



## 4 Week Period Reporting Pack 08/09

**Project Title:**  
Edinburgh Tram Project

**Reporting Period:**  
Period 13 2008/09

**Transport Scotland Project Manager:**  
John Ramsay

**Progress Meeting Date:**

Report authorised by: **Steven Bell**

Signature:...

Date:..... 3/4/09.....

For and on behalf of **tie Limited**



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# 1 Executive Summary

**tie** provided Transport Scotland with a update summary of cost and programme on 26<sup>th</sup> March 2009. The relevant sections of this report have been updated to reflect these unapproved changes. These are subject to review by the Tram Project Board and CEC under the existing delegated authorities.

## HSQE



One major reportable accident occurred during Period 13; a Carillion operative jumped into a 1.4m deep excavation and suffered a broken bone in his ankle resulting in the 13-period-rolling AFR rising to 0.38. This is under investigation by **tie** and Carillion.

The service damage frequency fell for Carillion but increased for BSC. The number of power cables being struck has increased including a significant strike to an 11 KVA cable. The average number score for PM inspections was 89%. BSC average score is 95% and Carillion is 81%. During the period there have been six safety tours carried out (six planned). There were 13 Project Manager Inspections planned and 16 carried out.

The frequency of Member of Public incidents has increased, mainly due to security incidents at Princes Street. Although intruders have managed to climb the fence on some occasions, BSC security has prevented further access. This will be monitored closely.

As a result of the Carillion reportable accident, a “blitz” on excavation inspections was carried out by **tie** work supervisors and HSQE staff. Areas of concern were noted with access, shoring and barriers, these have now been addressed. Further specific inspections will continue.

A successful meeting was held between **tie** and the HMRI during Period 13. The meeting was part of the continual working relationship with the HMRI and their interest in the design, construction, commissioning, operation and maintenance of the project. During the meeting a presentation was given by CAF regarding the Tram and by a representative from Manchester University regarding the wheel rail interface.

## Commercial

Agreement was reached (Princes Street Supplemental Agreement) to allow work to commence on Princes Street from 23<sup>rd</sup> March, notwithstanding resolution of the formal disputes. One of the disputes has now been referred to the next stage of the process – mediation or adjudication.

Additionally, **tie** and BSC have now set up a “Project Management Panel” (PMP) to review and agree issues with the objective of re-invigorating the contractual and working relationships. During the period BSC appointed a new Project Director, Martin Foerder, who until recently was working for Bilfinger Berger on the Malmo Metro project – this has been welcomed by **tie**.

Programme

As per the summary provided to TS on 26<sup>th</sup> March and in advance of developing agreement with BSC, **tie** has developed a recalibrated baseline programme which reflects an Open for Revenue Service date of 23 Feb 2012. The table below also reflects a completely unmitigated programme as a control scenario only. This is an unapproved delay to the Open for Revenue Service date. The unmitigated live programme predicts an Open for Revenue Service date in June 2012.

Although the recalibration exercise has been ongoing for some weeks, progress with engaging with Infracore on this matter has been hampered until now as a result of the other disputes. **tie** have a firm expectation of fully constructive engagement by the consortium following the signing of the Supplemental Agreement (SA) for Princes Street and the establishment of the PMP amongst the parties to resolve outstanding issues and ensure progress is made on critical construction activities. Early evidence from the first PMP meetings has supported this constructive engagement.

On a section by section basis there are “swings and roundabouts” identified in terms of improvement / degradation of delivery dates. Integration of these sections by BSC is now underway and the re-baselined programme assumes the all logic changes will be accepted by BSC.

Area	Description	Unmitigated Finish	Re-baseline Finish
Section 1A	Newhaven Road to Foot of the Walk	03-MAY-12	08-SEP-11
Section 1B	Foot of the Walk to McDonald Road	10-JAN-12	09-SEP-11
Section 1C	McDonald Road to Princes Street west	28-MAR-12	06-SEP-11
Section 1D	Princes Street West to Haymarket	19-OCT-11	17-MAR-11
Section 2A	Haymarket to Roseburn junction	14-FEB-11	28-JUL-10
Section 5A	Roseburn Junction to Balgreen Road	20-MAR-12	17-JUN-11
Section 5B	Balgreen Road to Edinburgh Park central	23-JUN-11	04-FEB-11
Section 5C	Edinburgh Park Central to Gogarburn	24-OCT-11	20-JAN-11
Section 6A	Gogar depot	28-MAR-11	15-OCT-10
Section 7A	Gogarburn to Ingliston Park and Ride	07-JUL-11	11-MAR-11
Section 7B	Ingliston Park and Ride to Airport	26-JUL-11	11-MAR-11
Section A	Depot (ready to receive trams)	21-JAN-11	15-OCT-10
Section B	Test track	07-JUL-11	27-DEC-10
Section C	All construction complete	20-APR-12	27-AUG-11
Section D	Open for Revenue Service	17-OCT-12	23-FEB-12

Importantly, the re-baseline programme does not take account of any opportunities regarding:

1. Improved productivity rates – Princes Street will be an important test in this regard;
2. Embargo relaxations;
3. Alternative construction methodologies to recover time;
4. Adjustments to the testing and commissioning phase (the original programme window has been retained); or
5. Partial opening options.

Progress – Design

Good progress is being made in Prior and Technical Approvals with 91% and 84% of each being granted by CEC, respectively. Of the Prior Approvals required, only five remain to be granted and 13 Technical Approvals remain to be granted.

Structures approvals are progressing well – one structure from v31 remains to be approved (Balgreen Road NR access bridge). Roads and drainage approvals remain difficult although positive progress has been made to resolve CEC detailed comments with three areas outstanding for Technical Approval in Phase 1a. Scottish Water are now making good

progress with drainage outfall consents with two of the four on-street sections informally approved. Two consents are still to be submitted by SDS. All other consents expected to be granted by SW in Period 1 2009/10.

The section 1B close report was signed off by CEC on 24/03/09. Section 1C3 and 1D close reports are now with CEC to conclude. Other sections (excluding Section 7) are pending on SW approval.

Seventy four out of the 93 IFCs have been issued to date. The slippage is being addressed as part of the ongoing Approvals Taskforce and is incorporated into the re-calibration of programme. Reasons for design slippage are being reviewed and recorded each week at the design taskforce meeting which is focused on resolving outstanding design issues. This slippage will be addressed as part of the re-calibration of the programme. **tie** are identifying and implementing opportunities to mitigate the impacts of this slippage.

The quantum of designs which are required to go through a re-design process as a result of either the approvals process or value engineering is captured in the programme analysis and the integrated design programme incorporating all system activities is expected from BSC.

#### Progress – MUDFA (Utilities)

Utility diversions are now complete in sections 5a, 5b and 6 (depot). BT cabling and SGN connection works are now underway. Utility diversions continue on a number of fronts throughout the city including Leith Walk, York Place, St Andrew's Square, The Mound and Haymarket. For Leith Walk, works are now nearing completion with many of the final water and gas tie-ins now being scheduled. SGN connections will commence in Leith Walk during April. Cumulative progress to date is shown in the table below.

	Rev 7.9 total (m)	Revised total (m)	Plan to date (m)	Completed to date (m)	% completed
On-street	40,625	38,324	38,324	24,988	65.2%
Off-street	11,969	8,410	8,410	7,789	92.6%
<b>Total</b>	<b>52,594</b>	<b>46,734</b>	<b>46,734</b>	<b>32,777</b>	<b>70.1%</b>

The following is of note:

- The A8 sewer turn of flows was achieved on 26<sup>th</sup> March and demobilisation is expected by the end of April;
- Physical work on the diversion of the high pressure gas main in the Mound is well underway;
- De-scoping is underway at Broughton Street (Section 1c) to simplify the diversions required following the results of trial holes in January;
- The 800mm watermain at Gogar has been completed and the Infraco contractor now has significant access to the depot. Earthworks will commence in Period 1;
- Utility diversions were completed by BAA in one section at the airport;
- BT cabling works are underway and SGN connections start on 13<sup>th</sup> April;
- 3.1% against a target of 2.7% of the plan was delivered in the period;
- Incomplete utility diversions are now impacting on construction works at Haymarket and Leith Walk. This is being addressed by integration and reviewing traffic management options to gain greater productivity; and
- Additional delivery options are being considered for diversions in the Forth Ports estate and at Edinburgh Airport to further accelerate completion of the utility works.

#### Progress – Infraco (including Tramco)

Work started on Princes Street on 23<sup>rd</sup> March following the contractual issues which delayed the works following the diversions being implemented in February. There is a focus via the PMP to deal with the top priority issues affecting progress including the depot and key structures. This has successfully led to agreement on works commencing at the depot in

Period 1 and will continue to ensure no further barriers emerge and some of the lost time is recovered.

Disappointingly, progress has continued to be slow at other locations where work is ongoing including Edinburgh Park (bridge beams being installed from 8<sup>th</sup> April) and Carrick Knowe. Additionally, tram construction work has been deferred on Leith Walk until utility diversions have been completed. This is expected to recommence in late summer. Alternative access arrangements are being considered to recover some of the time lost. The sub-contractor has been redeployed to construct the Verity House access road. Construction at Gogarburn has progressed well and bridge beams are being delivered on 5<sup>th</sup> May.

BSC have still not entered into formal contracts with any of their sub-contractors.

Good progress is being made with delivery of Tramco deliverables against the schedule with the modules for the first trams currently 2 months ahead of schedule.



View of Edinburgh Tram assembled bodyshell in CAF factory, Spain 01.04.09

Work has progressed with traffic management planning and for the tram construction works at Haymarket which are due to commence in June.

#### Progress – Other

- Draft schedules for the TROs have been prepared and formal consultation will commence in May / June;
- Haymarket carpark compensation – **tie** have agreed compensation with NR and will settle this before the end of the current financial year. **tie** continue to discuss with TS the additional compensation payable to First Scotrail, as a result of the extension of the FSR franchise from Nov 2011 to Nov 2014, as it is believed to be a TS cost;
- Building fixings – deemed consent has been obtained from 306 owners as well as 66 consents with the owners' agreement. There are nine fixings where matters remain unresolved and negotiations remain ongoing. However, there remains a possibility that these relevant owners may have to be referred to the Sheriff for resolution. CEC are leading the legal process, supported by the project team;
- Frontline are progressing well with the alterations to the road adjacent to the guided busway and the TRO will be in place during April; and
- Procurement is complete for the removal and relocation of a number of monuments in Edinburgh, the most significant of which is the Hearts War Memorial at Haymarket which is expected to be removed in Period 2.

#### Cost

Actual COWD for 2008/09 is £101.0m, in-line with the Period 12 forecast.

A full reforecast of the cost profile has been produced which links the re-baselined programme (opening 23<sup>rd</sup> Feb 2012) to Infracore constructions milestones – the resultant forecast spend on Phase 1a in 2009/10 is £150.4m In addition, we assume we will incur costs of £3.2m in 2009/10 as a result of the postponement of Phase 1b construction.

The AFC for Phase 1a reflects an as yet unapproved increase of £15m to the project risk allowance and total Phase 1a cost of £527m. The approved cost estimate remains at £512m. Allowing for Phase 1b postponement costs of £6.2m there is £11.7m of funding "headroom" within the £545m total funding available.

**tie** and CEC are in the process of deploying a work plan to target key risk areas and bottom-out issues in order to improve confidence and bring greater certainty to the allocation of risk. This work plan is to be implemented in parallel with on-going engagement with Infraco on all programme and commercial issues. This will be updated in the Period 1 report.

During the period £1.2m was drawn down from the risk allowance. This has been approved at the Change Panel in line with the project delegated authorities.

#### Potential changes

The following potential changes have been identified. These will impact cost, programme or risk and are outwith the £522-540m range given to TS on the 26<sup>th</sup> March:

- Gogar interchange – impact of changes to facilitate the provision of the Gogar interchange station (to be funded by TS); and
- Picardy Place – CEC change funded via developer under consideration.

The impact of such items, including the identification of ranges of risk and opportunity, is subject to review with the Tram Project Board.

#### Risk

A total of seven separate risk reviews were held during the period. The QRA was reduced in the period following the drawdown of £1.2m from risk. The total unutilised risk allowance included in the approved budget of £512m is now £23.2m.

Included in the top primary risks are:

- Failure of Infraco to commence work in line with programme;
- Delay to IFC drawings beyond V31;
- Tramway runs through area of previously unidentified contamination / unforeseen ground conditions;
- Safety incident during construction;
- Amendments to design scope from current baseline and functional specification; and
- Unknown or abandoned assets impacts scope of Infraco work.

In addition, the potential risks identified in regard to programme slippage are being reviewed and will form part of the updated QRA.

There are 47 risks in the risk register. There were no new risks identified in the period and one was closed ('Costs associated with obtaining wayleaves', was closed as there are no more wayleaves required). Treatment plans are in place for each risk and are being monitored.

#### Communications / Customer Service

In response to the Princes Street contract resolution on 20 March, the joint **tie** CEC team organised notifications to be sent to all MSPs, MPs, Councillors, local business and residents. Media activity has included news release distributed on Princes Street contract resolution, photo-shoot with Jenny Dawe on Princes Street works commencing and enquiries on project status.

The production and distribution of notifications continue on a regular basis. The tram website recorded 17,277 total visits in March 2009, which is up by 449 compared to February. The



design and delivery of Princes Street banners and tram mock-up support has been ongoing throughout this period. The volume of correspondence decreased in the period and continues the downward trend. 537 enquiries were received and 34 notifications of works were distributed. Information request remain the main reason for contact with the public. Customer service levels are generally in line with the targets set.

