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Edinburgh Tram Project
Full Progress Report No. 5
28th January – 24th February 2012
Final

February 12



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Rev	Originator	Approved	Date
1	Shirley-Anne Collin	Julian Weatherley	28-02-2012
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DOCUMENTS			

1 Executive Summary

This report covers progress made during the period from 28th January to 24th February 2012. It incorporates progress reported within Infraco and CAF Progress Report No. 4-12 to 4th February 2012.

There were no reportable accidents during the period. Twenty two incidents occurred in total of which two involved members of the public and three resulted in service disruption of local facilities and property.

Enabling utilities works in Shandwick Place and St Andrew Street was completed as planned and both sites made available to Infraco on 14th February 2012. Utility works continue in South St Andrew Street with an anticipated date for completion of 24th March 2012. The extent of utility diversions required in both Shandwick Place and St Andrew Street has been significantly greater than anticipated from record data.

Infraco's proposal's to connect into existing drainage manholes has been rejected by Scottish Water. If un-resolved this will significantly impact on the On Street programme. Urgent talks are ongoing with Scottish Water to bring about a resolution.

The project continues to plan for the implementation of Cost Engineering initiatives including the bringing forward of traffic management provisions within the Princes Street / Waverley bus lane and Haymarket 2 to 5 on the 3rd March and 24th March 2012 respectively.

Agreement in principle has been reached on a way forward to de-scope close out works at Forth Ports (Tower Bridge and Lindsay Road). Documents have been passed to CEC Engineering to enable solutions to be developed.

Good progress has been made throughout the Off Street areas this period with key activities including the opening up of Haymarket Yards to traffic, A8 crossing excavation breakthrough and the completion of sheet piling at Gogar Burn.

A formal decision on the way forward for the Edinburgh Gateway remains outstanding. It is now anticipated that this will be confirmed on 29th February 2012. Transport Scotland has recommended a de-scoped solution for ministerial approval.

Increased site supervision has been implemented at the First ScotRail Depot following concerns over increased risk of incidents resulting from BBS multiple work fronts.

BBS has reported a 25 day delay to secant piling works at the airport. A number of changes to the construction methodology are being implemented to recover this slippage.

The Murrayfield Ground Improvement methodology continues to be a cause for concern with Infraco back in discussions with alternative subcontractors. Infraco have indicated that they are still aiming to maintain the revised ground improvement programme.

Further discussions regarding the wayleave at Ingliston are being held week commencing 27th February between Scottish Gas Networks (SGN) and New Ingliston Ltd (NIL) this is due to the wording previously on the wayleave being changed by the NIL legal team. The contractor is progressing mobilisation, however without a wayleave in place the works shall not commence. The latest

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commencement date from the contractor is the 12th March 2012 which shall maintain the completion date of the 18th March 2012.

Eight trams have now been delivered to the Depot with seven having undergone dynamic testing on the Mini-Test Track.

Operational responsibility of the Depot by Lothian Busses is anticipated to be formalised by 2nd March 2012.

The logic of a revised Infraco programme (the Rev4c programme) has been tested and agreed by Turner & Townsend and CEC planners. A revised Master Schedule is also being developed to incorporate the revised Infraco programme.

A total of £8.62M of cost savings/additional contributions have been instructed this period. Generally these items represent omissions to the Infraco Contract or represent amounts confirmed by Infraco in the Cost Engineering Instructions. The setts in the On-Street works are subject to separate CEC funding. The specification and scope have been confirmed and the costs are being finalised.

Progress has been made on commercial issues with further work needed on the cost liability for the SGN diversion Off Street, the Roseburn viaduct footpath and evidence of incurred cost for the delay in commencement (2nd of September to 3rd of October).

Looking ahead the key cost challenges include resolution of the OLE piled foundations, minimising delay costs during the completion of the track form utility diversions and commencement of Infraco works in St Andrews Sq, Shandwick Place and Haymarket. Also resolution of the priority 2 conflicts outwith the track form requires careful planning and execution. The impact of Scottish Water's requirement for the re-building of manholes has not been incorporated as meetings have been arranged to resolve the matter. Depending on the agreed solution there may be re-construction works and delay costs.

The QSRA has commenced following the review of the Master Programme and a QCRA is to follow. It is anticipated that this will be completed by 29th March 2012. Review sessions require to be planned with CEC

2 Programme

Turner & Townsend has undertaken a review of the Rev 4C programme produced by Infracore and confirmed the logic. The resulting 22 week saving will be impacted by the requirement to address utilities works in advance of Infracore's possession of sites. The net effect will be determined through Turner & Townsend's Master Schedule going forward.

3 Health, Safety & Environment

3.1 Incident reporting

Within the period 28th January 2012 to 24th February 2012, covered by this report there have been 22 incidents, 2 members of Public incidents and 3 service damages that resulted in service disruption of local facilities and property.

Due to the increasing Trend of incidents occurring across the project there is now a need to take a more strategic approach to safety initiatives. Project Safety Strategy Group will be established during the next period.

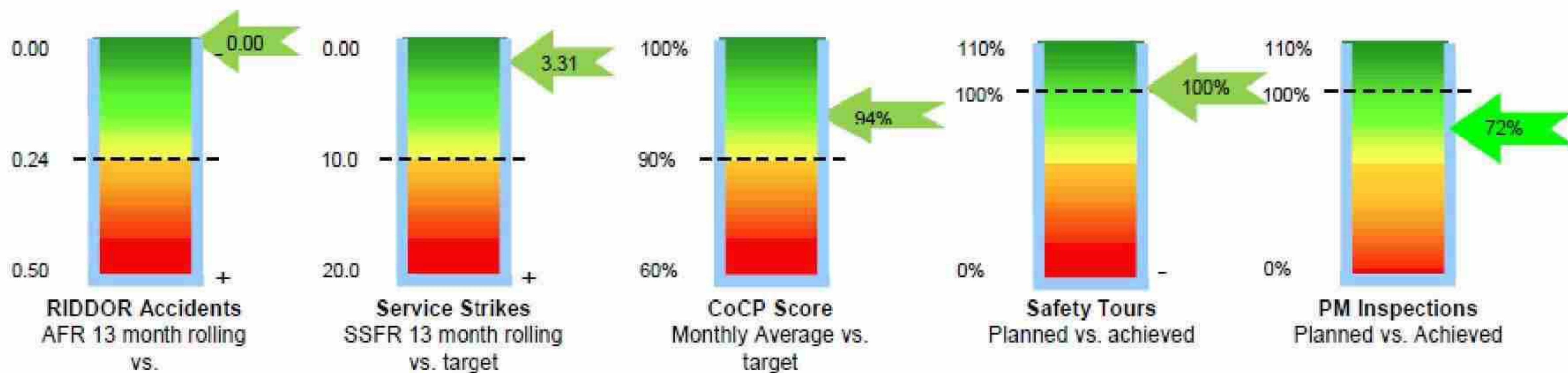
Trend Analysis available within Appendix 2.

Date	Location	Detail	Contractor	Classification	Category
25/01/2012	St Andrews Square	HV in potentially dangerous condition	McNicholas	Service damage	Serious/ Significant
13/01/2012	Murrayfield	Damage to Scottish power cable by Non tram contractor	Grahams	Service damage	Serious/ Significant
16/02/2012	St Andrews Square	Damage to 2 fibre optic cables	McNicholas	Service damage	Serious/ Significant
26/01/2012	Edinburgh Park	Diesel spill	Coffey	Environmental	Minor
26/01/2012	South St Andrews St	Cable duct cast in BT pit	McNicholas	Service damage	Minor
26/01/2012	Junction of South St Andrews St & St Andrews Square	Damage to concrete surround to ducts.	McNicholas	Service damage	Minor
27/01/2012	Murrayfield	Manhole cover not replaced - Scotrail depot	Grahams	Near miss	Minor
27/01/2012	Depot	Security guard slipped on ice	Edinburgh Trams	Minor injury	Minor
27/01/2012	Shandwick Place	BT cable damage	McNicholas	Service damage	Minor
30/01/2012	Depot	Security guard slipped on ice	Edinburgh Trams	Minor injury	Minor
01/02/2012	Shandwick Place	Damage to sewer at Shandwick Place	McNicholas	Service damage	Minor
01/02/2012	Edinburgh Park	Damage to water main supplying water features at Edinburgh Park	Coffey	Service damage	Minor
01/02/2012	Carrick Knowe	Damage to sewer at Carrick Knowe	Bilfinger Berger (Severn Bore Piling)	Service damage	Minor
03/02/2012	Edinburgh Park	Oil spill caused by burst hydraulic hose on item of	Coffey	Environmental	Minor

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Date	Location	Detail	Contractor	Classification	Category
		plant.			
07/02/2012	Shandwick Place	Container cover fell and hurt operative's foot.	DR Logistics	Minor injury	Minor
07/02/2012	Haymarket	MOP fell on temporary walkway.	Grahams	Member of the public	Minor
09/02/2012	St Andrews Square	Damage to an LV cable	McNicholas	Service damage	Minor
15/02/2012	Princes Street	Injured person was finishing concrete and caught his arm on the edge of a reinforcement sheet and sustained a small cut to his left forearm.	Crummock	Minor injury	Minor
14/02/2012	Shandwick Place	Damage to MOP jacket.	McNicholas	Member of the public	Minor
20/02/2012	Coates Crescent	Damage to water pipe to 2 Coates Crescent.	McNicholas	Service damage	Minor
21/02/2012	South St Davids Street	Damage to street lighting cable.	Bilfinger Berger	Service damage	Minor
04/02/2012	Haymarket	Injured person cut their finger with a stanley knife.	Class 1	Minor injury	Minor



3.2 Safety Initiatives

The Turner & Townsend Project Delivery Safety Meeting is being held monthly, this provides a review of previous performance and the identification of future issues of note. A further review has been carried out on the underlying factors identified within the incident investigations; these are to be discussed at the forthcoming Project Safety Strategy Group.

Work has commenced on the next stage of Targeted Inspections. These will focus on excavation, temporary works and vehicle movements. The results of these will be reported in the next Deliver the Tram Safe Report.

Increased pedestrian movements around the construction sites have occurred as a result of the Rugby International Six Nations tournament, this was held at Murrayfield on the 04th February and passed off without incident.

A meeting was held between First ScotRail, Turner & Townsend and BBS regarding access for works in the proximity of the Haymarket Depot. A protocol for arrangements for the access to the depot has been agreed. The effectiveness of these arrangements will be formally reviewed after implementation.

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3.3 CDM Regulations

There has been one case of CDM infringement, a utility company required access to a Tram project worksite to undertake emergency works, this was not carried out in line with the CDM Regulations.

Turner & Townsend are to advise the role of the utility companies as CDM client will impact on tram related works.

3.4 Environmental

Archaeological works associated with the air raid shelter at Haymarket are now complete.

Site inspections have been carried out at Section 7 on the 15th February 2012 to cover works being carried out under the CAR (Control Activity Regulations) licence. The site was found to be in good order with good environmental awareness.

A site inspection has been carried out with McNicholas on the 20th February 2012 covering the city centre works. Minor issues regarding the availability of spill absorbent material were addressed during inspection.

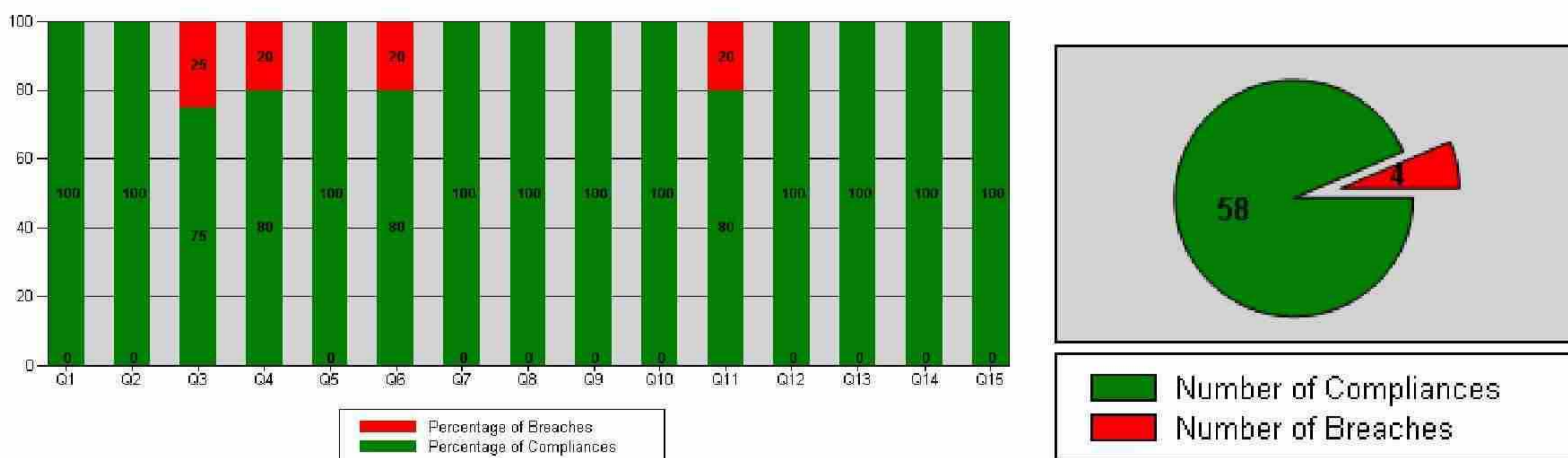
BBS held their second monthly environmental forum which Turner & Townsend were invited to. This will now take place every month; a representative from all sub contractors will be invited. This forum will provide a co-ordinated approach to environmental issue primarily to waste management across the Edinburgh Trams Project.

3.5 CoCP

Improvements to the Haymarket pedestrian walkway have now been complete.

CoCP compliance was recorded at 94% during Period 12

The results of the CoCP monitoring have been passed to the CEC Communications Team, these are to be up loaded to the project web site. Details of the results are in Appendix 2.



