excavating trench for kingpost support system Expanded subcontractor (LB Foundations) severed 4 C&W fibre optic cables. Incident was not reported to site team. C&W discovered location of fault at 2200hrs on 23/4/10 and contacted BSC. C&W/BSC attended site on 24/4/10 to install temporary cabling. Works completed 2200hs on 24/4/10.		tie have commenced a review of the incident report and will disseminate the lessons learned to non-BSC contractors
Location:	Section 5C A8 Underpass			
Date & Time	23/4/10 @ 13:40			
A/I type:	Service Damage			
tie PM:	A Scott	Action taken by Contractor:		
Contractor:	BSC	Attended site to assist with repair.BSC and Expanded carried out an investigation and report submitted to tie. Expanded commenced disciplinary process against supervisor and operative for not reporting incident at time of strike. BSC reiterated to all personnel on site that any incident must be reported at time.		
Sub Contr:	Expanded			

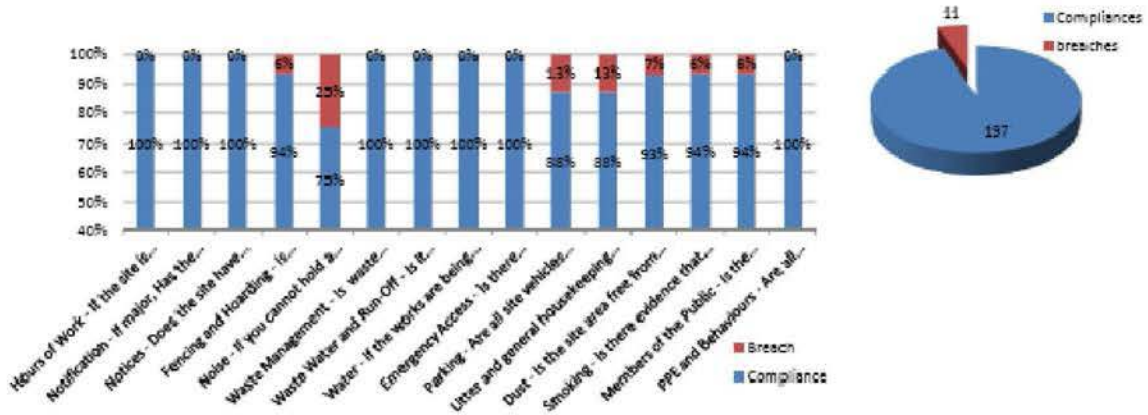
AIIR Ref:	AIIR01241	Serious/Significant	Yes	Action taken by tie (if required):
Contr Ref:		Description:		
Project	Infraco	Call 1: A dumper was reported as being on its side within the Haymarket Viaduct worksite. At time of call not known if anybody was injured. Call 2: Dumper was moving spoil around the site, initial reports indicate that the dumper tried to cross over a large stone this caused the dumper to tip onto its side Confirmed that nobody has been hurt.		Level 2 informed. tie PM and H&S informed. tie awaiting update. tie have asked BSC what measures will be taken across the project in light of this positive result
Location:	Haymarket Viaduct Work Site			
Date & Time	Approx 12:40pm Wednesday 12 <sup>th</sup> May 2010			
A/I type:	Near Miss/Unsafe Condition			
tie PM:	Tom Cotter	Action taken by Contractor:		
Contractor:	BSC	Grahams safety advisor is attending site and commencing investigation and will report to BSC. The driver was suspended from operating plant. The driver was tested and on the 19 <sup>th</sup> May the results showed that traces of cannabis were in his system and he was dismissed from site.		
Sub Contr:	Grahams			

AIIR Ref:	AIIR01252	Serious/Significant	Yes	Action taken by tie (if required):
Contr Ref:		Description:		
Project	Infraco	During offloading of concrete the wheels of the vehicle lifted off the ground		Tie to ensure that BSC carry out full investigation and that Bam Rail RRV is not used on site until full statutory compliance is assured. tie to ask BSC what management systems will be implemented to ensure that this scenario is not repeated.
Location:	Guided Busway			
Date & Time	Thursday 13 <sup>th</sup> May 2010, Approx 11:30am			
A/I type:	Near Miss/Unsafe Condition			
tie PM:	Tom Cotter	Action taken by Contractor:		
Contractor:	BSC	Works stopped immediately by the contractor. Full investigation being carried out. By BSC. Machine quarantined and Siemens confirmed that it will not be used in future on this project until strict regulatory compliance is attained		
Sub Contr:				



## APPENDIX B – INSPECTIONS

### Period 1



### Movement in Period

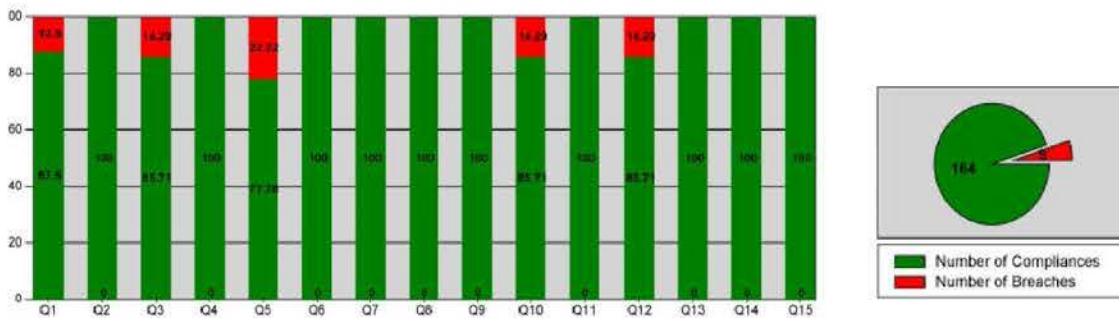
Compliance has remained constant over period at 95% for Period 1 to 2  
There has been an improvement in compliance with the following areas:

- Fencing and Hoarding
- Litter and General Housekeeping

There has been a decrease / stable level of non compliance in the following areas:

- Hours of work
- Notices
- Noise
- Parking
- Dust control

### Period 2



### tie Action

HSQE and Construction Director will discuss issues with Project Mangers and disseminate information to sites and highlight where additional measures are required. This month's targets will focus on notifications, noise and dust compliance. Period 3 compliance will specifically focus on the MUD contract.