The team will be working closely with the Health and Safety team to produce a Health and Safety video. This will be used for contractor safety briefings and will reiterate **tie's** commitment to Health and Safety. The Schools Programme will be focusing on the production of a new fact sheet and the preparation for tram bus visits in May. Filming for the new tram video will be taking place at the mock-up from 15-17 April.

## 2 Progress

### 2.1 Overall

Overall progress remains behind both the current three month look-ahead and the master programme, primarily due to:

- Finalisation of the agreement of change delaying the commencement of work. This is now being addressed through dispute resolution;
- Incomplete utility diversions caused in part by traffic management constraints (e.g. Manor Place);
- Slow mobilisation of Infraco;
- Failure of Infraco to submit preparatory paperwork in a timely manner;
- Requirement for re-design of temporary works;
- Design slippage since novation of design to Infraco (now recorded in v43 of the design programme);
- Design changes as a result of the Prior and Technical Approvals process; and
- Consortium integrated design programme and validation.

Work started on Princes Street on 23<sup>rd</sup> March following the contractual issues which delayed the works following the diversions being implemented in February. There is a focus via the PMP to deal with the top priority issues affecting progress including the depot and key structures. This has successfully led to agreement on works commencing at the depot in Period 1 and will continue to ensure no further barriers emerge and some of the lost time is recovered.

The time impact (38 days) of the v26 / v31 design programmes at the time of Financial Close was agreed in Period 8 (2008/09) and the commercial consequence of this continues to be discussed.

As per the summary provided to TS on 26<sup>th</sup> March and in advance of developing agreement with BSC, **tie** has developed a recalibrated baseline programme which reflects an Open for Revenue Service date of 23 Feb 2012. The table below also reflects a completely unmitigated programme as a control scenario only. This is an unapproved delay to the Open for Revenue Service date. The unmitigated live programme predicts an Open for Revenue Service date in June 2012.

Although the recalibration exercise has been ongoing for some weeks, progress with engaging with Infraco on this matter has been hampered until now as a result of the other disputes. **tie** have a firm expectation of fully constructive engagement by the consortium following the signing of the SA for Princes Street and the establishment of the PMP to resolve outstanding issues and ensure progress is made on critical construction activities.

On a section by section basis there are “swings and roundabouts” identified in terms of improvement / degradation of delivery dates. Integration of these sections by BSC is now underway and the re-baselined programme assumes the all logic changes will be accepted by BSC.

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Section 1D	Princes Street west to Haymarket	19-OCT-11	17-MAR-11
Section 2A	Haymarket to Roseburn junction	14-FEB-11	28-JUL-10
Section 5A	Roseburn Junction to Balgreen Road	20-MAR-12	17-JUN-11
Section 5B	Balgreen Road to Edinburgh Park central	23-JUN-11	04-FEB-11
Section 5C	Edinburgh Park Central to Gogarburn	24-OCT-11	20-JAN-11
Section 6A	Gogar depot	28-MAR-11	15-OCT-10

Section 7A	Gogarburn to Ingliston Park and Ride	07-JUL-11	11-MAR-11
Section 7B	Ingliston Park and Ride to Airport	26-JUL-11	11-MAR-11
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Importantly, the re-baseline programme does not take account of any opportunities regarding:

1. Improved Productivity rates – Princes Street will be an important test in this regard;
2. Embargo relaxations;
3. Alternative construction methodologies to recover time;
4. Adjustments to the testing and commissioning phase (the original programme window has been held); or
5. Partial opening options.

The recalibration of the programme is one of the key priorities for the PMP in Period 1.

## 2.2 Design

### IFC Design

The design is progressing as follows:

- IFCs – Phase 1a 74 issued out of 93 (Edinburgh Park station Bridge Redesign included in v42);
- Prior Approvals are progressing well with 91% granted, three left to be submitted (including the RBS Gogarburn tramstop) and five left to be granted;
- Technical approvals also progress well with 84% granted, ten remaining to be submitted and 13 left to be granted;
- Structures approvals are progressing well – one structure from v31 remains to be approved (Balgreen Road NR access bridge);
- Roads and drainage approvals remain difficult although positive progress has been made to resolve CEC detailed comments with three areas outstanding for Technical Approval in Phase 1a (1A3, 1C2 and 6 Roads);
- Scottish Water are now making good progress with drainage outfall consents with two of the four on-street sections informally approved. Two consents are still to be submitted by SDS. All other consents expected to be granted by SW in Period 1 2009/10; and
- The Section 1B close report was signed off by CEC on 24/03/09. Section 1C3 and 1D close reports are now with CEC to conclude. Other sections (excluding Section 7) are dependent on SW approval.

The quantum of designs which are required to go through a re-design process as a result of either the approvals process or value engineering is captured in the programme analysis and the integrated design programme is expected from BSC.

Phase 1a only	Number required		Number	
	v31	v42	Submitted	Granted
Prior Approvals	49	54	51 (94%)	49 (91%)
Technical Approvals	71	80	70 (88%)	67 (84%)

Reasons for design slippage are being reviewed and recorded each week at the design taskforce meeting which is focused on resolving outstanding design issues. This slippage will be addressed as part of the re-calibration of the programme. We are identifying and implementing opportunities to mitigate the impacts of this slippage.

Although there is evidence of better management of SDS by BSC, this has not yet resulted in improved design performance.

### 2.3 Utility works (MUDFA)

Period 13 has seen MUDFA progress as follows

Rev.07.09 Figures	Period		Delta	Cumulative		Delta
	Plan	Actual		Plan	Actual	
<b>MUDFA PERIOD 12 PROGRESS</b>						
Section 1a Newhaven to Foot of the Walk	5.9%	0.1%	-5.8%	100.0%	39.2%	-60.8%
Section 1b Foot of the Walk to McDonald Road	0.7%	1.1%	0.4%	100.0%	99.7%	-0.3%
Section 1c McDonald Road to Princes Street west	2.3%	9.1%	6.8%	100.0%	59.9%	-40.1%
Section 1d Princes Street west to Haymarket	0.0%	4.4%	4.4%	100.0%	76.4%	-23.6%
Combined Sections 1A-1B-1C-1D (On-street) Newhaven Road to Haymarket	2.7%	3.4%	0.6%	100.0%	65.2%	-34.8%
Section 2 Haymarket to Roseburn Junction	0.0%	15.2%	15.2%	100.0%	93.9%	-6.1%
Section 5a Roseburn Junction to Balgreen Road	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%
Section 5b Balgreen Road to Edinburgh Park Central	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%
Section 5c Edinburgh Park Central to Gogarburn	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%
Section 6 Gogar depot	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%
Section 7 Gogarburn to Edinburgh Airport	22.3%	2.4%	-19.9%	100.0%	45.9%	-54.1%
Combined Sections 2A-5A-5B-5C-6A-7A (Off-street) Haymarket to Edinburgh Airport	2.7%	2.1%	-0.6%	100.0%	92.6%	-7.4%
<b>FULL ROUTE PHASE 1A NEWHAVEN ROAD TO EDINBURGH AIRPORT</b>	<b>2.7%</b>	<b>3.1%</b>	<b>0.4%</b>	<b>100.0%</b>	<b>70.1%</b>	<b>-29.9%</b>

Section	Commentary
Section 1a Newhaven to Foot of the Walk	Work between Newhaven – Ocean Terminal expected to commence in May. Baltic Street Junction redesign ongoing to deal with difficult traffic management constraints. Constitution Street interface with both archaeological works and potential transfer of side entry manholes scope to Infraco - includes seven side entry manholes from Queen Charlotte Street to Duke Street.
Section 1b Foot of the Walk to McDonald Road	Leith Walk – moving significantly towards completion from FOTW to Macdonald Road. This allows SGN and BT works to commence with connections and cabling. Phase 3 of London road works due to commence on 6 <sup>th</sup> April.
Section 1c McDonald Road to Princes Street west	Work is progressing well at The Mound (although there is a two weeks delay to recover). There is also significant progress in St. Andrews Square and York Place.
Section 1d Princes Street West to Haymarket	Lothian Rd / South Charlotte Street water connections being planned within the existing traffic management for Princes Street. Haymarket junction works are ongoing with Manor Place and Dalry Road re-opened in the period. Grosvenor Street was not closed at the start of the period as planned due to a gas leak.
Section 2 Haymarket to Roseburn Junction	Haymarket Yards (lower) complete by 20 <sup>th</sup> March. Haymarket Yards (upper) including Haymarket Terrace sewer crossing by 8 <sup>th</sup> May.
Section 5a Roseburn Junction to Balgreen Road	MUDFA diversions complete. Utilities transferred to Infraco remain in Scotrail depot
Section 5b Balgreen Road to Edinburgh Park Central	BT cabling is expected to be completed in Period 1.
Section 5c Edinburgh Park Central to Gogarburn	Utility snagging complete. BT re-cabling commencing 23 <sup>rd</sup> March.
Section 6 Gogar depot	Complete
Section 7a Gogarburn to Edinburgh Airport	Keir have completed and tested all utility diversion associated with the BAA walkway project. Delivery of the remainder of scope is being addressed with BAA.

### 2.4 Tramworks (Infraco)

The project continues to experience problems with slow progress and, in particular, appointment of direct BSC resource and final appointment of the main package contractors. All BSC sub-contractors continue to operate with Limited Letters of Intent whilst awaiting conclusion of the full sub-contracts.

Haymarket viaduct and the Carrick Knowe bridge constructions have been on hold due to BSC's sub contractor issues. However, work has continued on a number of worksites including Princess Street, Edinburgh Park Bridge, A8 underpass, the Gogarburn Bridge, Gogar culvert 2, culvert 3 and the new access road at Verity House.

### Progress against Contract Programme

Summary milestones against the agreed Infraco contract and the short term programme milestones are shown in the table below (number of milestones).

	Period 13			Cumulative (short term)			Cumulative (contract programme)		
	Planned	Achieved	%	Planned	Achieved	%	Planned	Achieved	%
Prelims	3	3	100%	36	36	100%	36	36	100%
Construction	15	6	40%	39	30	77%	360	30	8%
<b>Total</b>	<b>18</b>	<b>9</b>	<b>50%</b>	<b>75</b>	<b>66</b>	<b>88%</b>	<b>396</b>	<b>66</b>	<b>17%</b>

Progress is now being monitored against the Revision 1 programme which 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		Delta	Cumulative		Delta
	Plan	Actual		Plan	Actual	
<b>INFRACO PERIOD 13 PROGRESS (Contract Programme)</b>						
Section 1a Newhaven to Foot of the Walk	2.6%	0.0%	-2.6%	10.7%	0.0%	-10.7%
Section 1b Foot of the Walk to McDonald Road	5.2%	0.0%	-5.2%	29.5%	1.4%	-28.1%
Section 1c McDonald Road to Princes Street west	2.1%	0.0%	-2.1%	5.9%	0.0%	-5.9%
Section 1d Princes Street west to Haymarket*	13.0%	0.0%	-13.0%	27.2%	0.6%	-26.6%
Combined Sections 1A-1B-1C-1D (On-Street) Newhaven Road to Haymarket	5.2%	0.0%	-5.2%	16.1%	0.4%	-15.7%
Section 2 Haymarket to Roseburn Junction	3.1%	0.0%	-3.1%	64.2%	12.6%	-51.6%
Section 5a Roseburn Junction to Balgreen Road*	4.0%	0.0%	-4.0%	44.0%	2.9%	-41.1%
Section 5b Balgreen Road to Edinburgh Park Central	8.2%	1.2%	-7.0%	72.6%	5.0%	-67.6%
Section 5c Edinburgh Park Central to Gogarburn	2.6%	0.0%	-2.6%	45.1%	1.6%	-43.5%
Section 6 Gogar Depot	6.6%	0.0%	-6.6%	62.6%	0.0%	-62.6%
Section 7a Gogarburn to Edinburgh Airport	1.4%	0.2%	-1.2%	42.3%	2.5%	-39.8%
Combined Sections 2A-5A-5B-5C-6A-7A (Off-Street) Haymarket to Edinburgh Airport	5.3%	0.3%	-5.0%	57.5%	3.4%	-54.1%
<b>FULL ROUTE PHASE 1A NEWHAVEN ROAD TO EDINBURGH AIRPORT</b>	<b>5.2%</b>	<b>0.2%</b>	<b>-5.0%</b>	<b>41.2%</b>	<b>2.2%</b>	<b>-39.0%</b>

\* Enabling works and works as part of a change, and therefore not included in the contract programme, were completed

Section	INFRACO Commentary
Section 1a Newhaven to Foot of the Walk	BSC have reinstated the sites on Leith Walk and work has been deferred until the completion of utility diversions. Section 1A4 Lindsay Road under review. Design awaited to allow Utility diversions to be completed for W1 Lindsay Road retaining wall.
Section 1b Foot of the Walk to McDonald Road	Roadworks due to commence post Leith embargo delayed awaiting MUDFA completion. Revised traffic management being investigated.
Section 1c McDonald Road to Princes Street West	Roadworks due to commence post Leith embargo delayed awaiting MUDFA completion. Revised traffic management being investigated. Princes Street works re-started 23 <sup>rd</sup> March 09. Surface planning work has now commenced with blacktop removal. Due to the presence of the steel and the other obstructions the contractor is now using alternative methods to complete the construction.
Section 1d Princes Street West to Haymarket	Princes Street works re-started 23 <sup>rd</sup> March 09. Surface planning work has now commenced with blacktop removal. Due to the presence of the steel and the other obstructions the contractor is now using alternative methods to complete the construction. Tram Works in Haymarket are dependent on MUDFA completion expected late June 09.
Section 2 Haymarket to Roseburn Junction	Haymarket viaduct temporary works design resolved although contractor has not yet mobilised following the Christmas break. Verity House access road has commenced. All required consents in place for track installation. Commercial issues holding-up commencement of works. Drainage and ductworks completed. Tree felling and site clearances have been completed during this period to avoid the bird nesting period.
Section 5a Roseburn Junction to Balgreen Road	Temporary and permanent works re-design delaying various structures. All required consents in place for track installation.
Section 5b Balgreen Road to Edinburgh Park Central	Construction of the Carrick Knowe bridge is on hold due to subcontractor and commercial issues. No package contractor has been procured for this bridge. The north and south abutment wall concrete has been poured for the Edinburgh Park Station bridge.
Section 5c Edinburgh Park Central to Gogarburn	A8 underpass recommenced during Period 13 but has since stopped due to discovery of obstructions.
Section 6 Gogar depot	Earthworks due to commence Period 1.
Section 7a Gogarburn to Edinburgh Airport	Gogarburn underbridge east abutment continues. Casting of culverts underway

## 2.5 Tram construction (Tramco)

Good progress continues to be made with the progress of deliverables against the schedule. The production line has commenced during Q1 2009 with the delivery of the first tram still on schedule for April 2010.