Q1. Hours of Work	Q9. Emergency Access
Q2. Notification	Q10. Parking
Q3. Notices	Q11. Litter and general housekeeping
Q4. Fencing and Hoarding	Q12. Dust
Q5. Noise	Q13. Smoking
Q6. Waste Management	Q14. Members of the Public
Q7. Waste Water and Run-Off	Q15. PPE and Behaviours
Q8. Water	

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4 Commercial

4.1 Cost Summary

The Forecast cost, including balance of original risk allowance, for the Infraco Works, Utilities Diversions and Tramco is £500.2M and is consistent with the budget. The Forecast cost contains the cost benefits from Approved Changes resulting from the Cost Baseline instructions, refer below. The revised Master Programme has been issued following the programme review in the Cost Baseline instructions.

Following the endorsement of the Master Programme a revised Quantative Schedule Risk Analysis will be completed to assess any potential programme delay or further opportunities and a Quantative Cost Risk Analysis (QCRA) will be completed to assess the cost risk and contingency requirements.

The detailed Cost Report, 27th February 2012, has been issued under separate cover and this section of the report summarises the issues and cost movements within the last 4 week reporting period. A summary of the cost movements are as follows (all figures £K):

Reporting Date:	27 Jan 12	27 Feb 12	Movement
Original Contract Amount	479,660	479,660	0
Add: Approved Changes	3,514	1,104	-2,410
Add: Changes in Progress	5,749	3,593	-2,156
Add: Anticipated Changes	15,025	15,227	202
Less: Funding contributions	-2,678	-3,768	-1,090
Less: Opportunities to secure	-8,322	-7,310	1,012
TOTAL: Forecast cost	492,948	488,506	-4,442
Original Budget	467,407	467,407	0
Variance	25,541	21,099	-4,442
Original forecast risk allowance	32,747	32,747	0
Less: Variance (from above)	-25,541	-21,099	4,442
Forecast balance of risk allowance	7,206	11,648	4,442
Forecast Total Cost	500,154	500,154	0

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4.2 Infraco

4.2.1 Approved Changes (Movement in Period)

Change Requests are reviewed at the weekly change meeting. This enables scrutiny of specific changes and also compliance with CEC Delegated Authority Rules. The movements in the period are included below:

[Note: shaded items were included in the interim report presented at the Tram Briefing meeting 16th February 2012]

Approved to 27 January reporting date	£3,514K
Design for providing a new cycleway from the Mound to Princes Street	2
Revised design to minimise utility diversions / conflicts - used for slit trenching and trial holes	157
Valve chamber access and alteration works to 800mm water main at the Depot	105
Section 7 - Plot 304 - Omit Landscaping works	-201
SDS to provide the services of Matt Fell until end March 2012	69
Site Wide - Provision of a CAD Technician	2
Detailed Design of York Place	56
Omit all works at the Forth Ports area	-2,443
On Street Generally - Worksite Modelling	10
Delete proposed cladding installation costs on Roseburn Viaduct Structures	-308
Descope of Service Vehicle (pick up truck at Depot)	-22
On Street Work Estimate – Period ending 6/1/12	159
Provision of sand for tram commissioning (Tramco budget)	5
TOTAL	1,104

4.2.2 Changes in Progress

Changes in Progress include items which cannot be mitigated and the change is agreed in principle include:

- St Andrew Square - tie in detail: £30k
- Revise design for amendments to setts areas and specification: £30k
- De-scoping the airport tramstop kiosk and canopy: -£150k
- Diversion of Scottish Power Cable at Haymarket Viaduct: £50k

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4.2.3 Anticipated Change

The movements in the period are provided below:

Anticipated Change to 27 January reporting date		£15,025K
Pricing Assumptions - 6.4.2.7 Cycleway at Mound	Cost moved to changes in progress	-70
Piled OLE base in lieu of utility diversion	Reduction for costs transferred to changes in progress	-160
MUDFA Reinstatement - Hope Street / Lothian Road	Works not completed under MUDFA	20
LV supply to Airport Tramstop and Kiosk	Not excluded from settlement agreement, entitlement to be proven	30
Further design changes to OLE resulting from utilities (York Place)	Provision for ongoing design resolution as a result of utilities	200
Sub station switching - Provision of competent resource to carry undertake sub-station switching and equipment monitoring. Allowed for 20 weeks	SCADA not operational therefore temporary manual solution	25
Additional Siemens supervision as a result of accelerated programme rev 4C	Additional on street track laying gangs requires additional supervision	155
Total		15,227

As design information is being developed further estimating work is ongoing on the Cathedral Lane Sub-station, piling, York Place Terminal Point, piling to OLE and delay analysis. In addition a review of changes to date and risks will be undertaken during March when the next iteration of the QSRA and QCRA are being concluded.

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4.2.4 Contributions Register

The cost report makes provision for the approved changes in scope. Contributions from 3rd party, stakeholder or other CEC budgets are being developed in order that the amounts can be finalised and deducted from the out-turn cost to indicate the costs for the base project scope. The current position is as follows.

Works	£M	Status / Action
Edinburgh Gateway Costs	0.94	Represents interim estimate, final costs to be agreed with TS
New Ingliston – ducts & crossings	0.54	Agreement required with NIL
Cathedral Lane Sub-station	0.25	Agreement required with Henderson Global
RBS Tramstop	0.50	Agreement required with RBS
St Andrews Sq Public Realm design	0.13	Separate CEC budget
CEC miscellaneous (George St)	0.32	Separate CEC Budget
Haymarket Station redevelopment	0.04	Omit substation hard standing and add costs for the removal of the parapet and staircase
Setts in On-Street Works	1.00	Specification and scope confirmed, costs to be finalised
Network Rail Haymarket redevelopment – reroute SP cable	0.04	Agreement required with Network Rail. Recorded in meeting minutes, T&T/CEC (A Sim) to record formal agreement
Total	3.76	

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4.2.5 Contingency Analysis

A draft Quantative Risk Analysis (QCRA) was issued to CEC, 29th November 2011 for initial comment. It was agreed that the QCRA would be updated following approval by CEC for the Cost Engineering baseline instructions and incorporation of the revised traffic management arrangements into the master programme. The QSRA and QCRA will be completed by 29th March 2012.

In the interim, the risk analysis undertaken by F&G has been used to monitor the impact of approved change with original contingency and required contingency (change in progress and anticipated change) to show the balance available. Work is ongoing to mitigate risks, confirm final costs for changes in progress and avoid anticipated change to reduce time and cost impacts.

Category	Original Contingency			Forecast		
	Ctgcy	Approved	Available	Required	Post Mitigation	Balance
Design completion/scope risk	6.3	0.8	5.5	0.9	0.9	5.4
Time delay	11.6		11.6	5.4	5.4	6.2
Utilities: Haymarket to York Place	2.0	1.8	0.2	11.7	11.3	-9.3
Utilities: Off Street	0.4		0.4	0.0	0.0	0.4
Possession risks	0.3		0.3	0.0	0.0	0.3
Routine Maintenance	0.5		0.5	0.0	0.0	0.5
Relax of time constraints	0.3		0.3	0.0	0.0	0.3
Pricing Assumptions (York Place etc)	7.2	-1.6	8.8	2.2	2.2	5.0
Land Purchase	0.1		0.1	0.0	0.0	0.1
Traffic Management	0.2		0.2	0.0	0.0	0.2
Move to Cost reimbursable Contract	3.3		3.3	0.0	0.0	3.3
Procurement	0.2		0.2	0.0	0.0	0.2
Exceptionally Adverse Weather	0.3		0.3	0.0	0.0	0.3
Tramco	0.0		0.0	1.2	1.2	-1.2
Totals	32.7	-1.6	31.7	21.4	21.0	11.7

Original opportunities and late increase in the On-Street contract price	-11.0
Unsecured Opportunities	7.3
Project Contributions	3.8
Available Contingency	11.8

Note: the Tramco £1.2M variance represents the difference between the budget and the contract sum. This amount is not included in the sum of the post contract approved changes, changes in progress and anticipated changes.

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4.2.6 Opportunities and Baseline Project Instructions

Prior to commencement the budget incorporated £9.4M for Opportunities. This represented the £2.4M de-scoping of works at Forth Ports and £7.0M anticipated reduction from the capping levels included in the assumptions for the On-Street works. Immediately prior to the finalisation of the Settlement Agreement Infraco proposed some adjustments to the On-Street Works amounting to a £1.6M variance which has resulted in a requirement to secure £11.0M of savings.

The cost engineering work stream identified a number of value improvements and benefits to the project. These are summarised in the Baseline Project Instructions Report January 2012. The contract provides for a 50/50 share (client/contractor) for Off - Street value engineering savings and CEC and the Independent Certifier confirmed the basis of the share mechanism with Infraco. A summary of the items within the design and construction project scope are provided below.

Note: all figures are net

Item	£M	Status
Remove embargoes and revised TM	6.46	Subject to completion of sections in advance of contract dates (22 week time saving assumed in the Rev 4C programme)
Edinburgh Gateway		Transport Scotland instruction required
Setts (separate CEC budget)	1.00	Funded by separate CEC budget (added to contributions register)
De-scope public realm at St Andrew Sq	0.70	Instructed
Contributions 3rd Party Agreements	2.68	Refer contributions register
De-scope works at Forth Ports	2.44	Instructed
Omit Airport Tram Kiosk and Canopy	0.30	Approved, replacement materials t.b.c
Temporary tram stop at York Place	0.15	Design optimisation
Redeployment of Trams		Included in CEC budget code
Cancel track York Place to Newhaven	1.10	Instructed
Omit Siemens works at Tower Place	0.10	Instructed
Turner & Townsend / CEC resources		Ongoing
Shared recovery vehicle		Not taken forward

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Road re-construction depth	0.70	Principles instructed, saving subject to site conditions
Design freeze north of York Place		Infraco design costs expended
Reduced requirement for storage		Included in CEC budget code
Lay off TM at Forth Ports/Leith Walk		TM not included in Infraco budget provision
Roseburn Viaduct Cladding	0.30	Instructed
Opportunities secured	8.62	
Opportunities to secure	7.31	

4.2.7 On Street – Schedule 45 Pricing Assumption Variations and Commercial Issue

Infraco submit Pricing Assumption Variations to claim entitlement for additional costs on the On-Street Works. Schedule 45 in the contract governs the procedure and in some instances clarifications have been required to prove entitlement. Discovery of utilities affecting the On- Street works and scope gaps between the basis of the Off Street Contract price proposed at mediation and the Settlement Agreement. Guidance has been received from McGrigors (CEC’s lawyers) and this has been used in assessing entitlement. Refer Progress Report Nr 4 27th January 2012, section 4.2.7 for further details on these matters.

Approximate costs for the commercial issues are included in the table below. The ‘RAG’ status indicates: Green – variation principle and amount agreed; Amber – variation principle agreed and amount to be agreed; Red – variation principle not agreed. Please note that in the case of some On-Street Pricing Assumption Variations the final amount will only be determined when the work in all sections are completed, e.g. changes to OLE foundations resulting from utilities will be completed when the final foundations are completed in York Place.

The format of this schedule has been revised from previous reports to align with Infraco’s On-Street Works Estimate and Change Register to enable easier comparison. Please note that PMC refers to Post Mediation Change which is Infraco’s referencing system, Turner & Townsend adopts the tie Notice of Change as the referencing system to facilitate change requests and approval from CEC. Schedule 45 On Street Works entitles Infraco automatically to Pricing Assumptions Variations without the need for a tie Notice of Change. Infraco attach a PMC reference to all Pricing Assumption Variations. The Change Register tracks tNC’s, PMC’s and approved Change Orders which account for the agreed final costs.

PMC	Description	(£M)
	On - Street	
15	Utility conflicts – investigations (allowance: utility mapping and design changes)	0.02
25	OLE foundations resulting from discovery of utilities (excludes prolongation costs)	0.27
28	Temporary accommodation for utilities contractor	0.10
29	Road re-construction protocol (opportunity to reduce depth)	0.00

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PMC	Description	(£M)
30	Additional CBR/Plate testing – ground strength	0.00
32	Utilities affecting site clearance - disconnect power to bus trackers	0.02
33	Contract exclusion - drainage boxes	0.02
35	Utilities contractor affecting Infraco progress	0.01
36	BT Fibre Optic affecting progress	0.08
37	Slit trench to validate utilities	0.01
38	Move 3 OLE foundations (St Johns Church)	0.01
40	Scottish Water diversion Princes St	0.25
43	Christmas embargo – temporary infill Princes St	0.29
44	BT diversion – Princes St (included PMC 040)	Inc
52	Install Traffic Management early Shandwick and St Andrew sq	0.13
68	Utilities affecting track drainage	0.01
69	Geotextile liner to Clifton Terrace void	0.01
86	Re-build Scottish Water surface water manholes (c. 25Nr)	t.b.c
	Off – Street	
t.b.c	Payment for Utility diversions Off Street outwith BBS's scope	0.34
61	DDA Footpath Roseburn Viaduct	0.30
t.b.c.	Low voltage supplies to Airport Tramstop cabinet	0.03
	General	
	Rev3A to Rev 4 programme – evidence of delay costs (BB only, Siemens t.b.c)	0.60

4.3 Utilities

4.3.1 Budget

The approved budget is now £4.7M which contains the original budget and drawdown for track form and OLE conflicts in St Andrews Sq and Shandwick Place to the 31st of March.

The contractor has offered a reduction on the management fee of 11.4%:

- over £3million the fee percentage will be reduced by 0.5%
- Over £4million the fee percentage will be reduced by a further 0.5% giving a total discount of 1%.

In addition reduction of c. 10% have been achieved on labour and plant rates resulting from the volume of work and programme for Shandwick Place, St Andrews Sq and Haymarket (2 to 6).