The CAF contract programme is incorporated in the Master Tram Project Programme and the Period 13 update confirmed the following milestone dates:

- Mock-up finished – Delivered
- 1<sup>st</sup> Tram delivery – 09-Apr-10
- 5<sup>th</sup> Tram delivery – 10-May-10
- 27<sup>th</sup> Tram delivery – 17-Jan-11

The fabrication programme maintains approximately two months ahead of schedule.

## 2.6 Testing and commissioning

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 detailed sequence and scope of testing and commissioning prior to systems Acceptance testing is to be programmed out and proposed by BSC in further detail in the next year.

To achieve these objectives there is a layered approach to the overall testing and commissioning as laid out in the table below.

What	Who	Status
Design assurance	BSC (SDS) / tie	Underway.
Quality	Infraco	Ten of the 37 inspection and test plans have been submitted. A workshop will be held with BSC for each, to allow tie comments to be incorporated prior to formal issue.
Systems Safety	Infraco / Independent Competent Person(ICP) / TEL / Transdev	Started - Safety verification plan in place and process of verification already underway. The ICP has been appointed and has started his verification process.
Performance*	Infraco / Transdev / TEL	Requirements set out in the employer's requirements and will be tested following completion of each section of the network.

BSC have produced Inspection and Test Plans (ITP's) for the current set of construction works, however they have not yet produced a consolidated Test and Commissioning Plan. Constituent elements are available from CAF, the tram manufacturer, the Operator and an overall framework from TEL exists to cover the activities.

It is intended over the next 3 periods to obtain collective engagement on testing and commissioning, and agreement to the formation of a multi-organisation, multi-disciplinary test coordination team.

Testing undertaken and witnessed in the period has included the A8 piles at Gogar and the first tram set of body shells, (weld quality, dimensional tolerances and water tightness).

\*Pre-system acceptance testing includes both Factory Acceptance Tests(FATs), site Acceptance Tests (SATs), Sub-system integration tests (SITs) and System commissioning Tests(SCTs). Once a section of the network is physically completed and the SITs are satisfactorily completed then the formal acceptance process requires BSC to carry out and pass a series of systems Acceptance Tests in order to achieve Sectional Completion. These are shown in the table below.

Test	Test Name	Test Description	Programme
T1	Post Commissioning Test	To demonstrate that each Section of the ETN in sequence is able to perform in an acceptably safe manner and deliver the required run times. This is the gateway test to driver training.	Post Commissioning Test immediately follows successful commissioning of each section and is required for progressing to Driver Training.
T2	Performance Test 1	After Phase 1a is complete and has passed Test T1, this test demonstrates that Phase 1a is able to perform satisfactorily before starting the three-month Shadow Running period. This is the gateway test to shadow running.	Performance Test 1 will immediately precede the Shadow Running period and is a requirement for progressing to this phase of the programme.
T3	Pre-operations Test	The test covers a seven day period during the latter part of the Shadow Running phase of the programme using the initial 6/12 tph service timetable.	Pre-operations Test shall immediately precede the Service Commencement Date.
T4	Network Performance Test	The Test is carried out over a 28 day period in Passenger Service to establish that the ETN can reliably operate.	To be completed within twelve months of the Service Commencement Date.
T5	Network Reliability Test	Reliability Testing of key sub-systems in Passenger Service.	To be completed within twelve months of the Service Commencement Date.

This whole process can be described by the following flowchart.



Stage	Task Chart	Tests	Description
8	Passenger Service	Network Performance (T4) and Reliability Test (T5)	The date upon which the Edinburgh Tram Network starts in public service
	↑		<b>PASSENGER SERVICE COMMENCEMENT</b>
7	Shadow Running	Pre-Operations Test (T3)	The period of Tram operations that simulates full public service operation including running to published timetable and calling / dwelling at Tramstops before the ETN enters public service
	↑		<b>ENERGISATION OF COMPLETED PHASE OF THE ETN</b>
6	Test Running & Driver Familiarisation	Performance Test 1 (T2)	The period post-ETN commissioning used to complete driver and control room staff training and gain confidence to enter Shadow Running Phase
	↑		<b>ENERGISATION OF SECTION OF THE ETN</b>
5	Commissioning	System Integration Test	All subsystems, including the tram, are fully-integrated to form the ETN and are tested to demonstrate that they work together successfully and meet the Employer's Requirements
	↑		<b>ENERGISATION OF SECTION OF THE ETN</b>
4	Set to Work Tests	Site Tests	The point at which subsystems have been installed and then tested to prove they meet their requirements with both Type tests and Site Acceptance tests
	↑		<b>LIMITED ENERGISATION OF PART OF THE ETN</b>
3	Installation / Construction		Once the subsystem has successfully passed Factory Acceptance Tests installation / construction at site will take place and as appropriate a delivery test undertaken.
	↑		
2	Factory Acceptance Tests	FAT	Thorough demonstrable testing of the subsystem at Infraco's premises
	↑		
1	Build / Manufacture		Manufacture and assembly of the System by the Infraco
	↑		
D	Design		The scope of the works designed through Approval in Principle and Approved for Construction & Manufacturing Drawings; with associated verification and validation test and integration plans complete

A liaison meeting is arranged with HMRI and the ICP in Period 1 09/10.

## 2.7 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. The most significant interface of concern are the Gogar interchange. **tie** has requested an estimate of cost and programme for the design of the tram works and this is due from BSC by the end of the 1<sup>st</sup> week in April 2009. Following meetings with CEC and TS, this would allow a complete instruction to be given by the end of April. This period the St James centre re-development has moved from red to amber as commencement of this project is now indicated towards the completion of the Tramworks and therefore interfaces should diminish.

External Project	Promoter	Project Description	Potential Conflict	Tram contract		Project dates		Comments
				Start	Finish	Start	Finish	
Gogar Surface Station	Transport Scotland	New mainline station to the east of the Gogar depot.	Unknown as yet but expected to include: 1. Re-design impacts 2. Approvals and consents 3. Tram alignment issues 4. Traffic management clashes 5. Potential site access issues	Aug-08	Nov-10	Oct-09	Mar-11	All works with the exception of track installation between Gyle Centre and the depot stop and E&M Installations will be complete by July 2010. <b>tie</b> and TS have developed an integrated programme which is updated and reviewed periodically.
St. James Centre re-development	CEC / Henderson Global	Redevelopment of existing shopping centre.	Interface with Picardy Place junction reconstruction and Cathedral Lane sub-station.	Nov-10	Oct-11	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.
Haymarket Interchange		Haymarket Accessibility Project (planned for 2009-10).	Utility diversions continue until June.2009 Potential Interface with Infraco works at Haymarket junction commencing July.2009	May-09	Apr-10	TBA	TBA	Possible interface between installation of lifts for this project and construction works for viaduct, tramstop and OHL. Will become clearer as programme detail develops.
St. Andrew Square development	CEC	Demolition of existing buildings bordering South Side St. Andrew Square, South St David Street and Meuse Lane.	Infraco programme.	Nov-09	Mar-10	Apr-09	Sep-09	Utility Diversions in South and mid St Andrew Square will be complete mid April. Main demolition to commence late April following Traffic Management changeover. Telecoms works will continue on the east side. Infraco TM being managed. Project being reviewed periodically.
Princes Street Hotel	Deramore Property Group	Redevelopment of existing buildings at 121 - 123 Princes Street to 80,000 square feet 3 floor of retail and 100 bedroom hotel.	Direct clash with Infraco programmed works in Princes Street during the traffic diversions.	Mar-09	Nov-09	Early 2009	Jun-11	Currently in planning stage. CEC is managing the developer within the tram constraints. Contractors programme being sought.
Princes Street Hotel	asediqbal consulting	Site clearance and redevelopment at 125a Princes Street on all 3 floors to convert to an EasyHotel	Access through BSC worksite. Internal strip-down ongoing and access required for debris removal.	Feb-09	Nov-09	TBA	TBA	Requirement to access BSC worksite to allow removal of debris.

External Project	Promoter	Project Description	Potential Conflict	Tram contract		Project dates		Comments
				Start	Finish	Start	Finish	
Waverley Steps	Transport Scotland	Refurbishment of existing Waverley Steps with inclusion of new escalators and elevators.	Reviewed with both TS and Waverley Steps project team. Potential TM conflict being managed.	Nov-09	Mar-10	Oct-09	Mar-11	Although the main construction works will be complete by end Mar-10 this area will be re-visited in Q4 2010 for OHL installation. Potential impact on tram TM
Airdrie - Bathgate	Transport Scotland	New track installation.	Tram possessions mainly "piggy-backed" on A2B possessions which could be altered / cancelled.			Mar-09	Mar-10	Various possessions and RotR workings.
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-10	Sep-10	TBA	TBA	Design and approvals progressing to programme.
National Portrait Gallery		Major building construction and refurbishment.	Interface with both Utilities and Infraco works on St Andrew Street / York Place.	Now	Jul-11	Apr-09	Nov-11	Timetable of Gallery movements received. Meetings held with developer.
Pollution Prevention works	Network Rail / Scotrail	Re-location of existing diesel tanks at Haymarket Sprinter Depot.	Interface with S21A Roseburn Street viaduct and associated track.	Jan-10	Oct-10	Apr-08	Apr-09	Diesel tanks demolished & site clear-up underway. VE design on Roseburn viaduct will see this structure re-programmed.
New Hotel in Haymarket	Tiger Developments	New build hotel.	Utility diversions and potential interface with Infraco works.	Jan-09	Apr-10	Nov-08	2012	Risk has diminished. Manageable conflict.
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 which will interface with viaduct / tramstop.	Now	Apr-10	Oct-09 (TBC)	TBA	NR / Edinburgh Tram Project Delivery Group Meeting 09 Buchanan House, Edinburgh 11 February 2009 noted that the £30M scheme for Haymarket station has been shelved. No conflict.
Waverley Station re-roofing	Transport Scotland	New roof and general upgrade to station interior.	May be Traffic Management issues.	Feb-09	Nov-09	Apr-10	Apr-14	Although the main construction works will be complete by end Nov-09 this area will be re-visited in Q4 2010 for OHL installation.
Haymarket Terrace	DTZ Surveyors	Common Repairs to buildings at 2-4-6-8-68 and 74 Haymarket Terrace.	Scaffolding and external repairs.	Now	Apr-10	ASAP	ASAP	CEC will not issue scaffold permits until all tram TM is removed.
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.	Now	Jul-11	TBA	2010	No conflict.

## 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 review of the TS projects was carried out late February 2009 with TS and a further session will be arranged for Period 1 09/10.

## 2.8 Other

### Temporary traffic regulation orders (TTROs)

- Weekly visual summary being produced of all tram TM throughout city.

### Traffic regulation orders (TROs)

- A TRO programme is in place to ensure that the required TROs for the project are in place by November 2010. The informal consultation process for this is underway and comments are being recycled into any required small design changes.

### Network Rail

- Infraco has now delivered its EMC Management Plan and EMC Strategy for NR infrastructure assets and established the scope for the immunisation works. A programme for these works is being developed with Infraco;
- Following a successful trial for measurement of stray traction current between Nottingham Express Transit and NR, Infraco are currently considering three possible immunisation solutions:
  1. No additional measures required for ETN and no modification of NR infrastructure;
  2. Additional insulation measures on ETN and no modification of NR infrastructure; and
  3. No additional measures required for ETN and modify NR infrastructure with FETR.A decision has been made to progress with option 1 and develop to Approval in Principle the design for option 3 as a contingency;
- Infraco will be developing the full assurance case for NR acceptance. Preliminary assurance case to enable traction power testing and commissioning will be completed by August 2009. Further assurance will be provided up to, and including, bringing into service;
- The pollution prevention project at Haymarket depot is reported to be significantly over-running and not due to be completed until April 2009. A local agreement with First ScotRail has been reached to accommodate any potential overlap between completion of the pollution prevention activities and commencement of the Infraco works; and
- The contractor is preparing the possession plan according to the look-ahead programme.