These adjustments to the inputs costs, findings on the cost per conflict and resource costs utilised in Shandwick Place and St Andrews Square will be used to update the estimate for the remaining priority 1 conflicts, refer 3.3.4 below. In addition it is envisaged that standby gangs will be utilised to resolve priority 2 conflicts where Infraco has occupation of the site. A resource based approach will be used to estimate the costs for these works. The estimate will be completed and incorporated into the next progress report.

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4.3.2 Approved Changes

£1.8M has been approved for diversion and protection works within the track zone to 31 March 2012, refer Utilities Change Order dated 22nd December 2011.

Further change requests will be submitted when the scope of future works has been defined and when committed expenditure exceeds the approved budget

4.3.3 Changes in Progress

The contract form is NEC Option E – Cost Reimbursable. The contract is being administered by an NEC change management system which tracks orders/changes for specific items of work. This enables control over commitments and managing expenditure

4.3.4 Anticipated Change

A cost model has been developed for the works based upon the utilities conflict database. The cost model contains composite rates per conflict type. The works are being managed in two priority categories:

Priority	Conflict Type
Priority 1:	Overhead Line Bases Road Level Conflicts Tram Ducting Chambers Tram Ducting Track Construction
Priority 2:	Traffic Signal Pole Street Lighting Column Road Sign Base Kerb Re-alignment Drainage Drainage Gulley

The anticipated final costs currently remain at £14.2M. Further forecasts will be produced based upon work done in Shandwick Place and St Andrews Sq in order that anticipated costs can be revised. The key cost risks include:

1. Costs are based upon a unit cost per conflict type from Haymarket 1. It should be noted that there is a high degree of variability in work scope for each conflict for example: removal of foam concrete, steelwork within the road construction, abortive excavations owing to utilities not in the locations shown on the drawings.
2. Scottish Water has submitted a proposal for management and supervision costs for On-Street, Off-Street and Legacy Works. These costs are being challenged; however they are £1.5M in excess of the forecast allowance. It is unlikely that these costs will be agreed in advance of the historical issues associated with betterment and cost share.

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3. The scope of the Leith Walk legacy works is being established. Current provision is £1.1M as per the original budget. The estimate will be updated based upon the emerging scope and included in the next progress report.
4. The unit cost per conflict may not account for inefficiencies resulting in the accelerated programmes for Shandwick and St Andrews Sq.

4.3.5 Utilities Off – Street

To date a total of £0.34M has been invoiced by Utility Companies for diversions and supervision on the Off Street section. These works were not excluded from Infraco's Off Street Contract Price and discussions are ongoing regarding the correct allocation of these costs.

At this stage these costs have not been included in the Anticipated Change Section of the Cost Report.

4.4 Tram Vehicles

The budget for Tram Vehicles is £62.4M which is lower than the contract sum at £63.6m.

Changes for this period include

Item	£K
Provision of sand and amendments to testing and commissioning	5
Provision of CAF Integration Manager – cancellation may be residual liability of £25K	

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4.5 Risk

The risk register is in the process of being updated, the status of the top ten risks is provided below:

Risk	Level	Comments/Actions
Risk that the project relationship with Scottish Water deteriorates and access to utilities and resolving of delay issues becomes prolonged	RED	New Scottish Water Specific risk Ongoing Liaison and meetings in place Dedicated Scottish Water account Manager appointed Steering Group Set up and attended by Project Director
Discovery of additional Track construction conflicts (Live)	RED	Utility owners providing live and dead drawings Slit Trenching New Traffic Management plan being implemented and incorporated in Rev 4c Programme
Tram (CAF) / Infrastructure (Infraco) integration risk. Risk that Infrastructure and Tram meet the employers requirements but are incompatible such that system is inoperable	RED	Tram integration manager appointed CAF Interface manager (Mikel Irizar) to start from mid-January 2012 Section testing ongoing Programmed testing of complete track prior to project completion
Delayed NR approvals as applicable	RED	3rd party rep approved by NR. Meetings ongoing with NR. Assisting contractor in production of a detailed plan for the submission and approval of NR approval documentation. Co-located team now onsite Delay activity records kept
Risk that contract is moved to cost reimbursable	RED	Weekly PMC meetings Escalation to control meeting where necessary
Late 3rd party claims for utility/property damages from works	RED	Utility provider presence on site SW legacy works included in forecast
Design approvals milestones are not met in line with rev4 programme	RED	Fortnightly design team meeting attended by all stakeholders Tracking SDS Design Programme Traffic light system for design approvals SDS design programme is incorporated into Master Schedule
Additional land required to allow construction	RED	Key areas identified and process for land registry identification etc put into action via CEC
Risk that the public, public representatives, media and other stakeholders receive poor quality/ incorrect information about the project and TM plans	RED	New Risk raised by the TS Communications team Strategy & resource plan being developed by joint communications group. This will aim to produce regular, reliable and timely communications of information to the public, council and media
Risk that project delivery team fails to deliver against the Contract Programme Narrative	RED	Mitigation plans to be developed for each assumption Master Schedule to incorporate the dependencies against which the Programme Narrative assumptions are defined Ensure programme assumptions are accommodated in the Rev 4c programme

The QSRA and the QCRA are being updated to reflect the revised programme Rev 4C, the Master Programme and further analysis on risk mitigations.

Final

4.6 Payments and Cash flow

A summary of the certified amounts are provided below

	Certified	Planned	Comment
Infraco	£257.9m	£264.0m	Planned – based upon Rev 3A programme
Utilities	£2.43m	£2.45m	
Trams	£56.9m	£56.9m	Payments in accordance with milestone schedule.

A revised cost milestone forecast is being developed based upon the Master Programme and will be available for review 23rd March 2012.

4.7 Cost Engineering and time savings

The Rev 4C programme has been reviewed and there is a potential saving of 22 weeks which will be impacted by the utilities diversion works being undertaken in advance of Infraco and any delays encountered by Infraco resulting from unforeseen utilities discovered by Infraco during their works. The potential saving will be assessed by Infraco in each progress report and we will use the Master Programme to assess impacts and opportunities from the utilities diversion works.

5 On Street - Enabling Works & Utility Legacy Works

5.1 Progress in Period.

Utility works in Shandwick Place and St Andrew Street have progressed well and the sites have been handed over to Infraco as follows:

Shandwick Place

Shandwick Place was made available to Infraco on the 14th February 2012 as previously envisaged. There were some minor utility works that continued until the end of week commencing 13th February 2012 but these were remote from the area of site required by Infraco to prepare for piling works.

St Andrew Street

St Andrew Square and the north end of St Andrew Street were handed over on 14th February 2012 in line with the previous reports. There were some minor utility works that continued until the end of week commencing 13th February but these were remote from the area of site required by Infraco and agreement was reached with Infraco's site management team for works to continue.

In St Andrew Street south utility works have continued in line with the programme previously reported and works are due to be complete by 24th March 2012.

Haymarket

Planning for utility works in Haymarket 2-5 are now complete and works are due to commence on 24th March 2012. Enabling works to reconfigure junctions have commenced.

It should be noted that in clearing utilities in both Shandwick Place and St Andrew Street Turner & Townsend has encountered significantly more utilities than were anticipated. An example of this is in Shandwick Place where it was anticipated at the end of January that 195 major conflicts would be encountered. The actual number of conflicts encountered was in fact 316.

5.2 Key Issues

Scottish Water Manhole Connections

Infraco proposals to connect into existing manholes in Section 1D have been rejected by Scottish Water. This has the potential to be far reaching as other manhole connections on the project would also be rejected. Turner & Townsend has met with Scottish Water at a senior level to discuss the matter and has put forward a proposed solution. It has now been agreed to hold a full day workshop at Scottish Water's offices to work through each manhole on the project and seek resolution, this workshop is scheduled to take place on 1st March 2012. This issue has the potential to cause an overall delay to the overall programme.

Final

Infraco has also raised issues with the re-approval process now required by Scottish Water and has queried if the Scottish Water relationship can be improved by changes in some Scottish Water personnel, both these matters are also being discussed with Scottish Water.

Legacy Works

Turner & Townsend has now completed categorising the legacy issues. Progress on these will be reported on a fortnightly basis. It should be noted this is an ongoing exercise and further legacy issues may become apparent as investigations into work carried out by others are finalised. Within the list of issues falling within the tram worksites there are seven key water issues that have the potential to cause significant difficulty for the project. These can be further categorised as follows:

Apparatus falling within the tram Dynamic Kinematic Envelope and the tram DKE+2m that cannot be diverted

Apparatus without the necessary separation distance from other utilities as a consequence of congested areas

Discussions have commenced with Scottish Water on how to best deal with these issues and it has been agreed that Turner & Townsend, in the first instance, will provide a desktop study setting out its position and proposed solution avoiding any further diversionary works.

The legacy works at the Crawley Tunnel are now due to be completed during evenings using temporary traffic management, this will not impact on the re-opening of the Mound on 3rd March 2012.

Regarding the legacy works north of York Place the PQQ has been finalised and was published on 24th February 2012. Scoping these works has proved extremely challenging given the poor records available to Turner and Townsend, to reflect this in the contract strategy for delivery of the works has been left flexible with NEC options C and E still being considered.

5.3 Look Ahead

The bus lane at the east end of Princes Street is due to be closed on 3rd March and the utility works in Haymarket 2-5 are due to commence on 24th March 2012. Enabling works to reconfigure junctions are due to be completed during the period.

Detailed planning of enabling works in York Place is due to commence at the end of February in anticipation of traffic management measures being brought forward to October 2012 as envisaged in the cost engineering initiative.

Work will continue on dealing with legacy works and progressing with the PQQ for the legacy works north of York Place. Snagging works at the Mound are due to be completed to allow the Mound to open to traffic on 3rd March 2012.

6 On Street - Main Works

6.1 Progress in Period.

Works progressed well in Haymarket 1 with Infraco exposing, excavating and backfilling the air raid shelter in the area and constructing OLE pile caps. In Princes Street, works from South St David Street to St John's Church are progressing well and discussions continue with Infraco to establish if the works can be completed early ahead of the Rev 4 programme July completion date. This would include completion of all remedial works, the tram stop and OLE foundations. The Electrical & Mechanical Works, including the overhead wires, are then due to commence in early November 2012.

As reported previously Princes Street works have been re-sequenced to ensure bus traffic can be switched on 3rd March 2012 to facilitate the closure of the bus lane on east Princes Street at the bottom end of South St Andrew Street.

Third party approvals and consents for Dublin Street Steps, Picardy Place and Princes Street OLE re-design were progressed during the period. Consent applications for approval were due to be submitted by Infraco in mid February but these have been delayed a number of days, an oral update will be provided at the meeting on 1st March 2012.

All design work north of York place has been suspended and a methodology for closing out design issues has been agreed in principle with Infraco. Final wording is yet to be agreed.

Works required in the Forth Ports and Lindsay Road area to make good previous Infraco and MUDFA works were assessed during the period and information has been passed to CEC. An assessment of the likely expenditure will be carried out once the scope of work is further defined.

Turner & Townsend has been working closely with CEC in seeking to improve ongoing stakeholder communications. Public open days were held during the period and supported by Turner & Townsend.

6.2 Key Issues

The connections to Scottish Water manholes issue described above may impact significantly on the On Street programme of works.

Final

6.3 Look Ahead

Haymarket 1

Infraco works will continue in the area with pile cap construction although any further works will be delayed until such time as the Scottish Water manhole connection issue is resolved.

Shandwick Place



Piling for OLE bases will be completed during the period and excavation for track slab and pile cap construction will commence.

Princes Street



Track remedial works by Infraco will continue in Princes Street and Turner & Townsend will complete legacy remedial works to utilities in the area ahead of the completion of the non M&E works in the summer of this year. Specific legacy works for Scottish Water will be carried out ahead of the Mound re-opening on 3rd March 2012.

St Andrew Square



Works at the south end of St Andrew Street are delayed and it is currently anticipated these will be complete on 24th March 2012 to allow Infraco works to commence on Monday 26th March". Excavation

Progress Report No. 5 28th January – 24th February 2012

Final

works have commenced on the remainder of St Andrew Street and piling works for OLE foundations are due to be completed in the period.

York Place

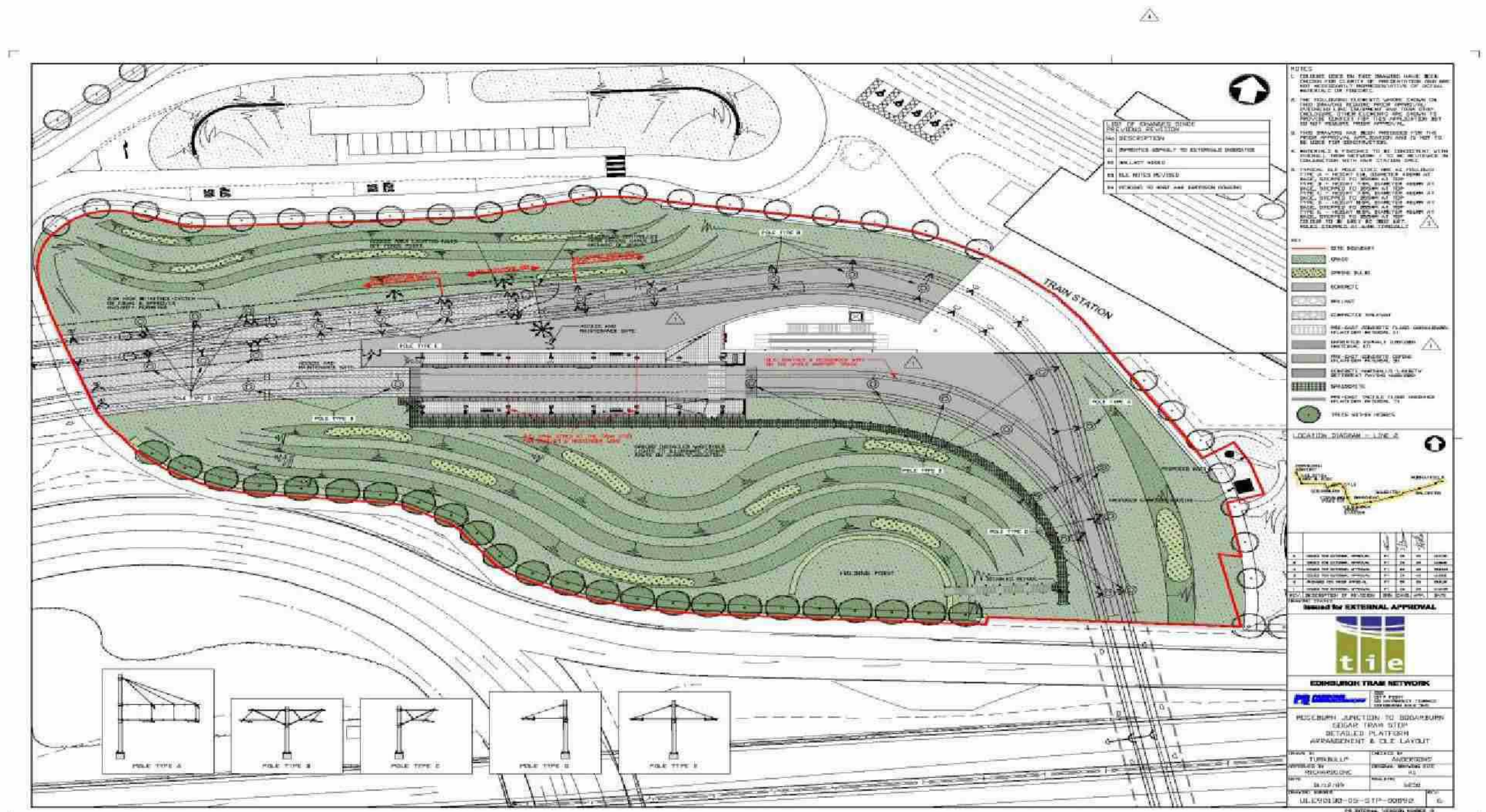
Planning work will continue in York Place.

Final

7 Off Street Works

7.1 Progress in Period

Edinburgh Gateway



A meeting was held on the 17th February 2012 to discuss Edinburgh Gateway, subcontractor tender returns and subsequent tender report produced by BBS for the retaining wall. This meeting was attended by Transport Scotland, BBS, Colin Smith and Turner and Townsend.

BBS advised 2 days float prior to delay costs being incurred. The completion of the retaining wall works are reliant on interfaces with Network Rail and Scottish Water. Given these interfaces pose a programme delay risk beyond 2 days the option of an earth slope was explored. BBS confirmed that their initial thoughts were that this option could be achieved within programme. Turner and Townsend have produced timelines and cost for the slope option for BBS to comment on.

First ScotRail Depot

First ScotRail raised an objection on Thursday 9th February 2012 with regards to BBS taking access to land located both north and south of their access road. First ScotRail felt that due to incidents that had occurred (manhole being left open, forklift blocking their access road) that BBS located on both sides of their road would increase their risk of an incident occurring.

A meeting was scheduled between Colin Smith, Stephen McCredie, First ScotRail and Shirley Mushet, (Turner and Townsend) on Wednesday 15th February 2012. At this meeting it was agreed that relevant parties would produce a draft protocol for work in the area. This was subsequently agreed and signed by Colin Smith on behalf of the Edinburgh Tram Project and Stephen McCredie, First ScotRail.

The protocol provided for the supply of supervisors in three areas around the First ScotRail depot. These are being supplied by Network Rail. Network Rail are concerned that their supervisors are being utilised for non priority working. It has been agreed with First ScotRail that the utilisation of this resource shall be reviewed on a weekly basis.

Section B Completion

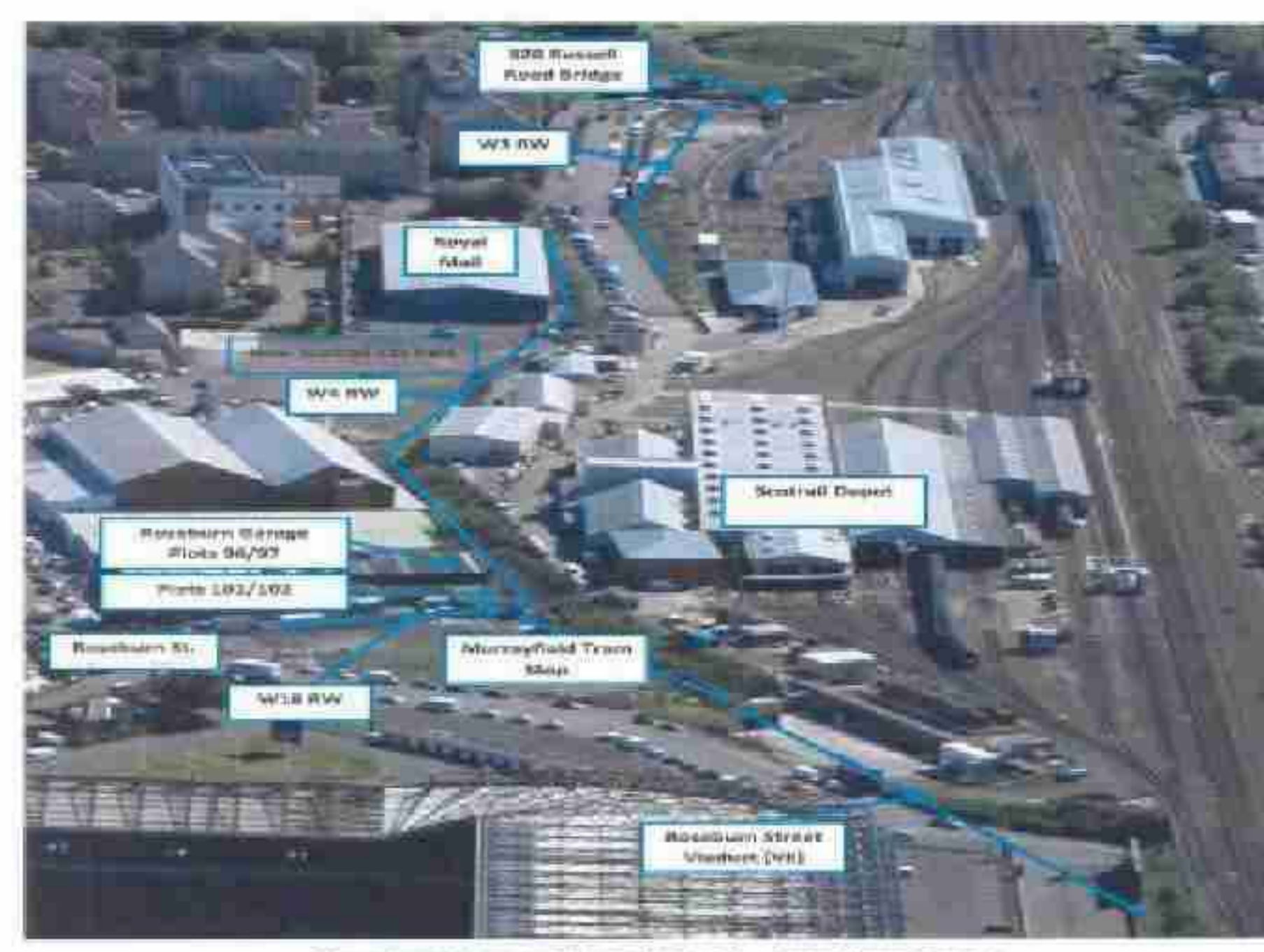
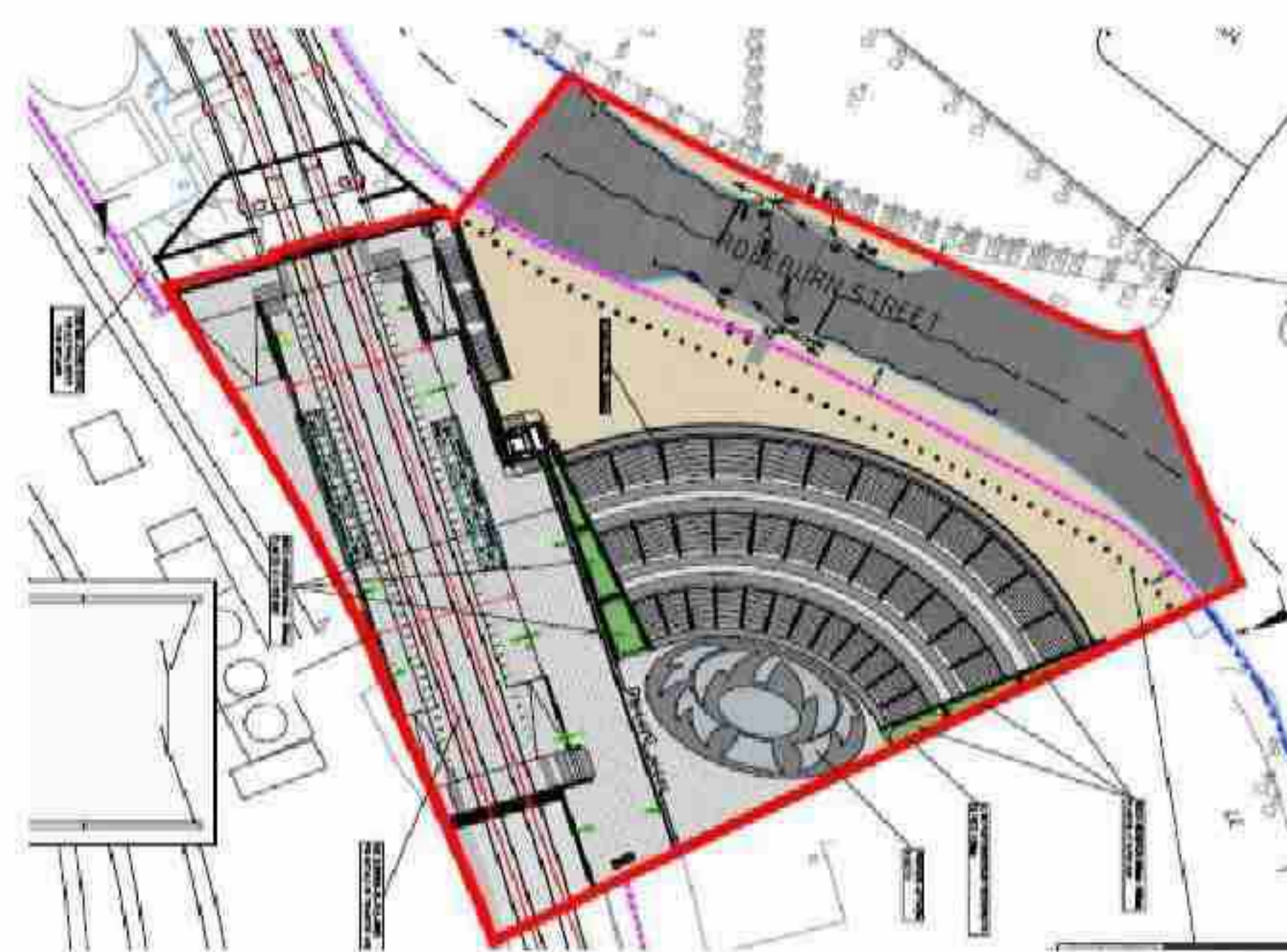
The secant piling at the airport is continuing however due to plant and staff issues there has been a reduced quantity in daily production. The latest progress report from BBS indicates a 25 days delay. BBS mitigation includes increasing the working hours of the rig and undertaking parallel working with the breakdown of the piles occurring while the piling rig is progressing. Turner and Townsend are currently monitoring production rates.