### Third party interfaces

- NR – the Bridge Agreements are not yet concluded. There is an outstanding issue on indemnities to close out. An Operating Agreement with NR is expected to be agreed in Q2 2009;
- Forth Ports – SDS have delivered agreement plans and **tie** / CEC will finalise the commercial arrangements with Forth Ports to conclude the agreement. It is currently anticipated that this will happen by mid April 2009;
- Haymarket carpark compensation – **tie** have agreed compensation with NR and will settle this before the end of the current financial year. **tie** continue to discuss with TS the additional compensation payable to First ScotRail, as a result of the extension of the FSR franchise from Nov 2011 to Nov 2014, as it is believed to be a TS cost;
- Building fixings – deemed consent has been obtained from 306 owners as well as 66 consents with the owners' agreement. There are nine fixings where matters remain unresolved and CEC have committed to pursue these through Sheriff Court action. Dates for hearings are to be established. The building fixing construction programme will commence in Spring 2010; and
- Interfaces are being managed to ensure that the SRU accommodation works and events are cohesive. **tie** are pursuing an alternative approach to the design and construction of the works due to lack of co-operation with BSC.

### Fast link modifications (Front Line)

- Front Line has completed all the civil works apart from the drainage connection with the remaining signage erected to coincide with the new traffic regulation order;
- The TRO process is due to be complete by end of April 09. Two objections may result in this slipping by two weeks;
- New lay-by (95% completed) SW issue resolved;
- Signage (95% completed) 100% completion by mid April 09;
- Street lighting(100% completed); and
- Move bus stops (95% completed) full completion by mid April.

### Murrayfield Pitches (Souters)

- Maintenance works ongoing every Monday; and
- Final accounts agreed in principle subject to final measurements.

### Ancient Monuments (Land Engineering)

#### **Hearts War Memorial**

- CEC advised that proposed start date for works is w/c 03 May 2009 to tie-in with the Utilities TM;
- Progress meeting with CEC / Land Engineering held 26/03/09. Updated Method Statement to be formally submitted to CEC w/c 30/03/09;
- LE to get confirmation from Scottish Power regarding disconnection and isolation of the power supply to the Hearts Memorial clock w/c 30/03/09;
- CEC to issue notices to key stakeholders w/c 30/03/09 notifying commencement of works w/c 03/05/09. **tie** to draft similar notice to local stakeholders.

#### **Robert Burns Monument**

- CEC advised 26/03/09 that the monument needs to be moved as part of the junction remodelling exercise and also due to the trams; and
- MUDFA are looking for the monument to be removed before they start work in the junction on 12 June 2009. Land Engineering confirmed that they can facilitate this timescale.

### BAA - Burnside road (BAA)

- BAA have advised that Scheme design information will be made available on 24<sup>th</sup> April;
- **tie** have requested that BAA review the exit arrangements for the contract taxis and hold a build-ability review, this may impact upon the date of 24<sup>th</sup> April;
- BAA are also working up decant proposals, these are still at feasibility stage; and
- Final procurement and delivery strategy of this work is to be settled and agreed with BAA during April 2009.

### 3 Headline cost report

#### 3.1 Current financial year

	FY 08/09 COWD Period			FY 08/09 COWD Year To Date			FY 08/09 COWD Full Year Forecast			COWD To Date Actual	Costs To Go Forecast	Total AFC Forecast
	Actual	Budget	Variance	Actual	Budget	Variance	Forecast	Budget	Variance			
Total Project COWD	8.840	10.490	-1.649	100.979	150.851	-49.872	100.979	150.851	-49.872	231.019	295.998	527.017
Other Funding	0.730	10.490	-9.760	7.769	30.852	-23.083	7.769	30.852	-23.083	19.075	24.440	43.515
Demand on TS	<b>8.110</b>	<b>0.000</b>	<b>8.110</b>	<b>93.210</b>	<b>120.000</b>	<b>-26.790</b>	<b>93.210</b>	<b>120.000</b>	<b>-26.790</b>	<b>211.945</b>	<b>271.558</b>	<b>483.502</b>

- COWD in 2008/09 was £101.0m versus the original budget for the year of £150.9m. The key driver of the under spend is the well rehearsed delays to Infraco mobilisation and slow progress by the contractor; and
- During Period 12, a series of disputes with BSC centred on the works on Princes Street was characterised by works across the Infraco contract progressing at a slower rate than anticipated. A SA for Princes Street has now been signed, and the PMP has been established, made up from tie and consortium senior management team members, with the aim of resolving outstanding issues and progression on critical construction activities.

#### Actual P13 vs. forecast FY08/09

£m	Forecast 08/09	Actual FY08/09
Infrastructure and vehicles	46.1	45.3
Utilities diversions	33.3	33.4
Design	4.6	4.7
Land and compensation	1.3	1.7
Resources and insurance	15.7	15.9
<b>Base costs</b>	<b>101.0</b>	<b>101.0</b>
Risk allowance	0.0	0.0
<b>Total Phase 1a</b>	<b>101.0</b>	<b>101.0</b>

- Actual COWD for 2008/09 is £101.0m, in-line with the Period 12 forecast;
- The infrastructure and vehicles shortfall in COWD against forecast relates to lack of progress against the Infraco milestone schedule. This is offset by higher land and compensation works costs relating to BAA and additional resource costs incurred during Period 13 as a result of the commercial disputes with BSC and negotiation of the SA for works on Princes St;
- 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 and will be reclassified as expenditure against funding in the periods when the related materials are delivered to site and incorporated in the works. To date just £21k has been released against the Infraco prepayment as most of the release will occur on the achievement of trackwork and structures milestones in future years.

#### 3.2 Next financial year

##### Profile for FY09/10 - Phase 1a only

£m	Q1	Q2	Q3	Q4	Total FY09/10
Infrastructure and vehicles	14.7	21.9	24.1	60.1	120.8
Utilities diversions	0	0	0	0	0
Design	0.7	0.1	0	0	0.8
Land and compensation	1.3	0.1	0.1	0.1	1.6
Resources and insurance	3.4	2.9	2.8	3.6	12.7
<b>Base costs</b>	<b>20.1</b>	<b>25.0</b>	<b>27.0</b>	<b>63.8</b>	<b>135.9</b>
Risk allowance	2.1	2.7	2.9	6.8	14.5
<b>Total Phase 1a</b>	<b>22.2</b>	<b>27.7</b>	<b>29.9</b>	<b>70.6</b>	<b>150.4</b>

- As previously described, In advance of developing programme agreement with BSC, **tie** has developed a “re-baselined” programme which reflects an open for service date of 23<sup>rd</sup> February 2012. This has not been agreed with BSC. Following the SA on a way forward on Princes Street, **tie** now expect to engage fully with BSC via the PMP to ensure that progress is made on critical construction activities and a recalibrated contractual programme can be agreed as soon as possible;
- A full reforecast of the cost profile has been produced which links the re-baselined programme to Infraco constructions milestones. The realigned base costs and risk have then been linked against this programme; and
- The latest view for 2009/10 shows base cost of £135.9m and risk £14.5m, giving a total phase 1a cost of £150.4m. Q1 09/10 base forecast is £20.1m with risk £2.1m and total phase 1a Q1 cost £22.2. Activity is expected to ramp-up throughout 2009 with a forecast of £63.8m base (£70.6m including risk) forecast in Q4.

### 3.3 Total project anticipated forecast cost

#### Phase Re-baselined Phase 1a AFC and profiling

£m	Cum FY07/08	FY 08/09	FY 09/10	FY 10/11	FY 11/12	AFC
Infrastructure and vehicles	30.7	45.3	120.8	82.8	28.6	308.2
Utilities diversions	18.4	33.4	-	-	-	51.8
Design	21.4	4.7	0.8	-	-	26.9
Land and compensation	16.8	1.7	1.6	-	-	20.1
Resources and insurance	42.7	15.9	12.7	7.5	2.9	81.7
<b>Base costs</b>	<b>130.0</b>	<b>101.0</b>	<b>135.9</b>	<b>90.3</b>	<b>31.5</b>	<b>488.7</b>
Risk Allowance	-	-	14.5	20.8	3.1	38.4
<b>Total Phase 1a</b>	<b>130.0</b>	<b>101.0</b>	<b>150.4</b>	<b>111.1</b>	<b>34.5</b>	<b>527.1</b>
Phase 1b postponement	3.0	-	3.2	-	-	6.2
<b>Total Phase 1a and Phase 1b</b>	<b>133.0</b>	<b>101.0</b>	<b>153.6</b>	<b>111.1</b>	<b>34.5</b>	<b>533.3</b>

- The table above reflects the base costs and risks aligned to the re-baselined programme and re-alignment of the Infraco milestones schedule. The AFC for Phase 1a above includes an unapproved increase of £15m to the project risk allowance. The approved cost estimate for delivery of Phase1a of the project remains at £512m;
- The latest forecast view (shown above) assumes that Phase 1b will be postponed and that £6.2m of costs relating to Phase 1b design and payable to BSC if Phase 1b does not progress under the Infraco contract will require to be covered by current funding. Coupled with the re-baselined forecast, there is £11.7m of funding headroom within the £545m total funding available; and
- **tie** and CEC are in the process of deploying a work plan to target key risk areas and bottom-out issues in order to improve confidence and bring greater certainty to the allocation of risk. This work plan is to be implemented in parallel with on-going engagement with Infraco on all programme and commercial issues. This will be updated in the Period 1 report.

### 3.4 Change control

The current change control position is summarised in the table below:

<b>BASE ESTIMATE</b>	498.10	87.30	585.40
<b>APPROVED CHANGES - to Financial Close</b>	13.91	0.00	13.91
<b>CONTROL BUDGET - Baseline</b>	<b>512.02</b>	<b>87.30</b>	<b>599.32</b>

<b>APPROVED CHANGES - post Financial Close</b>	0.00	0.00	0.00
<b>REVISED CONTROL BUDGET</b>	<b>512.02</b>	<b>87.30</b>	<b>599.32</b>

<b>ANTICIPATED CHANGES</b>	0.00	0.00	0.00
<b>CURRENT AFC</b>	<b>512.02</b>	<b>87.30</b>	<b>599.32</b>

<b>PREVIOUS AFC</b>	<b>512.02</b>	<b>87.30</b>	<b>599.32</b>
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- Base estimate – The position at Final Business Case (Oct 2007);
- Approved changes to Financial Close – The financial impact of the project control budget having been reset to reflect final Infraco and Tramco Contract Award levels and a consequential reappraisal of the risk allowance. This was approved at the Tram Project Board on 4<sup>th</sup> June 2008;
- Control budget baseline (New Project Control Budget) – The baseline within which all future project change control will be reported against;
- Approved changes post Financial Close – Tram Project Board approved changes from this point on. There are none to report with financial effect on the Control Budget at this point. The funding for the approved changes to date have been met from a drawdown of funds from the project risk allowance; and
- Anticipated changes – The following potential changes have been identified. These will impact cost, programme or risk and are outwith the £522-540m range given to TS on the 26<sup>th</sup> March:
  - Gogar interchange – impact of changes to facilitate the provision of the Gogar interchange station (to be funded by TS); and
  - Picardy Place – CEC change funded via developer under consideration.
 The impact of such items, including the identification of ranges of risk and opportunity, is subject to review with the Tram Project Board. There have been additional specific briefings with CEC and TS.

Risks to this position are described in Section 5 below.



## 4 Time schedule report

### 4.1 Report against key milestones

In advance of developing agreement with BSC, tie has developed a unapproved recalibrated baseline programme which reflects an Open for Revenue Service date of 23 Feb 2012. A completely unmitigated programme as a control scenario only has also been produced which shows a date of 17 Oct 2012. However, the LIVE programme has been used to generate the milestone data below and this is based on all current information fed into the master programme and gives a mid-point between the recalibrated baseline and un-mitigated programme dates. This indicates an open for revenue service date of June 2012.

*(The agreed baseline programme reference for this project is that at Financial Close leading to revenue service in July 2011.)*

Milestones	Baseline programme date	Actual / current forecast date – unmitigated
Approval of DFBC by CEC	21 Dec 06A	21 Dec 06A
TRO process commences	14Dec07A	10-Dec-07A
MUDFA – commencement of utility diversions	02 Apr 07A	02 Apr 07A
Approval of FBC by TS – approval and funding for Infraco / Tramco	09 Jan 08	Dec 07A
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
Haymarket viaduct commences	08-May-08	01-Sep-08A
Edinburgh Park viaduct commences	06-Aug-08	01-Sep-08A
A8 underpass commences	08-Aug-08	28-Aug-08A
Carrick Knowe Bridge commences	21-Aug-08	19-Aug-08A
All demolition work complete	22-Aug-08	13-Apr-09
Tram mock-up delivered	Oct 2008	Nov 2008A
First track installation commences – on street	03-Nov-08	Jun 2009
MUDFA works complete	Nov 2008	Oct 2009
Haymarket viaduct complete	08-Dec-08	23-Sep-09
Roseburn viaduct commences	20-Jan-09	29-Mar-10
Design assurance complete	20-Jan-09	21-Jul-09
All Issue for Construction (IFC) drawings delivered	21-Jan-09	08-Oct-09
Princes Street closed	03-Feb-09	22-Feb-09A
Roseburn viaduct complete	20-Apr-10	04-Mar-11
Carrick Knowe bridge complete	11-May-09	05-Jan-10
All consents and approvals granted	18-May-09	07-Aug-09
Edinburgh Park viaduct complete	24-May-09	30-Sep-09
A8 underpass complete	14-Jul-09	04-Mar-10
Princes Street re-opened	01-Aug-09	16-Nov-09
NR immunisation complete	Nov 2009	Nov 2009
TRO process complete	01-Dec-09	Nov-10
1 <sup>st</sup> OHL installed (Commence Section 2)	11-Dec-09	20-May-10
Commission Section 2 (Haymarket to Roseburn junction)	11-Jan-10	06-Oct-10
Commission Section 6 (depot)	25-Mar-10	17-Feb-11
1 <sup>st</sup> Tram delivered	09-Apr-10	09-Apr-10
Test track complete	23-Apr-10	13-Apr-11
1 <sup>st</sup> section (other than depot) complete ready for energisation	25-June-10	06-Oct-10
Commission Section 7 (Gogar to Edinburgh Airport)	25-June-10	23-May-11
Driver recruitment commences	July 2010	Oct 2010
Commission Section 5 (Roseburn junction to Gogar)	09-Nov-10	12-Dec-11

Driver training commences (depot only)	Dec-10	Jan-11
Driver training commences (excludes depot)	Nov 2010	Nov-11
System testing complete off street	09-Dec-10	Jan-12
Final tram delivered	17-Jan-11	17-Jan-11
Construction Line 1a complete	17-Jan-11	Dec-11
System testing complete on street	16-Feb-11	Jan-12
Commission Section 1 (Newhaven to Haymarket)	11-Mar-11	Sep-11
Letter of "no objection" from Independent Competent Person to commence tram running	17-Apr-11	Jan-12
Shadow running starts	18-Apr-11	Mar-12
Shadow running complete	July 2011	Jun-12
Letter of "no objection" from Independent Competent Person to commence revenue service	July 2011	Jun-12
Open for revenue service	July 2011	Jun-12

**Guidance for Completion:**

Legend for colouring of Actual / forecast date text

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

**4.2 Key issues affecting schedule**

Programme is one of the priorities of the PMP and a refresh of the key issues affecting schedule will be provided in future periods following engagement with BSC.

**4.3 12-week look-ahead**

Milestones	Actual / current forecast date
1B Roadworks Foot of the Walk – Balfour Street	16-Oct-08A
1D Roadworks and trackworks Princes Street	23-Feb-09A*
1D Roadworks Lothian Road junction	13-Apr-09
S19 Haymarket viaduct	01-Sep-08A
2A Trackworks Haymarket to Roseburn junction	20-May-09
S20 Russell Road bridge	27-May-09
W3/W4 Russell Road retaining walls	20-May-09
S23 Carrick Knowe bridge	20-Oct-08A
W11 Bankhead Drive RW	28-May-09
S26 South Gyle Access bridge	28-May-09
5B Trackworks Saughton Road north to Bankhead	28-Apr-09
5B Trackworks Bankhead to Edinburgh Park Station	12-Nov-08A
S27 Edinburgh Park viaduct	25-Aug-08A
5C Trackworks Edinburgh Park to Gyle	09-Oct-08A
W16 Gyle Centre TS RW	01-Jun-09
W28 A8 underpass	01-Sep-08A
Gogar depot earthworks	24-Apr-09
Gogar depot building foundations	02-Jun-09
S29 Gogar underbridge	13-Oct-08A
S30 Gogarburn culvert No.1	01-Dec-08A
S32 Gogarburn culvert No.2	12-Jan-09A

\*Works recommenced 23<sup>rd</sup> March 09.

## 5 Risk and opportunity

### 5.1 Review of risk register

#### Risk and Opportunity Reviews

The following reviews took place in the period.

Date	Format of review	Attendees	Comments
17/03/09	Infraco Risk Management Plan Review	Project Risk Manager BSC Commercial Director Siemens Finance and Commercial Manager	Discussion regarding the Record of Review for the IRMP
17/03/09	Infraco Risk Allocation Review	Project Risk Manager Infraco Commercial Manager	Review of Infraco risk allowances within the QRA
23/03/09	Structures Risk Review	Project Manager Project Risk Manager	All risks and treatment plans reviewed
23/03/09	Depot Risk Review	Project Manager Project Risk Manager	All risks and treatment plans reviewed
24/03/09	MUDFA Risk Review	MUDFA Constriction Director Project Risk Manager	All risks and treatment plans reviewed
25/03/09	Roads and Drainage Risk Review	Project Managers Project Risk Manager	All risks and treatment plans reviewed
25/03/09	Princes Street Risk Review	Project Managers Project Risk Manager	All risks and treatment plans reviewed
25/03/09	Section 7 Risk Review	Project Manager Project Risk Manager	All 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.

A full review of the Project Risk Register with various tie directors will take place in Period 1.

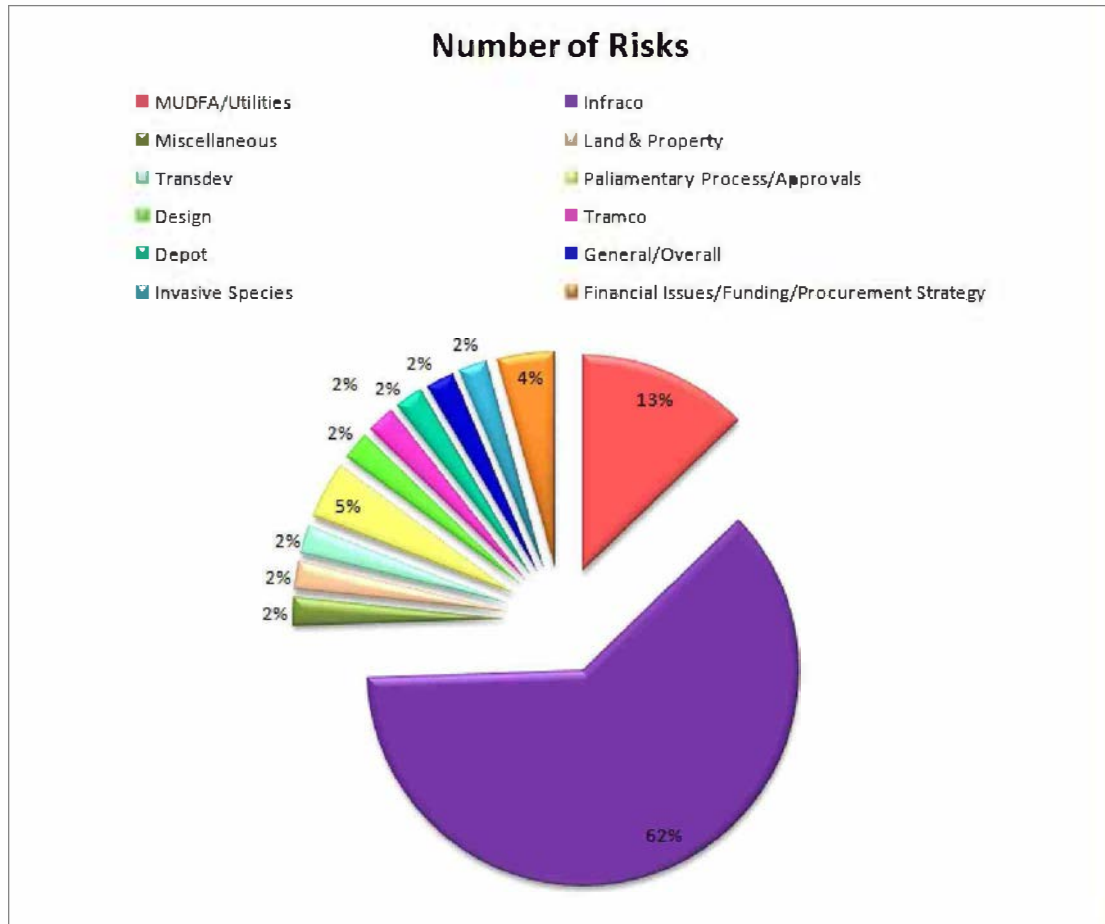
There are currently 47 risks in the Project Risk Register. The top five project risks are listed on the following pages.

Top 5 Risks - Period 13

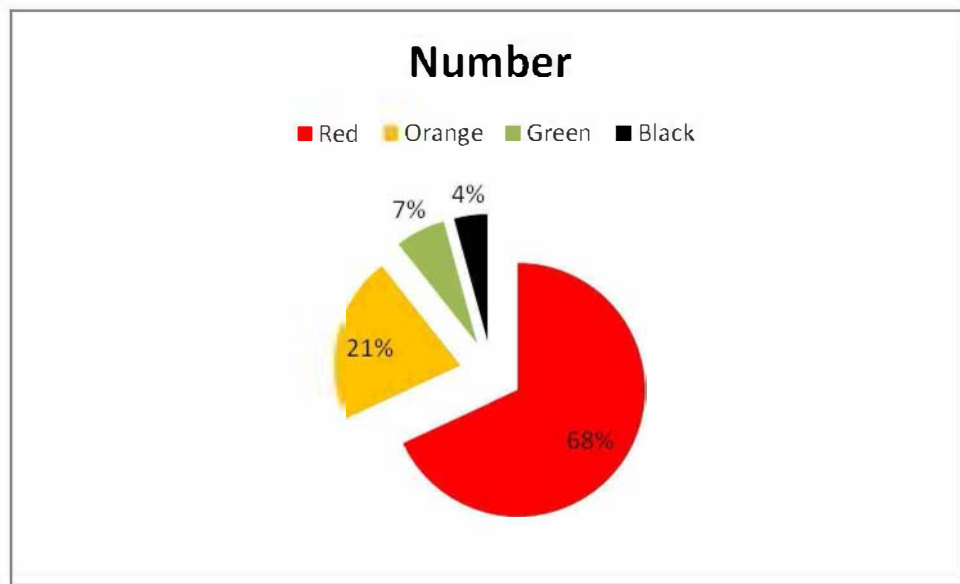
ARM Risk ID	Cause	Risk Description Event	Effect	Risk Owner	Significance	Black Flag	Treatment Strategy	Previous Status	Current Status	Due Date	Action Owner
1016	CEC do not achieve capability to deliver	CEC are unable to honour their funding commitment	Potential showstopper to project if contribution not reached; Line 1B may depend on incremental funding from CEC	S McGarrity	NIL - 0.00	Project	CEC has formed a multi discipline Tram Contributions Group to monitor identified sources of £45m contribution including critically developers contributions. tie are invited to that group. (see add info)	On Programme	On Programme	31-Jul-11	CEC
							CEC to deliver necessary contributions for 1a	On Programme	On Programme	31-Jul-11	CEC
							Tram Project Board to monitor progress towards gaining contributions	On Programme	On Programme	31-Jul-11	MacKay
1009		Extent of concessionary fare support commitment from TS provides inadequate comfort to CEC	CEC withdraw support for FBC and project fails	B Campbell	NIL - 0.00	Project	Negotiate the terms of Government commitment to concessionary fare support to level which is satisfactory to CEC	Complete	Complete	31-Jan-09	B Campbell
1077	Lack of visibility of design changes	Tramworks price based on a design which may have been altered. Unclear who authorised design change.	Dispute with contractor regarding changes. Potential delay and additional costs.	S Bell			Establish a process which will act as a control mechanism for design changes.	On Programme	On Programme	31-May-09	T Glazebrook
							Escalate to Infracore German parent companies if still unresolved.	Complete	Complete	31-Dec-08	S Bell
							Identify potential threat/response to BSC positioning to encourage engagement and co-ordinate to resolve programme challenges and delays	Complete	Complete	31-Mar-09	S Bell
							Utilise DRP processes if appropriate.	On Programme	On Programme	31-May-09	S Bell

144	SDS contractor does not deliver the required prior and technical approval consents in line with SDS V31	Delay to IFC drawings beyond V31 Programme	Delay to programme with additional resource costs and delay to infraco. Impact upon risk balance.	D Sharp		Evaluation of prior approval programme	Complete	Complete	31-Oct-08	D Sharp
						Hold fortnightly Roads Design Group	Complete	Complete	31-Dec-07	T Glazebrook
						Informal consultation prior to statutory consultation	Complete	Complete	31-Mar-09	T Glazebrook
						Integrate CEC into tie organisation/accommodation (office move)	Complete	Complete	4-Jun-07	T Glazebrook
173	Uncertainty over extent of contaminated land on route	Tramway runs through area of previously unidentified contamination/unforeseen ground conditions.	Increase in costs to remove material to special and other tip.	R Bell		Weekly Meetings of Approvals Task Force	On Programme	On Programme	31-May-09	D Sharp
						Issue containment and gi report to Infraco bidders	Complete	Complete	2-Mar-07	B Dawson
						tie to obtain ground investigation and contamination reports from SDS	Complete	Complete	30-Mar-07	A McGregor

The risks within the Project Risk Register are categorised below.



The ratings of the risks are illustrated below.



### New risks and concerns

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.

The following six items were added to the Infracore Concerns Register in the period.

Discipline	Risk description			
	Risk Number	Cause	Risk Event	Effect
Section 1D	84	Underground structures	Presence of underground chambers and/or structures	Delay to programme, extension of time claim. Additional costs.
Section 7	85	BAA to not accept design	tie/BSC are unable to gain BAA consent for the design	Delay to critical works.
Section 7	86	Design costs exceeds amount allowed for in project budget	Unable to conclude the design in time or to cost	Delay to critical works. Cost overrun
Section 7	87	Construction costs exceed amount allowed for in project budget	Unable to complete the works in time or to cost	Delay to critical works. Cost overrun
Section 7	88	Actual costs exceed budget costs	Increase in the cost of works associated with the relocation of Burnside Road	Cost overrun
Land & Property	89	BSC have indicated that it may be necessary to purchase additional land on Roseburn Street.	tie are required to purchase plots 97 and 101 on Roseburn Street	Additional cost.

The item relating to underground structures and chambers was added by the Section 1 Project Manager.