Network Rail Interface

The project is starting to achieve a more comfortable time lag between documentation being submitted and approval achieved from Network Rail. There are still some exceptions with occasional Work Package Plans being submitted through the week for works commencing the subsequent weekend. There are also issues with documentation that have been reviewed taking time to be changed and resubmitted

Other items of progress

- Haymarket Yards re opened to traffic
- Haymarket Yards track works commencing adjacent to the railway corridor
- Rail installed from Haymarket Yards to the viaduct
- Russell Road bridge abutment construction started
- W4 wall construction continuing
- W3 enabling works commenced
- Roseburn Street structures continuing to pile
- Water of Leith temporary sheet piling for east and west abutment



Structures Layout Russell Road – Roseburn Street

- **Murrayfield Tram Stop works ongoing**

Final



- **Baird Drive earthworks continuing**



- **A8 underpass deck waterproofing completed for the last phase**
- A8 excavation breakthrough
- NIL Future proofed crossing constructed
- Gogar landfill; sewer diversion continuing
- Sheet piling along the Gogar Burn completed
- Eastfield Avenue; Crossing works continuing

Final

8 Trams

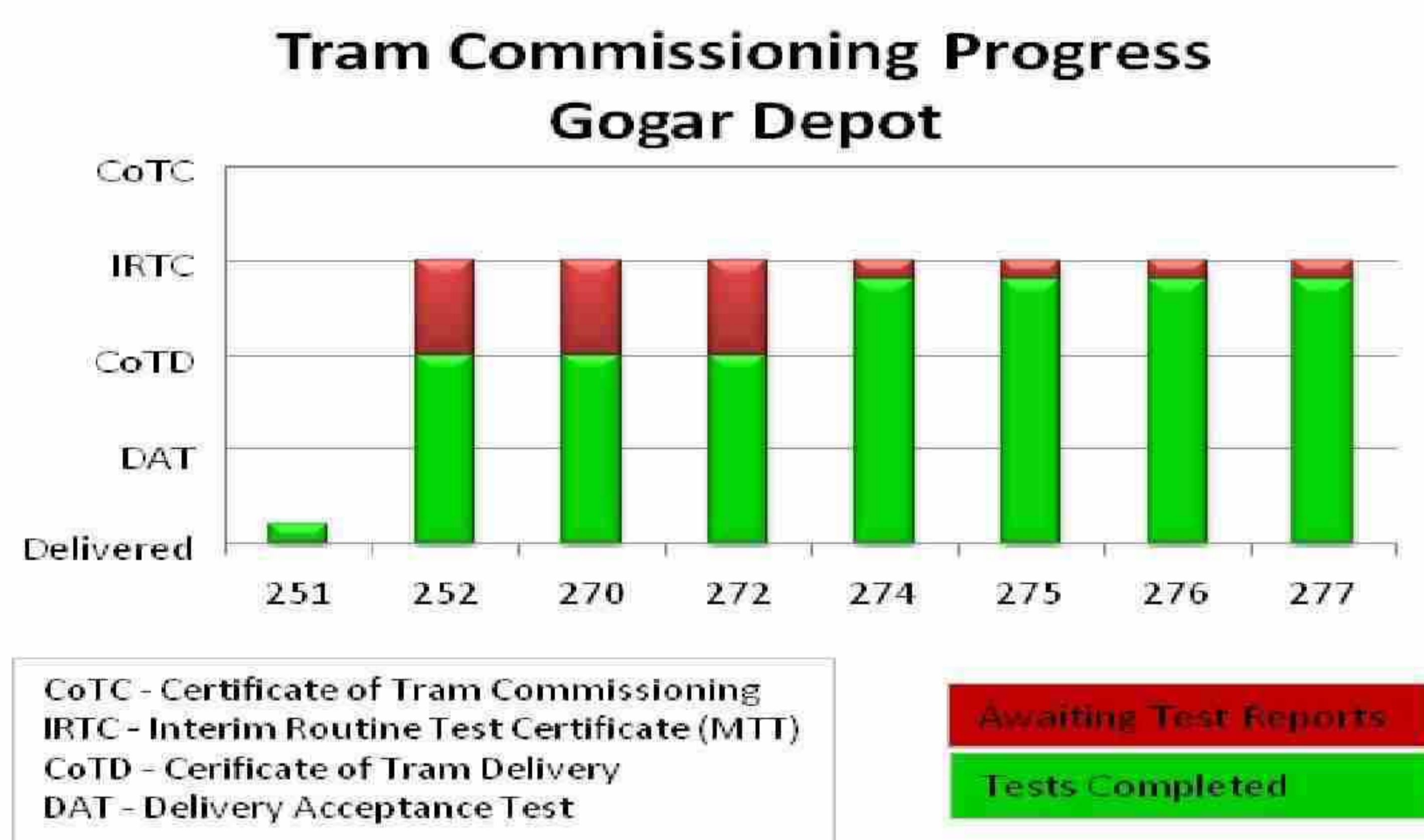
8.1 Progress in Period

The Tram commissioning continues to be completed in line with the commissioning plan, with Tram Inspector in attendance at all Routine Tests. These works continue to progress well. This work is being controlled by a detailed spreadsheet developed to show progress of commissioning at Gogar Depot, with commissioning KPIs being developed.

Eight trams now delivered, with seven having undergone dynamic testing on the Mini-Test Track

Delivery of trams is on-going post Depot handover a month earlier than in the Programme with Tram 251 delivered on the 21st February 2012

Capital Spares now being delivered with inspection and sign-off process started.



8.2 Key Issues

Tram Inspector Agreement accepted 'in principle' by all parties - submitted to all stakeholders for final review and signature

Tram Certification process developed – to be discussed with CAF (meeting arranged – 28/02)

Initial proposal to modify the Tram Wash Plant to ensure all areas of tram are washed has been accepted by all stakeholders – modification to be costed and formally proposed – due for completion in May 2012.

8.3 Look Ahead

Tram Delivery, Test & Commissioning:

- Tram Inspector Agreement finalised and signed-off
- Ninth Tram expected 13th March 2012
- Confirmation that Mini-Test Track Routine Testing has been completed on the first seven Trams.

9 Assurance

9.1 Progress in Period

BBS has now responded to the outstanding safety verification audits, these actions have been ongoing for a number of months; these responses are now under review to close out the outstanding actions.

BBS have advised that further Inspection and Test Plans have been put on their BIW system relating to Section A handover, formal issue now received.

Currently progressing two metrics inspection; QM73 – the QM73 form reviews the risk of electrocution/electric hazards at the depot. The inspection is progressing well with a number of questions answered as a result of the Section A handover. However; a number of hazards associated with electrocution remain open thus the inspection cannot be finalised. It is expected that subsequent to review, these hazards will be closed within the next two periods.

Advised Testing and Commissioning Strategy is expected from BBS on Monday 12th March 2012, prior to this date an internal review of the possible enhancement of the Testing and Commissioning Programme will be held with Technical Support Service.

A formal audit programme has been agreed with TSS moving forward, they have issued a revised fee forecast, inline with the current budget.

The operators training has progressed in accordance with their integrated training plan; further assessment of training is ongoing. The first ISO9001 certification audit took place in January 2012, with the auditors advising that the processes of Edinburgh Trams were at a state of readiness for certification.

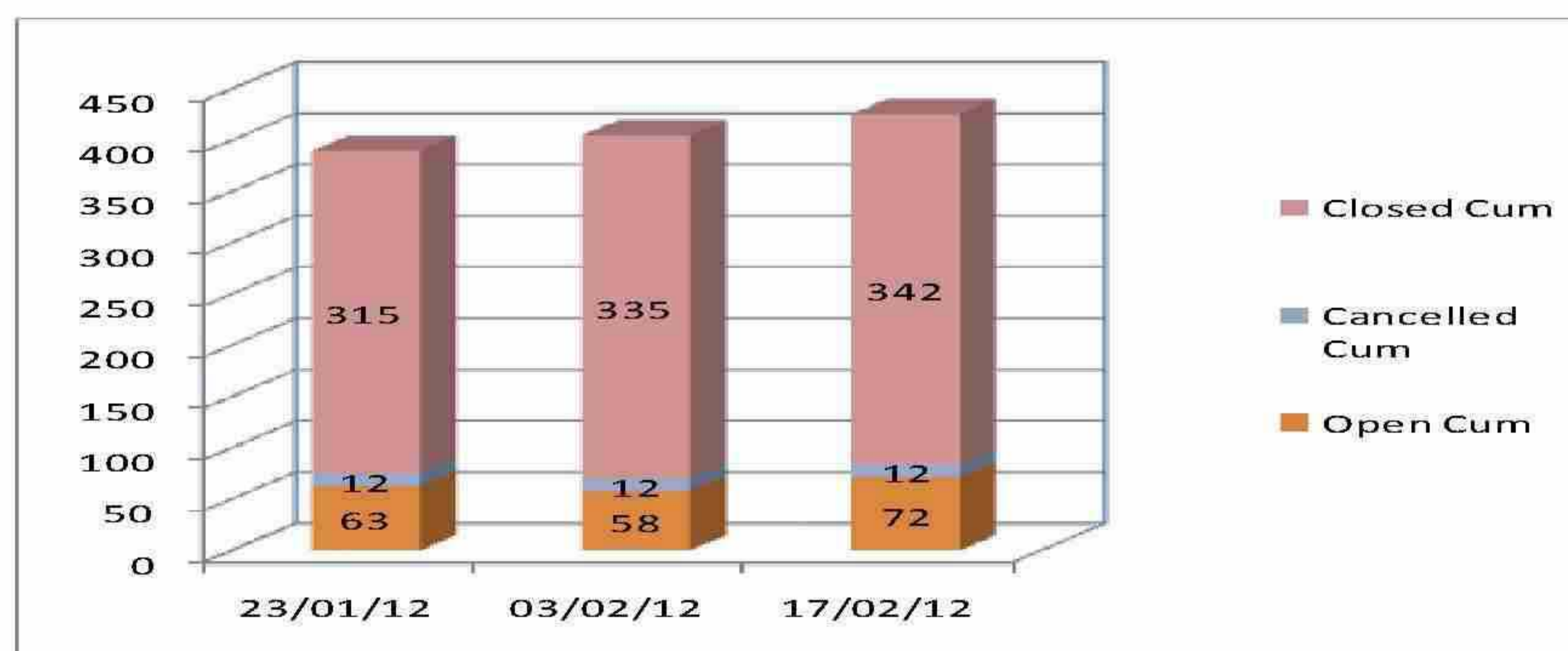
9.2 Quality

Total No of NCRs raised is 426.

36 NCRs were raised during the period and 27 NCRs were closed out during the period.

- BBS have carried out a detailed survey on the Princes Street reinstatement works, as a result of Turner & Townsend inspection the full report is due on the Tuesday the 28th February 2012.

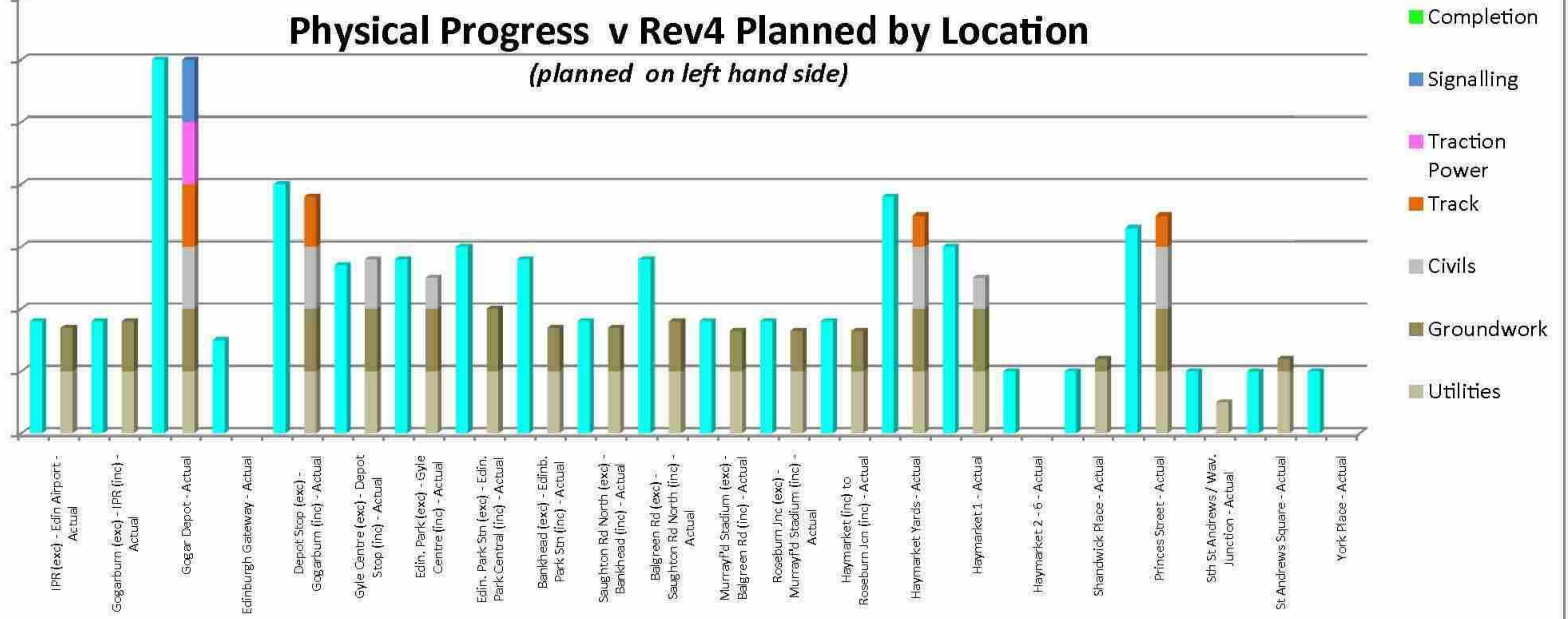
13 no open NCRs are greater than 6 months old. These are shown in the graph below:



Appendix 1 – Dashboards

Produced by	Julian Weatherley & Shirley Collin	SECTION	SUMMARY DASHBOARD REPORT		Employer	City of Edinburgh Council
Approved by	Julian Weatherley	Issue By:	Turner & Townsend Project Management Limited, 9 Lochside Avenue, Edinburgh Park		Address	Waverley Court, Edinburgh, EH8 8BG
Status	FINAL	Issue Date	27-02-2012	REPORTING PERIOD	14 th to 27 th February 2012	Project:
						Edinburgh Tram Network

Executive Summary:	CEC Actions / Decisions
<ol style="list-style-type: none"> There were no reportable accidents during the period. Twenty two incidents occurred in total of which two involved members of the public and three resulted in service disruption of local facilities and property. Shandwick Place and St Andrew Street (north and central) were made available to Infracore on 14th February 2012. St Andrew Street is anticipated to be made available to Infracore on 24th March 2012. Infracore's proposal's to connect into existing drainage manholes has been rejected by Scottish Water. Urgent talks are ongoing with Scottish Water to bring about a resolution. Planning continues to bring about access to Princes Street / Waverley bus lane and Haymarket 2to5 on the 3rd March and 24th March 2012 respectively. Agreement in principle has been reached on a way forward to de-scope close out works at Forth Ports (Tower Bridge and Lindsey Road). Off St progress includes the opening up of Haymarket Yards to traffic, A8 crossing excavation breakthrough and the completion of sheet piling at Gogar Burn. A formal decision on the way forward for the Edinburgh Gateway remains outstanding. It is now anticipated that this will be confirmed on 29th February 2012. Increased site supervision has been implemented at the First ScotRail Depot following concerns over increased risk of incidents resulting from BBS multiple work fronts. BBS has reported a 25 day delay to secant piling works at the airport. A number of changes to the construction methodology are being implemented to recover this slippage. The Murrayfield Ground Improvement methodology continues to be a cause for concern with Infracore back in discussions with alternative subcontractors. Infracore have indicated that they are still aiming to maintain the revised ground improvement programme. Further discussions regarding the wayleave at Ingliston are being held week commencing 27th February between Scottish Gas Networks (SGN) and New Ingliston Ltd (NIL) this is due to the wording previously on the wayleave being changed by the NIL legal team. The contractor is progressing mobilisation, however without a wayleave in place the works shall not commence. The latest commencement date from the contractor is the 12th March 2012 which shall maintain the completion date of the 18th March 2012. Eight trams have now been delivered to the Depot with seven having undergone dynamic testing on the Mini-Test Track. Operational responsibility of the Depot by Lothian Busses is anticipated to be formalised by 2nd March 2012. The logic of a revised Infracore programme (the Rev4c programme) has been tested and agreed by Turner & Townsend and CEC planners. A revised Master Schedule is also being developed as a tool to forecast the true project progress. A total of £8.62M of cost savings/additional contributions have been instructed this period. Progress has been made on commercial issues with further work needed on the cost liability for the SGN diversion Off Street, the Roseburn viaduct footpath and evidence of incurred cost for the delay in commencement (2nd of September to 3rd of October). Looking ahead the key cost challenges include resolution of the OLE piled foundations, minimising delay costs during the completion of the track form utility diversions and commencement of Infracore works in St Andrews Sq, Shandwick Place and Haymarket. Also resolution of the priority 2 conflicts outwith the track form requires careful planning and execution. The impact of Scottish Water's requirement for the re-building of manholes has not been incorporated as meetings have been arranged to resolve the matter. Depending on the agreed solution there may be re-construction works and delay costs. The QSRA has commenced following the review of the Master Programme and a QCRA is to follow. It is anticipated that this will be completed by 29 March 2012. Review sessions require to be planned with CEC. 	<ol style="list-style-type: none"> Obtainment of permissions in support of the location of revised OLEs in Princes Street and design approvals at Dublin Street & Picardy Place. Clarification on historical commercial position relating to scope of the Roseburn Delta Footpath. Confirmation of scope at Edinburgh Gateway. Material approvals Haymarket Tram Stop (tactile paving). Scottish Power wayleave at Haymarket. Signing of permanent depot building warrant. Agreed Tram Inspector Agreement to be signed. Lothian Buses are due to take full operational responsibility for the Depot negotiations these are on going with CEC, due to be completed Friday 2nd March. Confirm requirements for Tram Livery. Assistance in resolving Scottish Water manhole connections issue.



This chart shows physical progress in each geographical section, a full coloured bar represents completion of the construction aspect. A partial coloured bar represents work in progress.

PROGRESS



Produced by	Julian Weatherley & Shirley Collin	SECTION	SUMMARY DASHBOARD REPORT			Employer	City of Edinburgh Council
Approved by	Julian Weatherley	Issue By:	Turner & Townsend Project Management Limited, 9 Lochside Avenue, Edinburgh Park			Address	Waverley Court, Edinburgh, EH8 8BG
Status	FINAL	Issue Date	27-02-2012	REPORTING PERIOD	14 th to 27 th February 2012	Project:	Edinburgh Tram Network

KEY MILESTONES

Section	Description	A Rev 4 Schedule Date	C Forecast/ Actual Date	B - A = C Var. (d's)	Completed	Crit. Path	Comments
Section Completions							
ALL	Section A; Depot complete	16-Dec-11	16-Dec-11	0	✓	Y	
ALL	Section B; Test Track complete	08-Mar-13	12-Apr-13	35		Y	Due to current delays in Off-Street construction, measures are being put in place by Infracore to recover delays.
ALL	Section C; All construction complete	09-Apr-14	tbc	N/A		Y	The full impact of the Utility Enabling Works on the completion dates is still being analysed.
ALL	Section D; open for revenue	08-Jul-14	tbc	N/A		Y	The full impact of the Utility Enabling Works on the completion dates is still being analysed.
On Street							
Haymarket							
On-Street	Haymarket 1- Completion of Utility moves in advance of Infracore Works	28-Oct-11	16-Dec-11	49	✓	N	Access to site was granted to Infracore on 18-Nov-11, with only minor utilities works remaining. Full hand back was 16 Dec 11
On-Street	Haymarket 1- Completion	04-Apr-12	30-May-12	56		N	Potential further delay to H1 due to Scottish Water manhole and drainage connection issues. Delay to H1 completion does not affect overall project completion date.
On-Street	*Haymarket Phase 2 Utilities Work Complete	N/A	08-Jun-12	N/A		N	All Haymarket Utilities works to be carried out in advance of construction works.
On-Street	Haymarket Civils Works Complete for all Phases	23-Jul-13	21-Mar-13	-124		N	Master Schedule projecting time saving due to cost Engineering Initiatives. Savings not yet agreed with INFRACO. Discussions ongoing.
Shandwick Place							
On-Street	Shandwick Place Traffic Management Commences	07-Mar-12	14-Jan-12	-53	✓	N	Site access achieved early to facilitate Utility Clearing Works
On-Street	*Shandwick Place 1 Utilities Work to commence	N/A	03-Jan-12	N/A	✓	N	No forecast date in Rev4. Utility works now in progress.
On-Street	Completion of Shandwick Place Utility Moves	N/A	15-Feb-12	N/A	✓	N	Current handback is approximately 4 weeks before Infracore due to Commence works
On-Street	Shandwick Place Civils Works Complete	15-Nov-13	26-Jul-13	-112		N	Whilst Master Schedule is projecting time saving due to Cost Engineering Initiatives these savings not yet agreed with INFRACO. Discussions ongoing.
St Andrews Square & St Andrews St North							
On-Street	St Andrews Sq Traffic Management	14-Feb-12	07-Jan-12	-38	✓	N	Work complete. Change over of Traffic Management system from South St Andrew's Sq. to South St David's St.
On-Street	Commence St Andrews Square Utility Moves	N/A	09-Jan-12	N/A	✓	N	Utility works in progress.
On-Street	*St Andrews Square Utilities Work Complete	N/A	14-Feb-12	N/A	✓	N	Majority handed over 14th Feb in accordance with requirements of Rev 4
On-Street	Complete *Section 01 St Andrews Square Outbound Ch 1061 to 1220 Carriageway Construction	25-Oct-12	25-Oct-12	0		N	Progress to date shows early indications of possible completion ahead of scheduled date.
South St Andrews St / Waverley Junction							
On-Street	Start Utilities Works South St Andrew St / Waverley St Junction	N/A	09-Jan-12	N/A	✓	Y	No specific activity in Rev4 plan
On-Street	Finish Utilities Works South St Andrew St / Waverley St Junction	N/A	23-Mar-12	N/A		Y	Utility Diversions now in progress. Works across Waverley Bus lane to commence 3/3/12.
On-Street	*Commence Civil Work *Section 01 South St Andrews/Waverley Junction St. Inbound Ch 1171 to 1364 Phase 1	08-Feb-12	26-Mar-12	47		Y	Delayed due to required utilities diversions. Date now in accordance with VE initiative
On-Street	Complete *Section 01 South St Andrews/Waverley Junction St. Outbound Ch 1150 to 1370 Carriageway Construction	15-Oct-12	12-Oct-12	-3		Y	On-Street works have been re-sequenced in line with Cost Engineering initiatives
York Place							
On-Street	Start York Place Utility Moves	N/A	25-Oct-12	N/A		Y	On-Street works have been re-sequenced in line with Cost Engineering initiatives. Traffic light at SAS/Waverley require to be commissioned before starting this phase.
On-Street	Completion of York Place Utility Moves	N/A	06-Mar-13	N/A		Y	On-Street works have been re-sequenced in line with Cost Engineering initiatives
On-Street	Commence Civil Works - York Place	24-Oct-12	13-Mar-13	140		Y	On-Street works have been re-sequenced in line with Cost Engineering initiatives. Delay due to required Utility Diversions
On-Street	Completion of York Place Civils Works	11-Nov-13	10-Sep-13	-62		Y	Master Schedule projecting time saving due to cost Engineering Initiatives. Savings not yet agreed with INFRACO. Discussions ongoing.
Princes Street							
On-Street	Completion of Princes St Highway Re-instatement and non-M&E works	05-Jul-12	06-Jun-12	-29		Y	Discussions ongoing with BBS indicate that works in P St area may be completed ahead of Rev.4 date.
Off Street							
ALL	Forecast completion of AIR-HAY route	21-Aug-13	29-Nov-13	100		Y	Delay due to Water of Leith Bridge
Off-Street	Murrayfield ground improvements, complete	25-Mar-12	21-May-12	57		N	Potential impact if revised gr'd improv'ts are not agreed and approved by NR
Off-Street	Haymarket Yards, complete	27-Feb-12	03-May-12	66		N	Delay accom'd within float, no effect on forecast completion of AIR-HAY route
Off-Street	South Gyle Beam Installation, complete	11-Jul-12	10-Oct-12	91		N	Delayed subject to ground improvement methodology. Further delays possible.
Off-Street	Water of Leith Bridge, complete	31-Aug-12	27-Nov-12	88		Y	Delay due to reverting back to original construction methodology in lieu of design for ground improvements
Off-Street	W4, 19-29; Russell Rd. Retain, complete	29-Oct-12	07-Dec-12	39		N	Delay accom'd within float, no effect on forecast completion of AIR-HAY route
Off-Street	S21A, S505; Roseburn St., complete	19-Sep-12	03-Oct-12	14		N	Delay accom'd within float, no effect on forecast completion of AIR-HAY route
Off-Street	S22A Balgreen Road Bridge complete	18-Sep-12	28-Nov-12	71		N	Level of Float reduced. Potential to be on Critical Path
Off-Street	Gyle Tram Stop complete	23-Apr-13	17-May-13	24		N	Delay accom'd within float, no effect on forecast completion of AIR-HAY route
Depot & Test facilities							
Depot & Test Facilities	Mini test track available	02-Dec-11	12-Dec-11	10	✓	N	Complete
Depot & Test Facilities	Soil nails, test, complete, Gogar Landfill	16-Jan-12	08-Feb-12	23	✓	N	Complete
Depot & Test Facilities	Reinf'd Earth Embank't, complete, Gogar Landfill	16-Mar-12	23-Apr-12	38		N	Delay accom'd within float, no effect on forecast AIR-Depot test track available
Depot & Test Facilities	Eastfield Avenue, complete	21-Feb-12	17-May-12	86		N	Delay accom'd within float, no effect on forecast AIR-Depot test track available
Depot & Test Facilities	Ingliston Gas Mains diversion, const'n complete	N/A	18-May-12	N/A		N	Contractor programme has been confirmed
Depot & Test Facilities	A8 Underpass Completion & Traffic Back	13-Jun-12	31-Mar-12	-74		N	Anticipated that traffic will be back over the full junction on 31-Mar-12.
Depot & Test Facilities	Completion of Gogar Burn Tram Stop	17-Oct-12	17-Sep-12	-30		N	Ahead of Schedule
Depot & Test Facilities	Interim test track, IPR-GBN available		17-Sep-12	N/A		N	The interim test track, IPR-GBN, is a proposed milestone
Depot & Test Facilities	AIR-Depot test track available	07-Dec-12	23-Jan-13	47		Y	Delay due to late start of the retaining wall at the Airport, Infracore feel this is recoverable.
Tram Test & Commission							
Tram Test & Commission	Trams 1-5; commission	08-Mar-13	12-Apr-13	35		Y	8th Tram Delivered as planned on 21/2/12
Tram Test & Commission	T2 Performance Tests. Complete	09-Apr-14	tbc	N/A		Y	The full impact of the Utility Enabling Works on the completion dates is still being analysed.
Tram Test & Commission	Shadow Running, AIR-YRK, complete	08-Jul-14	tbc	N/A		Y	The full impact of the Utility Enabling Works on the completion dates is still being analysed.