The entries relating to Section 7 were added to the existing risks for these works by the new Project Manager for this section. An assessment has been made for these in the unapproved cost review.

The land and property item was added following the Period 12 PD Review after it was highlighted that BSC are claiming that two additional plots on Roseburn Street require to be purchased.

### Reassessed and closed risks

The following items in the Infracore Concerns Register were closed in the period.

Discipline	Risk description			
	Risk Number	Cause	Risk Event	Effect
Depot	21	Delay to pipejacking sewer diversion works	Sewer diversion at A8 underpass not completed on time	Delay and disruption to Tramworks on A8 underpass completion
Depot	67	Delay in full Carillion mobilisation due to reconciliation of liability with supply-chain	Late completion of remedial works to water main	Further delay to critical depot building works
Depot	68	Design of permanent dewatering alters discharge from close proximity to NR asset to SW sewer.	NR suspend works due to excessive settlement adjacent to Depot	Delay to programme, extension of time claim. Additional third party costs.

Number 21 was closed as the sewer diversion is now complete.

Number 67 was closed as the problems with the water main are now effectively complete.

Number 68 no longer exists as the monitoring measures put in place have eased Network Rail's concerns and the threat of suspension has diminished.

There was one project risk closed in the period. Risk Id 10, 'Costs associated with obtaining wayleaves', was closed as there are no more wayleaves required.

### **5.2 Risk action plan for next two 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 Hill	164	42	In conjunction with MUDFA, undertake trial excavations to confirm locations of utilities and inform designer. All complete but section 1A1 and York Place to Picardy Place outstanding.	30/06/2009	Yes	No	No	Period 4
A Hill	931	605	MUDFA trial holes to verify GPR surveys	30/04/2009	Yes	No	No	Period 2
A Hill	139	42	In conjunction with MUDFA, undertake trial excavations to confirm locations of utilities and inform designer. All complete but section 1A1 and York Place to Picardy Place outstanding.	30/06/2009	Yes	No	No	Period 4
D Sharp	44	467	Weekly Meetings of Approvals Task Force	31/05/2009	Yes	No	No	Period 3
D Sharp	279	634	Weekly Meetings of Approvals Task Force	31/05/2009	Yes	No	No	Period 3
D Sharp	279	635	Monitoring and tracking through the 3rd party rep	31/05/2009	Yes	No	No	Period 3
D Sharp	271	559	Assure the quality and timing of submissions	31/05/2009	Yes	No	No	Period 3
D Sharp	271	637	Weekly Meetings of Approvals Task Force	31/05/2009	Yes	No	No	Period 3
D Sharp	1033	632	Pressure from Approvals Task Force to ensure Technical and Prior Approvals are delivered	30/04/2009	Yes	No	No	Period 2
G Barclay	1084	654	Assess TM implications to minimise enabling works and additional cost	30/04/2009	Yes	No	No	Period 2
G Barclay	1085	653	Examine VE opportunity to reduce costs with SUCs and SDS	30/04/2009	Yes	No	No	Period 2
I Clark	914	573	SDS to obtain consent for design in accordance with programme requirements - Scottish Water and all Telecoms. Complete with the exception of section 1A1	30/04/2009	Yes	No	No	Period 2
M Blake	911	628	Liase with Scottish Power to agree and approve method of crossing tunnel	30/04/2009	Yes	No	No	Period 13
M Blake	914	557	SDS to obtain consent for design in accordance with programme requirements - SGN and Scottish Power. Complete with the exception of section 1A1	30/04/2009	Yes	No	No	Period 2
R Bell	1079	648	Ongoing review of BSC resources and formal review at 4-weekly meeting. Objectives to be set for BSC at monthly meetings in order to monitor progress.	31/05/2009	Yes	No	No	Period 3
T Glazebrook	1077	646	Establish a process which will act as a control mechanism for design changes. (If one exists already then ensure process is complied with)	31/05/2009	Yes	No	No	Period 3

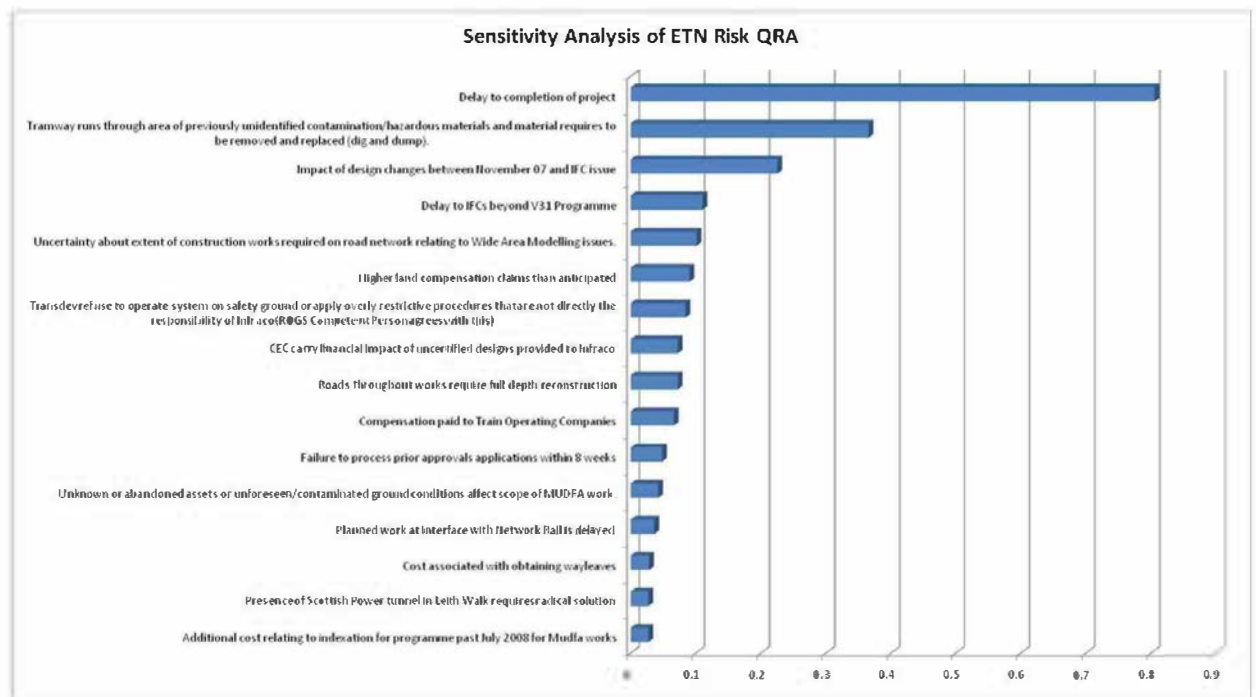
### 5.3 Cost Quantative Risk Analysis

The Project Risk Allocation has reduced by £1.2m in the period. All draw-downs are shown in the table below. The current Project Risk Allocation is £23.2m.

Description	Owner	Value (£)
Edinburgh Park Office rental - additional cost	Frank McFadden	-42,326
Track monitoring of NR infrastructure at Gogar depot	Mike Paterson	-4,673
Land at Leith Goods Yard	Eric Smith	-56,000
MUDFA	John Casserly	-1,033,000
Enhanced response mgmt for unplanned traffic delays	Alan Coyle	-100,000
	<b>Sub-total</b>	<b>-1,235,999</b>

Sensitivity analysis of 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.

**5.4 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 in line with the recalibration of the overall programme. In advance of the recalibrated programme **tie** will trial the updated ARM software against the current programme.

## 6 Health, safety, quality and environment

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

HS&E ACCIDENTS and INCIDENTS SUMMARY											
Project running totals	Total Hours	>3 day	Major	Injury	NM / Unsafe condition	Service damage	ENV	RTA	MOP	AFR	SFR
Period 13	136,339	0	1	2	29	15	0	2	13	0.73	11.00
Year to date	1,320,064	1	4	29	171	216	3	15	87	0.38	16.36
13 period rolling	1,320,064	1	4	29	171	216	3	15	87	0.38	16.36



There was one “Major” reportable accident occurred during Period 13; a Carillion operative jumped into a 1.4m deep excavation and suffered a broken bone in his ankle. This is being investigated by Carillion. This has resulted in the 13-period-rolling AFR rising to 0.38.

The service damage frequency fell for Carillion but increased for BSC. The number of power cables being struck has increased including a significant strike to an 11 KVA cable. The average number score for PM inspections was 89%. Three Carillion sites fell below the 80% compliance level. BSC average score is 95% and Carillion is 81%. During the period there have been six safety tours carried out (six planned). There were 13 Project Manager Inspections planned and 16 carried out.

The frequency of Member of Public incidents has increased, mainly due to security incidents at Princes Street. Although intruders have managed to climb the fence on some occasions, BSC security has prevented further access. This will be monitored closely.

As a result of the Carillion reportable accident, a “blitz” on excavation inspections was carried out by tie work supervisors and HSQE staff. Areas of concern were noted with access, shoring and barriers, these have now been addressed. Further specific inspections will continue.

A successful meeting was held between tie and the HMRI during Period 13. The meeting was part of the continual working relationship with the HMRI and their interest in the design, construction, commissioning, operation and maintenance of the ETN. During the meeting a presentation was given by CAF regarding the Tram and by a representative from Manchester University regarding the wheel rail interface. tie and BSC also discussed how construction was controlled to an integrated design.

Two Operational Health Standards were agreed by tie and BSC regarding the appropriate standard to be adopted for the provision of suitable and sufficient site welfare and for the placement of kerbs to minimise manual handling. These have been communicated to site and subcontractors have already been challenged by BSC regarding compliance to the standards.

## 6.2 Environment

An inspection of Japanese Knotweed to the area of the old Viking building to ascertain if new growth was evident was inconclusive. To aid identification of new growth, the old weed is being removed to a skip and burned in a controlled manner. SEPA and CEC have been contacted.

A new Quality and Environmental Manager has been employed by **tie** and will assess the adequacy of the current BSC environmental and quality plans.

## 6.3 Quality

**tie** have appointed a new Quality and Environmental Manager in the period. This section will have increased focus from this specialist resource in the upcoming periods.

### Infraco

BSC Quality Management Plan (Rev 3) and Siemens Quality Management Plan (Rev A), issued to **tie** 16/2/2009 for review and acceptance, currently outstanding. Action passed to S. Smith, to be completed during Period 1. BSC are in the process of reviewing their 10 ITP's which, upon completion of review will be resubmitted to **tie** for acceptance.

Various inspections carried out by Construction Support Service over Period 13, with weekly reports submitted to BSC's construction team, in order that issues raised can be dealt with or NCR's raised by BSC. NCR's are not raised by CSS. S. Smith to monitor the findings from these inspections.

### MUDFA

Three Carillion audits were planned for the period and three were carried out. NCRs from two audits are all closed out. Output from 3<sup>rd</sup> audit conducted 27/3/09 is awaited. Three NCRs raised by **tie** inspectors during Period 13. 24 NCRs are recorded as still open. Process review to be held detailing action to close outstanding NCR's.

## **7 Stakeholder and communication**

### **7.1 Stakeholder / communication strategy / plan**

tie, CEC and other key parties continue to work closely together to enhance the ongoing communications strategy. All parties continue to meet regularly and the next Communications Group meeting is due to be held on 7 April 2009.

### **7.2 Stakeholder / communication update**

In response to the Princes Street contract resolution on 20 March, the team organised notifications to be sent to all MSPs, MPs, Cllrs and 7,000 local business and residents on 20 March and w/c 23 March. The website was also updated. Media activity has included news release distributed on Princes Street contract resolution, photo-shoot with Jenny Dawe on Princes Street works commencing and enquiries on project status.

The production and distribution of notifications continue on a regular basis: Constitution Street Update (5 March), Haymarket Update (5 March) Leith Walk Update (20 March) as well as several local updates. The tram website recorded 17,277 total visits in March 2009, which is up by 449 compared to February. The most popular pages viewed continue to be the homepage, local updates and the route map. The design and delivery of Princes Street banners and tram mock-up support has been ongoing throughout this period.

Events this month included: the Labour Party Conference at which tie participated in a Dragon's Den Fringe event (6 March), a presentation to Leith Chamber of Commerce (16 March), a stand and workshop held at ETAG Conference (17 March), a presentation to the Fife Council (20 March), All Party Light Rail Committee (24 March) and a Spokes event (25 March). Scottish Parliamentary MSP briefings were held by Mike Connelly throughout the dispute.

The customer service team have been handling telephone and email requests for information including the Princes Street works, information on tram mock-up, parking, logistics requests, Small Business Support Scheme and requests for tram images. A weekly Customer Stakeholder Report is available on the trams website.