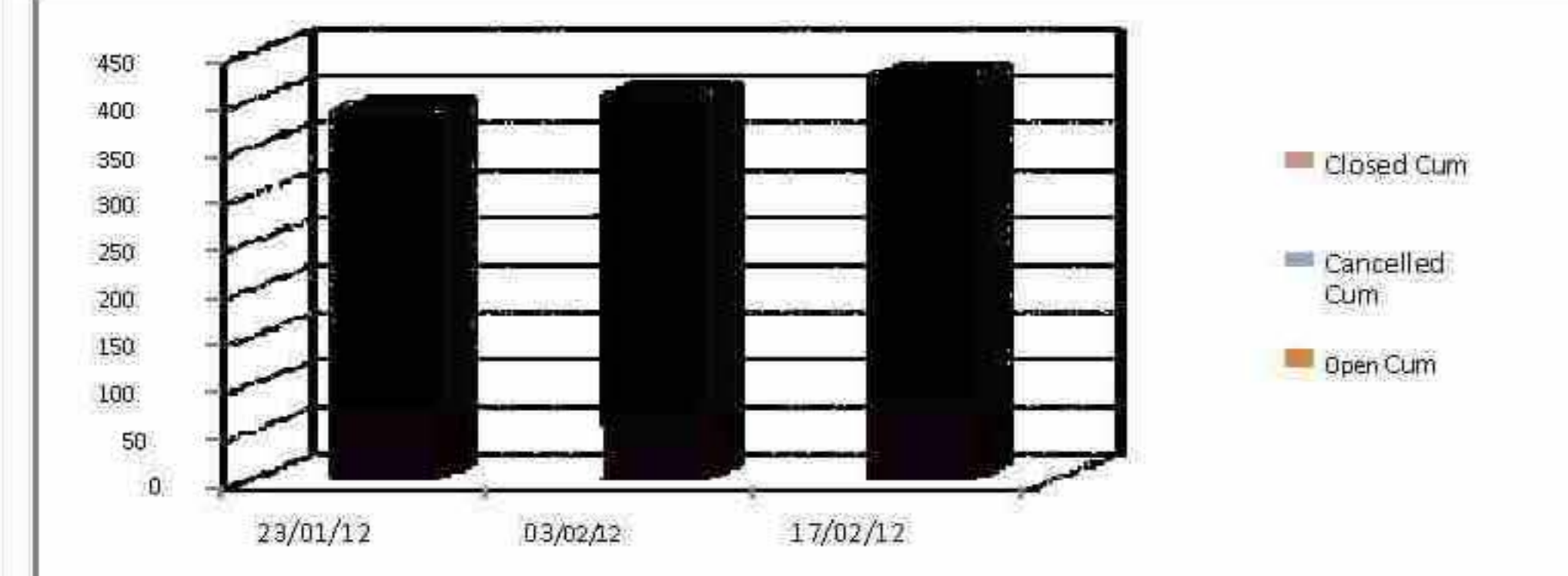
Produced by	Martyn Ayres & Shirley Collin	SECTION	HS&E, QUALITY, ASSURANCE	Employer	City of Edinburgh Council
Approved by	Julian Weatherley	Issue By:	Turner & Townsend Project Management Limited, 9 Lochside Avenue, Edinburgh Park	Address	Waverley Court, Edinburgh, EH8 8BG
Status	DRAFT	Issue Date	27-02-2012	REPORTING PERIOD	14 th to 27 th February 2012
				Project:	Edinburgh Tram Network

PROGRESS

SUMMARY

- Health and Safety** - The team have been focusing on the incidents that have occurred on resulting in damage to services. A meeting has taken place with BBS & McNicholas and Scottish Water to review safe digging practices and the Scottish Water requirements for piling and accessing manholes.
- The Key findings from incidents on site have been discussed at the Turner & Townsend Project Safety meeting to increase the effectiveness of site monitoring.
- Environmental**- Scottish Environmental Protection Agency visited the off street work on the 8th February and were happy with the measures in place.
- Assurance** - Further documentation for section A has been issued by BBS for review. This process is on going.
- We are currently working with BBS to review the trends in relation to NCR's, a key area of concern is workmanship. This area continues to produce the majority of NCR's.

QUALITY



Total No of NCRs raised is 426.

21 NCRs were raised during the period and 7 NCRs were closed out during the period. 13 no open NCRs are greater than 6 months old.

BBS are undertaking a survey of the rails and concrete works in Princes Street to quantify the workmanship issues, this may result in an NCR being raised.

ENVIRONMENT

Environmental

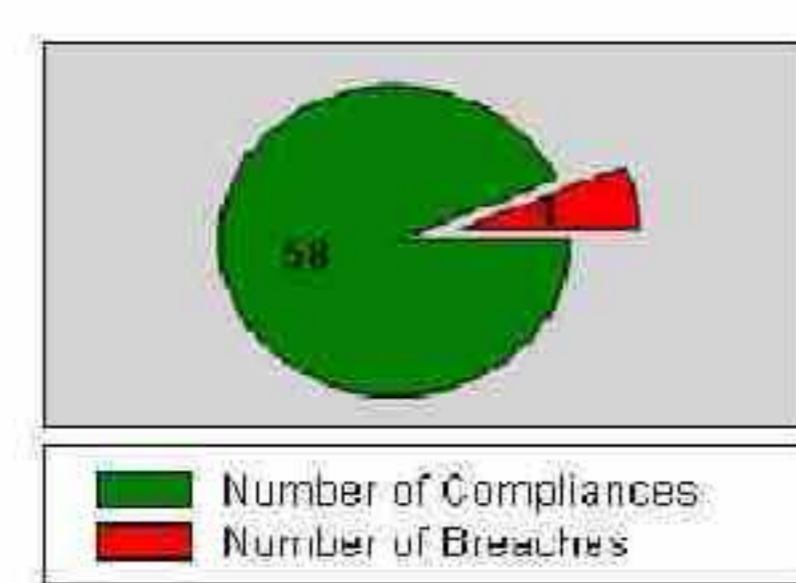
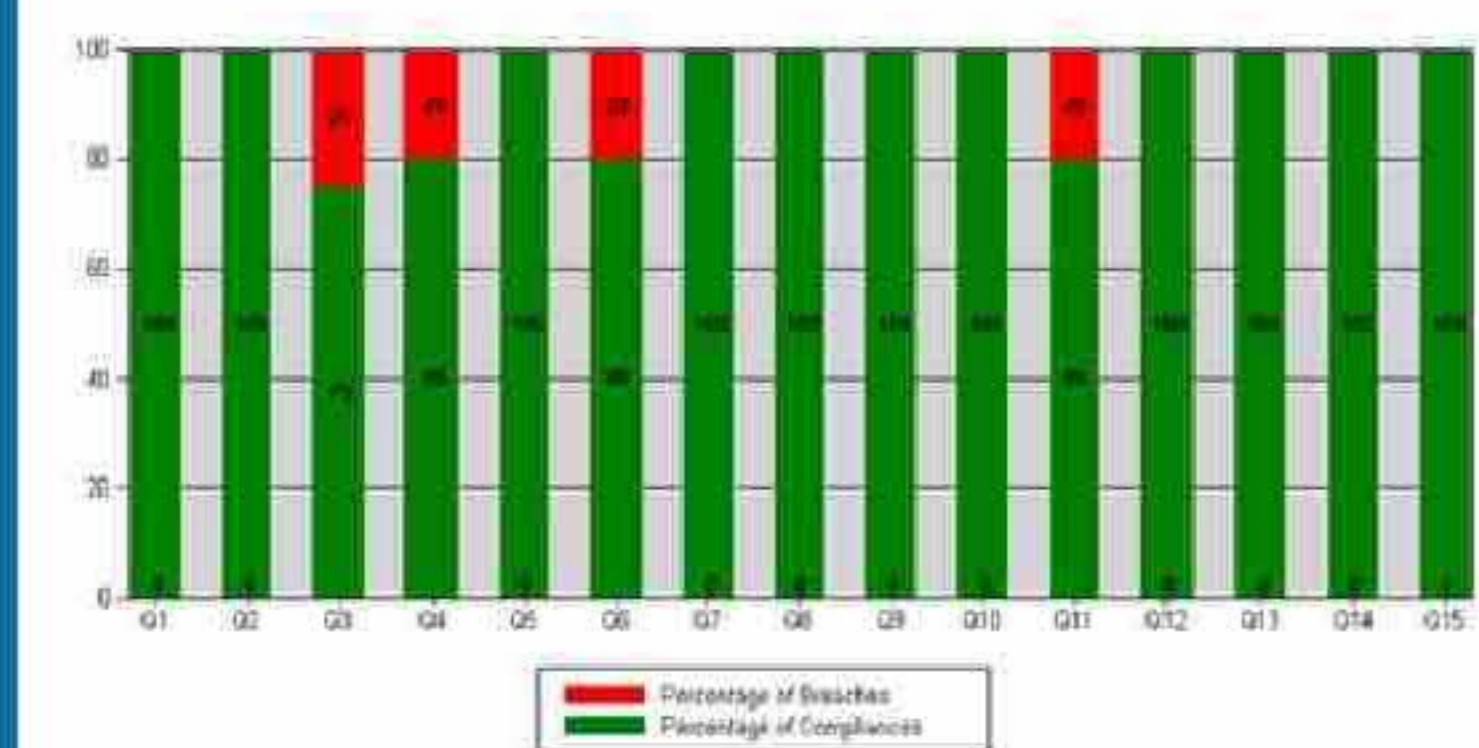
- Archaeological works associated with the air raid shelter at Haymarket now complete.
- Site inspection carried out at Section 7 on 15th February 2012 to cover works being carried out under the CAR licence, the site was in good order with good environmental awareness.
- Site inspection carried out with McNicholas on the 20th February 2012 covering the city centre works being carried out. There were minor issues regarding availability of spill absorbent material which were address during inspection.
- It has been agreed that copies of reports produced by Ecological Clerk of Works (John Darbyshire) will be provided to Turner & Townsend for information.
- Updated environmental legal register issued to project team during period 12.
- BBS held their second monthly environmental forum which Turner & Townsend were invited to. This will now take place every month with a representative from all sub contractors invited.
- BBS have agreed to submit a monthly report/updated on the Site Waste Management Plans as is required by the CoCP.
- Turner & Townsend will accompany BBS environmental advisor on the Network Rail Safety Bus to communicate relevant environmental tool box talks to the site staff, during period 13.

CoCP

- CoCP compliance for period 12 was recorded at 94%.
- No issues required action.

CoCP KEY

Q1. Hours of Work	Q9. Emergency Access
Q2. Notification	Q10. Parking
Q3. Notices	Q11. Litter and general housekeeping
Q4. Fencing and Hoarding	Q12. Dust
Q5. Noise	Q13. Smoking
Q6. Waste Management	Q14. Members of the Public
Q7. Waste Water and Run-Off	Q15. PPE and Behaviours
Q8. Water	



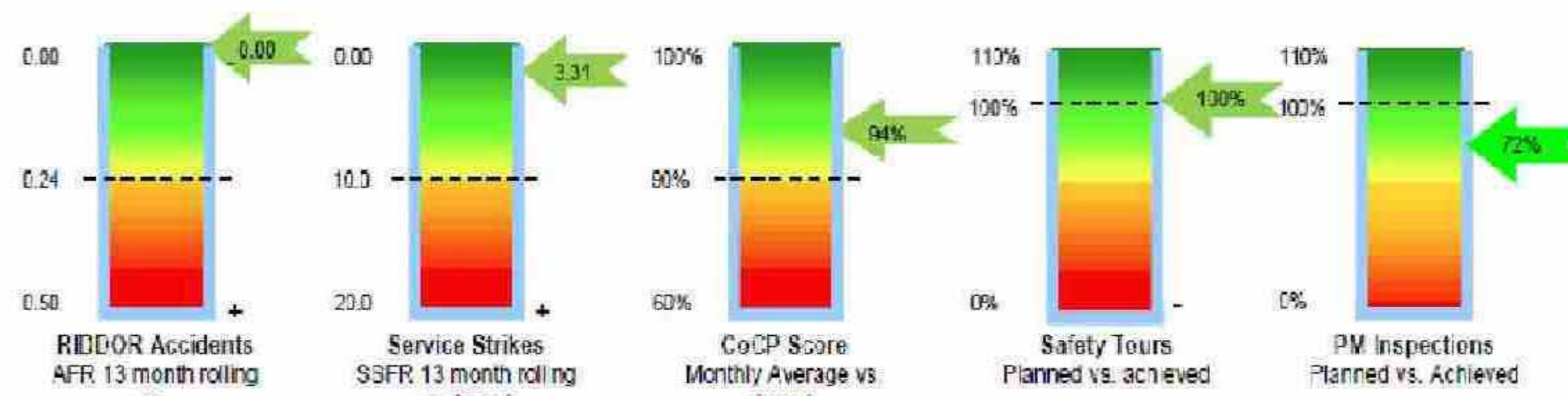
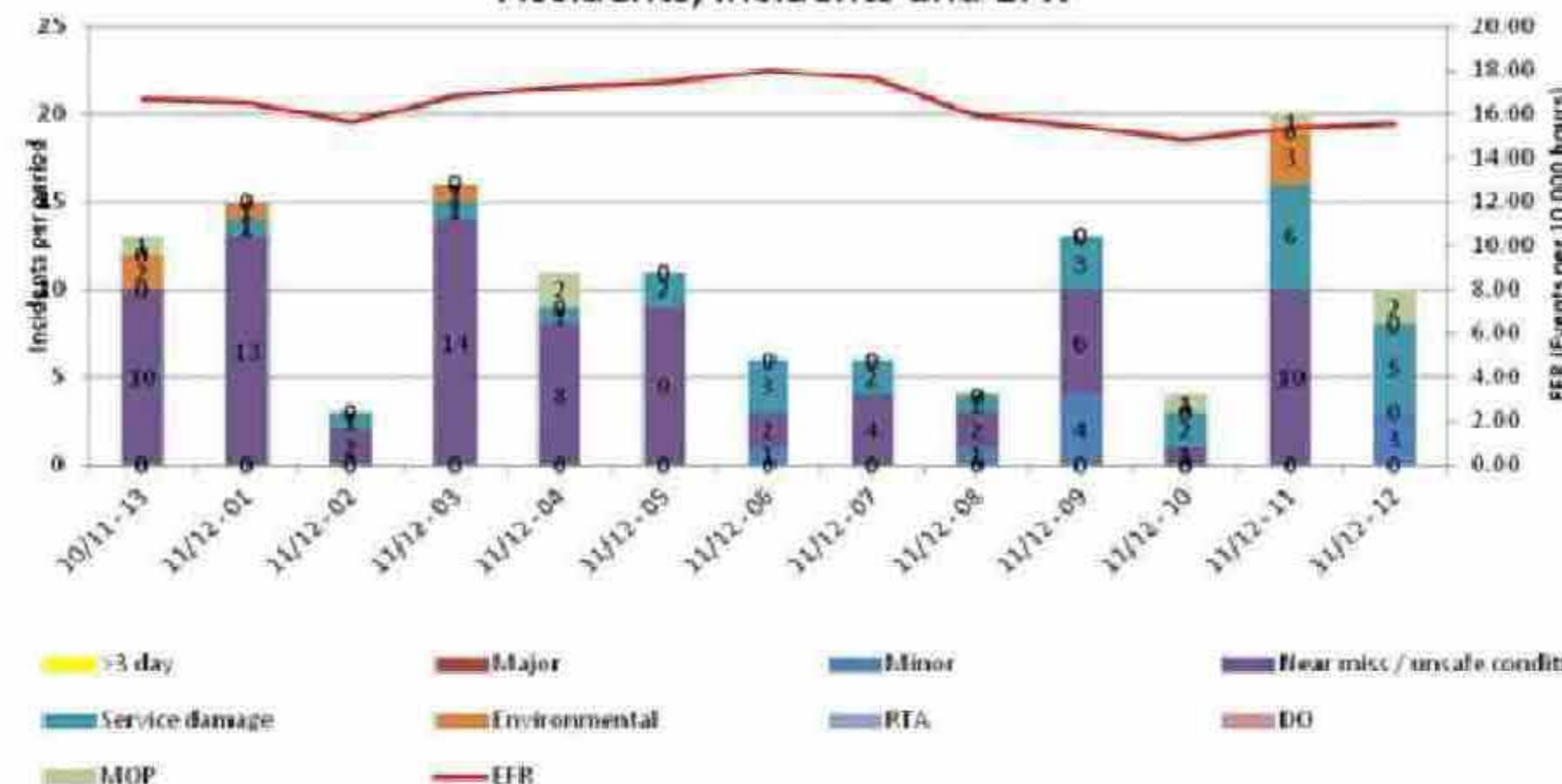
Health & Safety

- There were no reportable accidents during the period. The rolling 13 Period AFR remains at 0.00, better than the benchmark KPI of 0.23 for the project.
- An 11KVA cable strike occurred on the 22nd February, this is currently under investigation
- There were 8 incidents reported during the two week period since the last dashboard. Two (ref 1604 and 1606) were classified as serious / significant incidents (referenced in orange in the table below).