### **7.3 Communication and stakeholder action plan for next period**

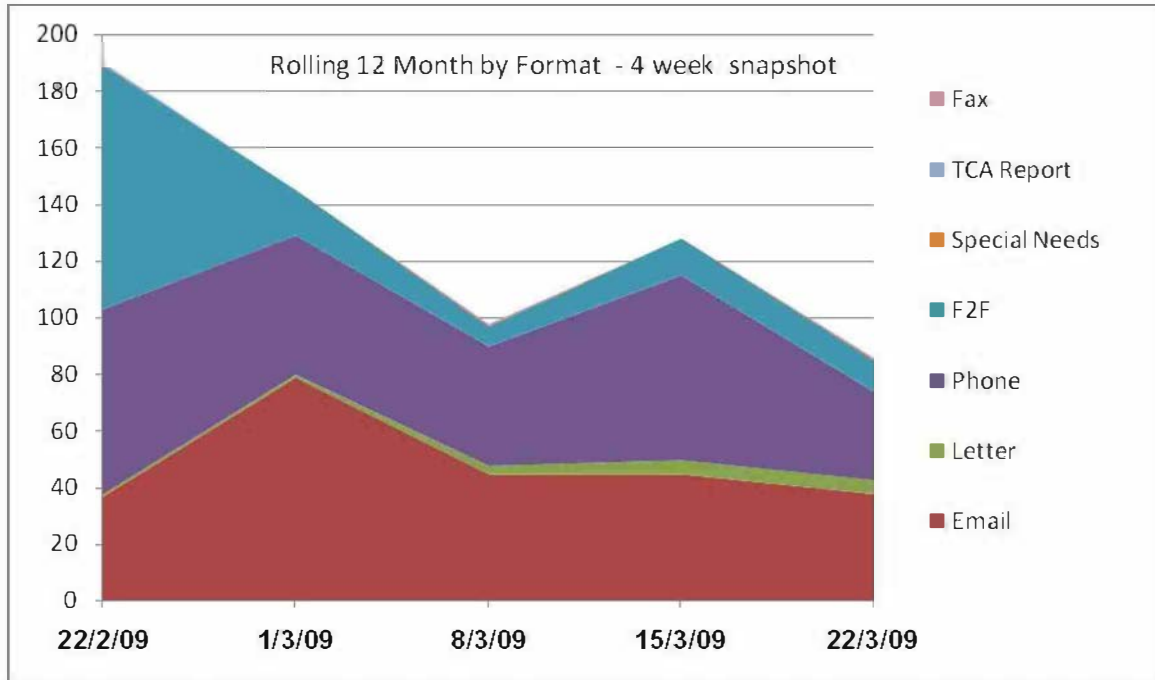
Notifications will be distributed to local businesses and residents regarding upcoming works in Constitution Street, Leith Walk, Lothian Road junction, Haymarket and Roseburn. The Princes Street tram works will be supported by ongoing face to face engagement, website updates and banner / signage installation. Media activity next period will be focused these works and ongoing coverage on the tram mock-up.

Events in the next period will include a presentation to the Leith Rotary Club, CBI Lunch (3 April), a stand at Scottish Trades Union Congress (20-22 April) a fringe event featuring Sarah Boyack MSP and Paul Tetlaw from Transform, a presentation to ex Royal Mail executives and a presentation to Strathclyde Uni students (28 April).

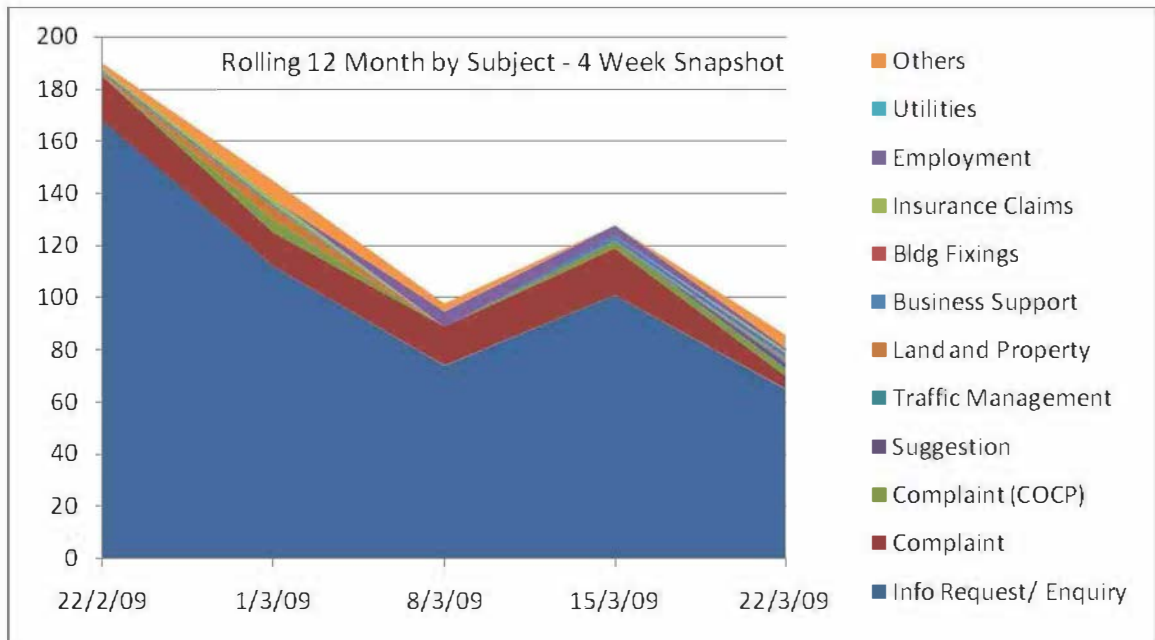
The team will be working closely with the Health and Safety team to produce a Health and Safety video. This will be used for contractor safety briefings and will reiterate tie's commitment to Health and Safety. The Schools Programme will be focusing on the production of a new fact sheet and the preparation for tram bus visits in May. Filming for the new tram video will be taking place at the mock-up from 15-17 April.

### **7.4 Customer Service Trends and Analysis**

A 4-week breakdown of Customer Service's incoming correspondence is shown below. From the previous month's figures, the overall volume of correspondence has decreased substantially between February 22<sup>nd</sup> and March 22<sup>nd</sup>.



Regarding the format of correspondence, the total number of contacts decreased, with figures for phone calls and emails rising in place of the declining face to face meetings (F2F) figures.



Figures decreased across the board concerning the subject of customer correspondence. However Information Requests still remain the bulk of all contacts.

## Monthly Customer Service Report

Item	Volume Month	Volume (Cumulative from 21/11/08)	Performance (Month)	Performance (Cumulative)	Target Performance
Telephone response	323	1076	99	96	90% in 30 seconds
Telephone Same day resolution	317	1039	98	96	Info only
Email acknowledgement	202	605	100		100% acknowledged within 24 hours
Email response			99	97	90% resolution in 7 days
Email same day resolution	180	524	90	85	Info only
Letter acknowledgement	12	48	100		100% acknowledgement within 24 hours
Letter response			92	94	100% resolution in 7 days
Total Enquiry Volumes	537	1729			
Website update	91	249	100	100	Weekly

Monthly Notifications Performance 23/02/09 to 21/03/2009 and Cumulative from 1<sup>st</sup> September 2008)

Notification Type	Work Site		Utilities	Tram works	Total	% in Standard
	Month	Notifications				
Major works	Month	Notifications	0	0	0	
		In Standard	N/A	N/A	N/A	N/A
	Cumulative	Notifications	5	3	8	
		In Standard	0	1	1	13
Minor Works	Month	Notifications	7	3	10	
		In Standard	7	2	9	90
	Cumulative	Notifications	15	15	30	
		In Standard	10	9	19	63
Emergency	Month	Notifications	1	0	0	
		In Standard	1	N/A	1	100
	Cumulative	Notifications	14	0	14	
		In Standard	14	0	14	100

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## Appendix 'A' Detailed cost report

# FY 08/09: Demand on TS

93.210

**1: HEADLINE FINANCIAL COMMENTARY**

**PERIOD RESULTS:**

Period is for Phase 1a only. See Section 3 of the TS report for further commentary.

**YTD RESULTS:**

YTD is for Phase 1a only. See Section 3 of the TS report for further commentary.

**FULL YEAR FORECAST:**

FY 0809 is for Phase 1a only. See Section 3 of the TS report for further commentary.

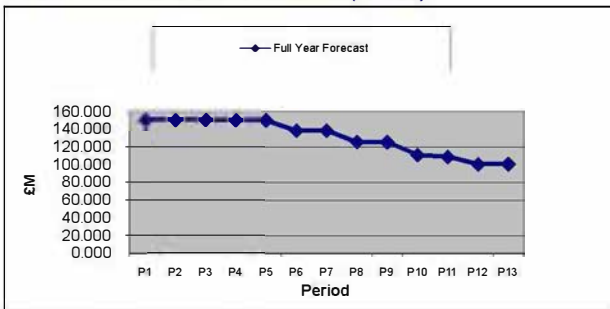
**AFC:**

**AFC is for Phase 1a only and includes an unapproved increase of £15M to the Project Risk allowance.** This excludes £6.2M of potential Phase 1b costs and is consistent with the update sent on 26th March 2009. See Section 3 of the TS report for further commentary.

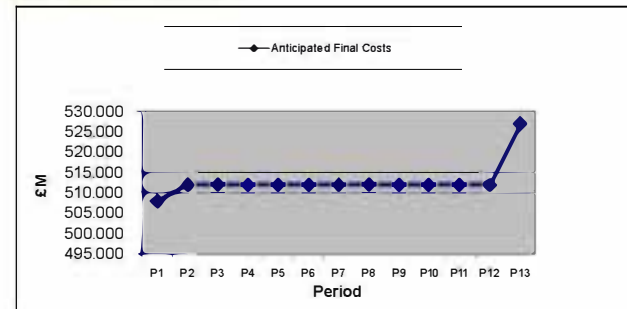
**2: SUMMARY**

	FY 08/09 COWD Period			FY 08/09 COWD Year To Date			FY 08/09 COWD Full Year Forecast			COWD To Date Actual	Costs To Go Forecast	Total AFC Forecast
	Actual	Budget	Variance	Actual	Budget	Variance	Forecast	Budget	Variance			
Total Project COWD	8.840	10.490	-1.649	100.979	150.851	-49.872	100.979	150.851	-49.872	231.019	295.998	527.017
Other Funding	0.730	10.490	-9.760	7.769	30.852	-23.083	7.769	30.852	-23.083	19.075	24.440	43.515
Demand on TS	<b>8.110</b>	<b>0.000</b>	<b>8.110</b>	<b>93.210</b>	<b>120.000</b>	<b>-26.790</b>	<b>93.210</b>	<b>120.000</b>	<b>-26.790</b>	<b>211.945</b>	<b>271.558</b>	<b>483.502</b>

GRAPH 1 - Period Trend of Full Year Forecast (FY 08/09)



GRAPH 2 - Period Trend of AFC



**3: RISK AND OPPORTUNITIES TO:**

**FULL YEAR FORECAST:**

See Section 3 of the TS report for further commentary.

**AFC:**

**AFC is for Phase 1a only and includes an unapproved increase of £15M to the Project Risk allowance.** This excludes £6.2M of potential Phase 1b costs and is consistent with the update sent on 26th March 2009. See Section 3 of the TS report for further commentary.

**4: ACCRUALS COMMENTARY**

**5: TOTAL PROJECT ELEMENT SPEND BREAKDOWN (TS & 3rd Party Costs)**

**PLANNED/EMERGING/FORECAST**

Allocated in accordance with standard WBS. Values relevant to

business case or other agreed baseline date to be known as original estimate

Relevant Baseline date **FBC 20/12/2007**

	Estimated Cost			Actual Cost/Forecast			Variance AFC v ELE
	Original Estimate	Escalated Original Estimate	Escalated Latest Estimate	Cost Of Work Done (COWD)	Forecast to Completion	Anticipated Final Costs (AFC)	
General Overall	28.233	28.233	28.639	23.851	4.788	28.639	0.000
Procurement Consultant	68.126	68.126	70.357	50.582	19.775	70.357	0.000
Design	23.683	23.683	26.953	26.174	0.779	26.953	0.000
Financial Issues/Funding/Procurement Strategy	2.258	2.258	2.630	2.276	0.354	2.630	0.000
Parliamentary Process/Approvals	0.329	0.329	0.319	0.319	0.000	0.319	0.000
Procurement Construction Works	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Construction Works	273.102	273.102	301.803	112.525	189.278	301.803	0.000
Testing & Commissioning	1.984	1.984	0.000	0.000	0.000	0.000	0.000
Handing Over & Service Operations	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NOP/Rail Projects Interface (Promoters View)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Interfacing Developments	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TRAMS, Vehicles (Edinburgh TRAMS Use Only)	51.370	51.370	58.152	15.293	42.859	58.152	0.000
Risk	48.974	48.974	38.166	0.000	38.166	38.166	0.000
Opportunity (Negative Value)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OB/Contingency	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>Total</b>	<b>498.060</b>	<b>498.060</b>	<b>527.017</b>	<b>231.019</b>	<b>295.998</b>	<b>527.017</b>	<b>0.000</b>

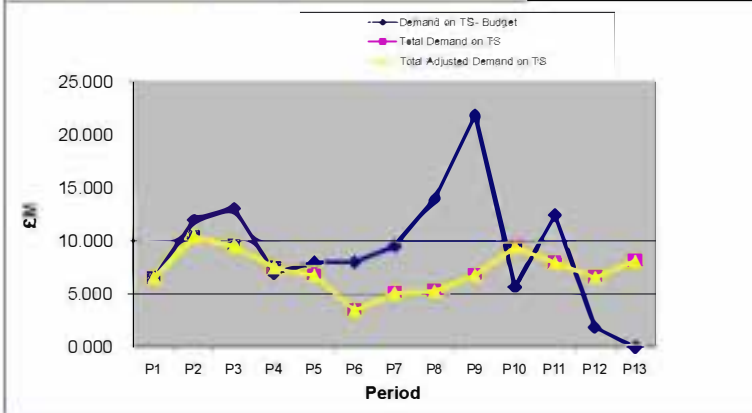


	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	Total
<b>6: Current Year 08/09 - Baseline Budget</b>														
1 Total Project COWD - Budget	6.457	13.085	14.265	7.667	8.688	8.763	10.395	15.222	23.863	6.198	13.563	12.195	10.490	150.851
2 Other Funding - Budget	-0.036	1.080	1.178	0.633	0.717	0.724	0.858	1.257	1.970	0.512	1.120	10.348	10.490	30.852
3 Demand on TS - Budget	6.493	12.005	13.088	7.034	7.971	8.039	9.537	13.965	21.893	5.686	12.443	1.847	0.000	120.000
<b>7: Current Year 08/09 - Actuals (Updated 4 weekly)</b>														
4 Total Project COWD + Revised Forecast	6.457	11.287	10.360	8.162	7.371	3.744	5.531	5.750	7.377	10.265	8.648	7.186	8.840	100.979
7 Other Funding + Revised Forecast	-0.036	0.932	0.855	0.674	0.609	0.309	0.457	0.475	0.609	0.848	0.714	0.593	0.730	7.769
10 Total Demand on TS	6.493	10.355	9.505	7.488	6.762	3.435	5.074	5.275	6.768	9.418	7.934	6.593	8.110	93.210
<b>8: Variance tracker</b>														
12 Variance Line 1 to Line 4 - Project Actual vs Budget	0.000	-1.798	-3.905	0.495	-1.318	-5.018	-4.864	-9.472	-16.487	4.068	-4.915	-5.009	-1.649	-49.872
13 Variance Line 2 to Line 7 - Oth Funding Actual vs Budget	0.000	-0.148	-0.322	0.041	-0.109	-0.414	-0.402	-0.782	-1.361	0.336	-0.406	-9.755	-9.760	-23.083
14 Variance Line 3 to Line 10 - Demand on TS vs Budget	0.000	-1.650	-3.583	0.454	-1.209	-4.604	-4.463	-8.690	-15.125	3.732	-4.509	4.746	8.110	-26.790

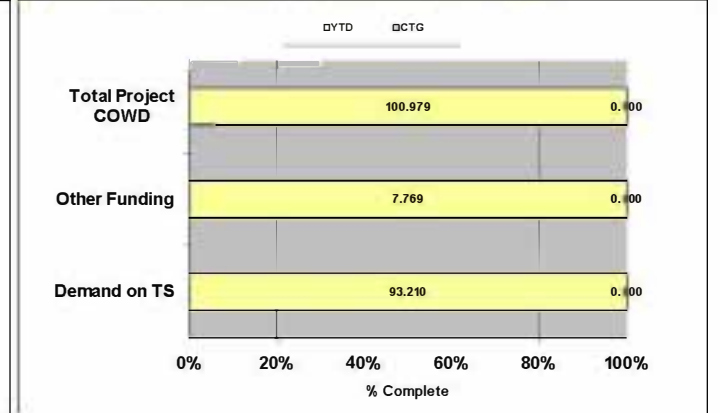
	Q1	Q2	Q3	Q4	Total	Financial Commentary - FY 09/10 Onwards
<b>9: Next Year 09/10 - Forecast (Updated 4 weekly)</b>						
16 Total Project COWD	22.186	27.667	29.891	70.669	150.413	All costs are for Phase 1a only and includes an unapproved increase of £15M to the Project Risk allowance. This excludes £6.2M of potential Phase 1b costs and is consistent with the update sent on 26th March 2009. See section 3 of the TS report for further commentary.
19 Other Funding	1.832	2.284	2.468	5.835	12.419	
22 Total Demand on TS	20.354	25.383	27.423	64.834	137.994	

	FY 03/04	FY 04/05	FY 05/06	FY 06/07	FY 07/08	FY 08/09	FY 09/10	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FUTURE	TOTAL
<b>10: All Years (Escalated) (Updated 4 weekly)</b>														
24 Total Project COWD	0.000	3.093	10.664	30.431	85.852	100.979	150.413	111.101	34.483	0.000	0.000			527.017
27 Other Funding	0.000	0.000	1.000	0.019	10.287	7.769	12.419	9.173	2.847	0.000	0.000			43.515
30 Total Demand on TS	0.000	3.093	9.664	30.412	75.565	93.210	137.994	101.928	31.636	0.000	0.000	0.000	0.000	483.502

GRAPH 3 - Demand on TS: Actual/Budget Run Rate - Current Year FY 08/09



GRAPH 4 - Year To Date/ Costs To Go - % Complete - Current Year FY 08/09



	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	Total
<b>11: Other Funding</b>														
<b>Budget (Current Year 08/09)</b>														
CEC	-0.036	1.080	1.178	0.633	0.717	0.724	0.858	1.257	1.970	0.512	1.120	10.348	10.490	30.852
Other Funding Stream														0.000
Other Funding Stream														0.000
Other Funding Stream														0.000
Other Funding Stream														0.000
<b>Total Budget Other Funding</b>	-0.036	1.080	1.178	0.633	0.717	0.724	0.858	1.257	1.970	0.512	1.120	10.348	10.490	30.852
<b>Actual (Current Year 08/09)</b>														
CEC	-0.036	0.932	0.855	0.674	0.609	0.309	0.457	0.475	0.609	0.848	0.714	0.593	0.730	7.769
Other Funding Stream														0.000
Other Funding Stream														0.000
Other Funding Stream														0.000
Other Funding Stream														0.000
<b>Total Actual Other Funding</b>	-0.036	0.932	0.855	0.674	0.609	0.309	0.457	0.475	0.609	0.848	0.714	0.593	0.730	7.769

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13
<b>12: Promoter Full Year Forecast Run Rate</b>													
Period Trend of Full Year Forecast (Current Year 08/09)	150.851	150.851	150.984	150.537	150.647	138.759	138.792	126.104	126.104	111.658	109.555	100.971	100.979
Full Year Forecast													

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13
<b>13: Promoter AFC Run Rate</b>													
Period Trend of AFC	508.017	512.017	512.017	512.017	512.017	512.017	512.017	512.017	512.017	512.017	512.017	512.017	527.017
Anticipated Final Cost													

## **Appendix 'B' Change control register**

**(Register and other information as volunteered or requested from delivery organisation / promoter – There are none to report on at this point)**

## Appendix 'C' Programme information

To be sent separately to TS by CD:

- **Milestone Schedule Summary (progress against baseline)**
- **Full Detailed Time Schedule (progress against baseline)**
- **Critical Path**
- **12 Week Look Ahead Extract from Schedule**




## Appendix 'D' Primary risk register

**Please note that a full review of the Project Risk Register will take place in Period 1. The Primary Risk Register will be updated accordingly.**

Period 13 2008/09 - Primary Risk Register

Risk Description											
ARM Risk ID	Cause	Event	Effect	Risk Owner	Significance	Black Flag	Treatment Strategy	Previous Status	Current Status	Due Date	Action Owner
44	SDS contractor does not deliver the required prior and technical approval consents in line with SDS V31	Delay to IFC drawings beyond V31 Programme	Delay to programme with additional resource costs and delay to infraco. Impact upon risk balance.	D Sharp	High - 23.00		Evaluation of prior approval programme	Complete	Complete	31-Oct-08	D Sharp
							Hold fortnightly Roads Design Group	Complete	Complete	31-Dec-07	T Glazebrook
							Informal consultation prior to statutory consultation	Complete	Complete	31-Mar-09	T Glazebrook
							Integrate CEC into tie organisation/accomodation (office move)	Complete	Complete	4-Jun-07	T Glazebrook
							Weekly Meetings of Approvals Task Force	On Programme	On Programme	31-May-09	D Sharp
173	Uncertainty over extent of contaminated land on route	Tramway runs through area of previously unidentified contamination/unforseen ground conditions.	Increase in costs to remove material to special and other tip.	R Bell	High - 20.00		Issue containation and gi report to Infraco bidders	Complete	Complete	2-Mar-07	B Dawson
							tie to obtain ground investigation and contamination reports from SDS	Complete	Complete	30-Mar-07	A McGregor
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 - 23.00		Close working relationship with CEC and stakeholders	On Programme	On Programme	31-Jan-11	L Murphy
							Weekly critical issues meeting	Complete	Complete	31-Jul-08	T Glazebrook
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 tie and stakeholders.	S Clark	High - 23.00		All Site Staff to get CSCS or equivalent	On Programme	On Programme	30-Jan-11	C McLauchlan
							Develop and Implement Incident Management Processes	Complete	Complete	27-Apr-07	T Condie
							HSQE Audits, site inspections and Management Safety Tours to be carried out	On Programme	On Programme	31-Dec-10	T Condie
							Safety Induction to be carried out for all site staff	On Programme	On Programme	31-Dec-10	T Condie

Risk Description

ARM Risk ID	Cause	Event	Effect	Risk Owner	Significance	Black Flag	Treatment Strategy	Previous Status	Current Status	Due Date	Action Owner
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 Infraco work	Re-design and delay as investigation takes place and solution implemented; Increase in Capex cost as a result of additional works.	D Sharp			Site Supervisors to be appointed by tie	Complete	Complete	28-Feb-07	S Clark
							GPR surveys in areas where there are likely to be services	Complete	Complete	1-Apr-07	T Glazebrook
							MUDFA trial holes to verify GPR surveys	On Programme	On Programme	30-Apr-09	A Hill
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 Infraco.	Requirement to start construction using TTROs	A Sim			Use of TTROs to undertake construction of permanent works in advance of permanent TROs being approved.	On Programme	On Programme	30-Jan-11	A Sim
105	Encountering archaeological finds/burials/munitions during construction	Exhumation of archaeological finds/burials	Delay in construction programme	R Bell			Agree protocol	Complete	Complete	20-Apr-07	T Condie
							AMIS to re-programme works accounting for hot-spots	Complete	Complete	30-Apr-07	S Clark
							Assess Infraco programme to determine if float contained within the high risk areas	Complete	Complete	28-Aug-07	T Hickman
							Carry out advanced archaeological works in advance of Infraco	Complete	Complete	31-Mar-08	P Douglas
							Check to ensure that AMIS programme has adequate float	Complete	Complete	14-May-07	J McAloon
							Identify hotspots	Complete	Complete	28-Feb-07	S Clark
							Meet Archaeologist	Complete	Complete	28-Feb-07	S Clark
Review Infraco programme regarding archaeological hotspots and ensure adequate programme float	Complete	Complete	31-Jul-07	T Hickman							

Risk Description											
ARM Risk ID	Cause	Event	Effect	Risk Owner	Significance	Black Flag	Treatment Strategy	Previous Status	Current Status	Due Date	Action Owner
271	Inadequate quality of submission of approval. Partial submission of package. Programme compression. Lack of CEC resources. CEC does not follow agreed procedures.	Failure to process prior approvals applications within 8 weeks	Delay and disruption to Infraco programme	D Sharp	High 19.00		Agree approvals submission arrangements with CEC to align with SDS design programme and procurement programme.	Complete	Complete	31-Mar-08	T Glazebrook
							Assure the quality and timing of submissions	On Programme	On Programme	31-May-09	D Sharp
							Final agreement to be approved by Roads Authority, CEC Promoter, CEC in-house legal and tie	Complete	Complete	28-Feb-07	T Craggs
							Finalise alignments and gain agreement from CEC	Complete	Complete	29-Dec-06	T Craggs
							Weekly meetings of Approvals Task Force	On Programme	On Programme	31-May-09	D Sharp
							Where appropriate increase case officer resource to cope with programme compression	Complete	Complete	31-Oct-08	D Fraser
1033		Failure of Infraco to mobilise in time to commence work in line with programme.	Delay to programme. Cost overruns. Negative publicity. Criticism from stakeholders	S Bell	High 20.00		Continued focus at Infraco progress meetings as well as programme workshops to mitigate the impacts of any delay	Complete	Complete	1-Oct-08	S Bell
							Implementation of Advanced Works programme in order to mitigate potential future issues during construction	Complete	Complete	1-Aug-08	R Bell
							Infraco given instructions to proceed at risk	Complete	Complete	1-Aug-08	R Bell
							Pressue from Approvals Task Force to ensure Technical and Prior Approvals are delivered	On Programme	On Programme	30-Apr-09	D Sharp

Risk Description											
ARM Risk ID	Cause	Event	Effect	Risk Owner	Significance	Black Flag	Treatment Strategy	Previous Status	Current Status	Due Date	Action Owner
1076	Utilities do not finish diversion works prior to Tramworks commencing work	Tramworks are unable to commence work or work is delayed/disrupted	Delay and disruption claims from BSC.	R Bell	High - 18.00		Tramworks PMs attendance at Traffic Management meetings. Weekly meetings between tie Tramworks and Utilities PMs. 4-weekly tie Tramworks/Utilities management meetings. Identification of programme clashes between Tramworks and Utilities works tracked	On Programme	On Programme	31-Jul-09	R Bell
1078	Lack of effective engagement from BSC leaders towards tie and third parties (NR, BAA, Forth Ports) and the Tram project as a whole.	Failure of partnership approach between tie and BSC. Failure to maintain effective third party relationships with key third parties.		R Bell	High - 10.00		Engagement between tie and BSC at different levels. Regular review of BSC management of third parties as per Employers Requirements.	On Programme	On Programme	31-May-09	R Bell
1079	Failure of BSC to effectively resource up for project	Lack of competent resources within BSC to safely and effectively deliver Tram project	Delay to programme and additional cost	R Bell	High - 20.00		Ongoing review of BSC resources and formal review at 4-weekly meeting. Objectives to be set for BSC at monthly meetings in order to monitor progress.	Complete	Complete	31-Mar-09	R Bell



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## Appendix 'E' Resource information

(Updated Organisation Charts, Notifying Changes of Key Personnel –  
N/A)