Ref	Location	Description of Incident	Contractor	Classification
1604	Murrayfield Tram Stop	Damage to a Scottish Power cable on the Murrayfield tram stop site caused by a utility contractor (C Plan engaged by Cable and Wireless) not engaged on the tram project.	Grahams	Service damage
1606	Princes St / Hanover St	Damage to 2no ducts containing virgin media fibre optic cables.	McNicholas	Service damage
1603	St Andrew Square	Damage to an LV cable	McNicholas	Service damage
1608	Coates Crescent	Damage to water pipe to 2 Coates Crescent.	McNicholas	Service damage
1609	Sth St David St / Mews Lane	Damage to street lighting cable.	Bilfinger Berger	Service damage
1607	Shandwick Place	Damage to MOP jacket.	McNicholas	Member of the public
1605	Princes St	Injured person caught his arm on the edge of a reinforcement sheet and sustained a small cut to his left forearm.	Crummock	Minor injury
1610	Haymarket Yards	Injured person cut their finger with a stanley knife.	Class 1	Minor injury

TREND

Accidents, incidents and EFR



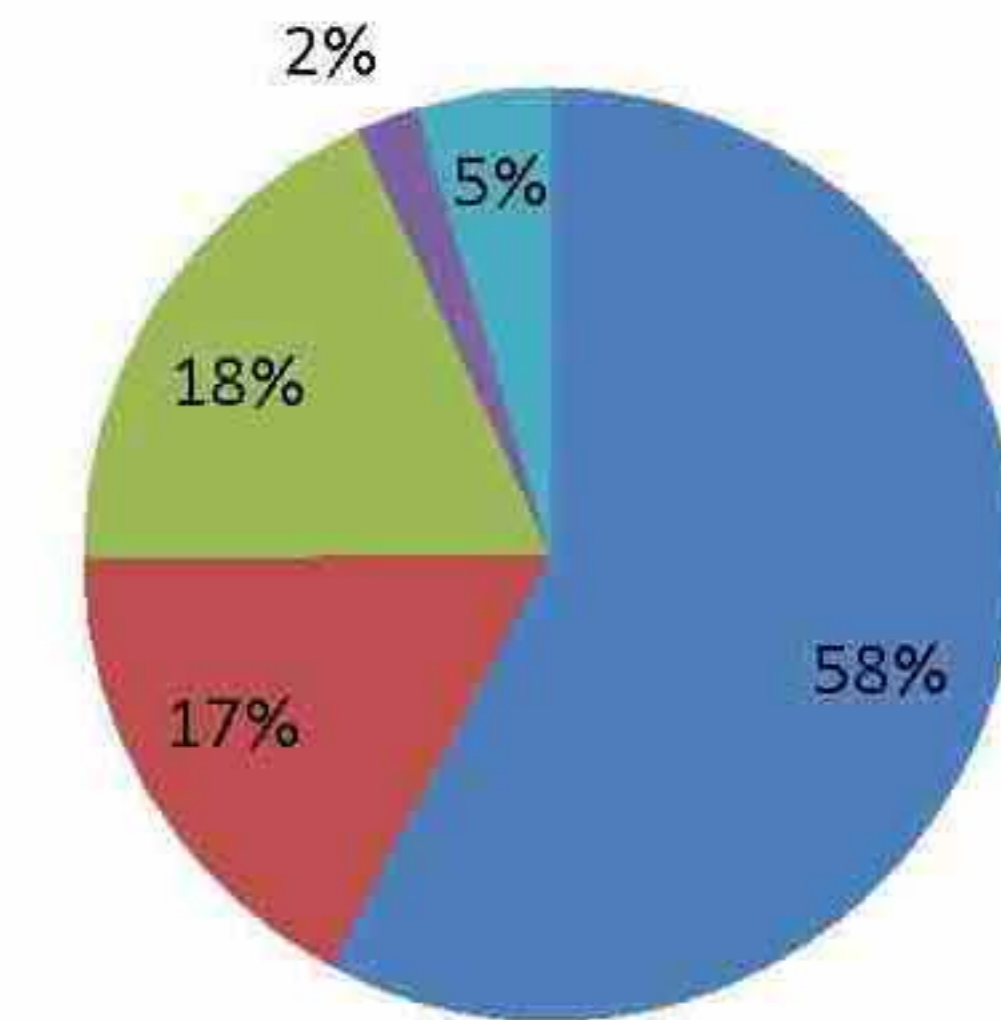
PROJECT INITIATIVES

Deliver the Tram Safety

- Discussions have taken with Scottish Water to agree the measures required to protect their assets. A meeting with BBS, McNicholas, Turner & Townsend and Scottish Water has been held on the 21st February 2012.
- For the next period targeted inspections for safe excavation and vehicle movement is being planned. This will be followed by targeted inspections for vehicle movements across the sites.
- A period safety meeting will be established with BBS to monitor the corrective action developed by the package contractor to address the finding raised.
- Investigation has now commenced into initiatives to support the local community and to raise the awareness of children to the dangers of construction sites.
- Consideration is being given into the establishment of a Project Safety Strategy Group.

Depot Snagging

■ COMPLETE ■ MONITOR ■ OUTSTANDING ■ UNRESOLVED ■ ONGOING



CONSENTS

Combined Consents required

	Total Required	Total On Hold	Total Outstanding	Total Closed
Third party	17	4	12	1
CEC Approval	20	7	12	1
Technical informations	6	1	5	1
Planning informatives	23	8	15	

SOFT ANALYSIS

SUCCESSSES

- Targeted inspection of excavations completed.
- All stakeholders are cooperating well at the depot.
- Request of Opinion 18 has been agreed for derailment containment at Ocean Terminal bridges.
- Site monitoring KPIs are increasing.
- EMC briefings.

OPPORTUNITIES

- Increased monitoring of onsite activities. Project Management resources are will become part of integral assurance process.
- Improved technical assurance of tram/ Infrastructure interfaces.
- Safety seminars to be arranged for project manager.
- Establishment of Project Safety Strategy Group.

FAILURES

None Identified

THREATS

- Statuary bodies co-operation.
- Late issue of documentation by BBS.
- Potential gaps between contracted maintenance responsibilities
- Visibility of BBS design and assurance documentation.
- Lack of availability of GIS information from Scottish Water.
- Concerns have been raised that site safety is potentially being compromised by unrealistic delivery timescales.

Produced by	Rob Leech & Shirley Collin	SECTION	ON STREET DASHBOARD REPORT		Employer	City of Edinburgh Council
Approved by	Julian Weatherley	Issue By:	Turner & Townsend Project Management Limited, 9 Lochside Avenue, Edinburgh Park		Address	Waverley Court, Edinburgh, EH8 8BG
Status	DRAFT	Issue Date	27-02-2012	REPORTING PERIOD	14 th to 27 th February 2012	Project:
						Edinburgh Tram Network

PERIOD

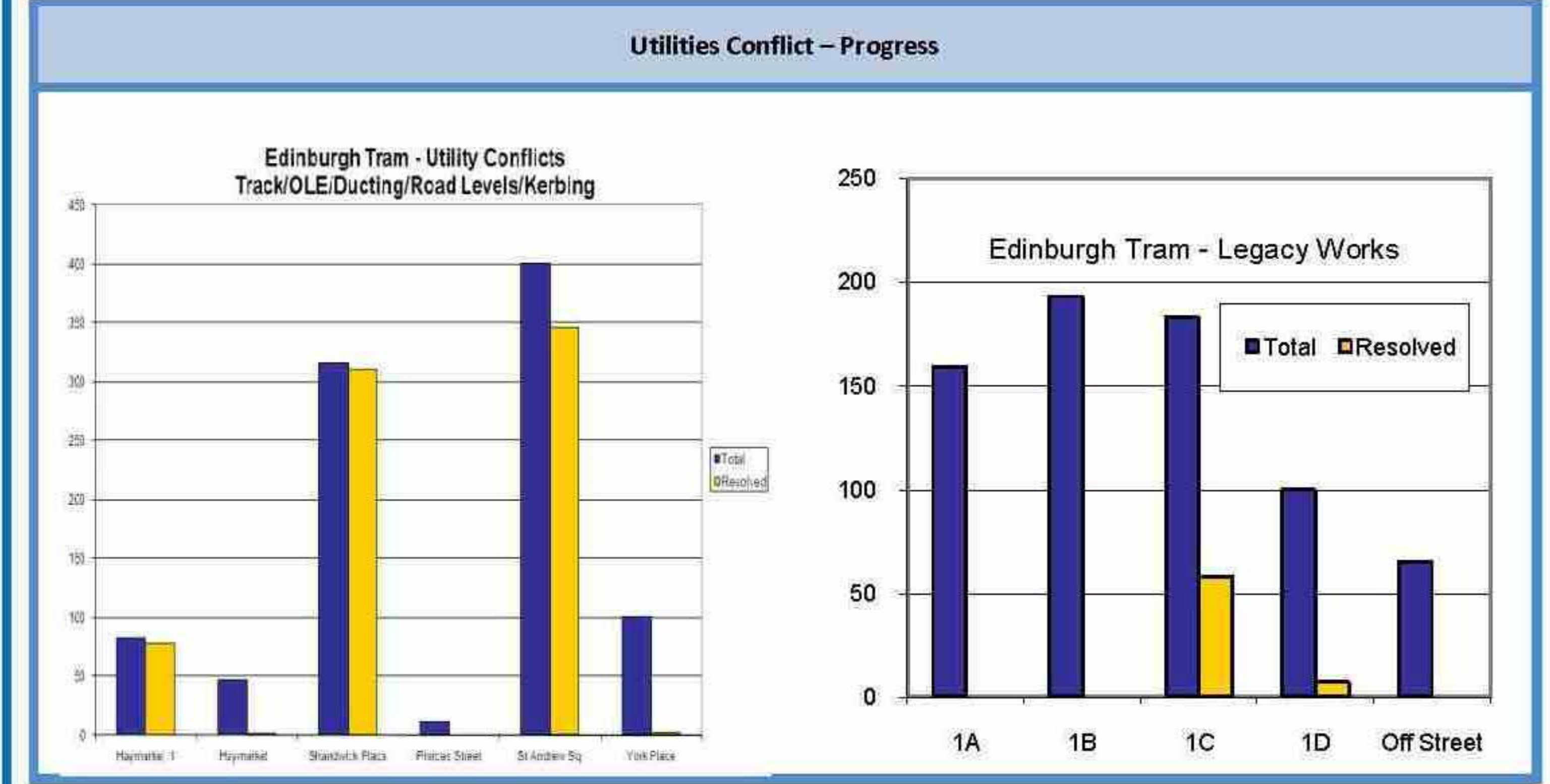
PROGRESS

- Shandwick Place & St Andrew Street made available to Infraco on the 14th February 2012 as previously envisaged. Some minor utility works that continued until the end of week commencing 13 February but these were remote from the area of site required by Infraco
- St Andrew Street south utility works due to be complete by 24 March 2012 to allow Infraco works to commence on Monday 26th March.
- Planning for utility works in Haymarket 2-5 are now complete and works are due to commence on 24 March 2012. Enabling works to reconfigure junctions have commenced.
- In clearing utilities in both Shandwick Place and St Andrew Street Turner & Townsend has encountered significantly more utilities than were anticipated.
- Haymarket 1 with Infraco exposing, excavating and backfilling the air raid shelter in the area and constructing OLE pile caps.
- Princes Street, works from South St David Street to St John's Church are progressing well - Pursuing early completion
- Princes Street works re-sequenced to ensure bus traffic can be switched on 3 March
- Third party approvals and consents for Dublin Street Steps, Picardy Place and Princes Street OLE re-design were progressed during the period.
- All design work north of York place has ceased
- Forth Ports and Lindsay Road area - Scope of work being further defined.
- Working closely with CEC in seeking to improve ongoing stakeholder communications. Public open days were held during the period and supported by Turner & Townsend.

LOOK AHEAD

The following items will be progressing during the coming period:

- Bus lane at the east end of Princes Street is due to be closed on 3 March and the utility works in Haymarket 2-5 are due to commence on 24 March 2012. Enabling works to reconfigure junctions are due to be completed during the period.
- Detailed planning of enabling works in York Place is due to commence at the end of February in anticipation of traffic management measures being brought forward to October 2012 as envisaged in the cost engineering initiative.
- Work will continue on dealing with legacy works and progressing with the PQQ for the legacy works north of York Place. Snagging works at the Mound are due to be completed to allow the Mound to open to traffic on 3 March 2012.
- Infraco works will continue in H1 with pile cap construction although any further works will be delayed until such time as the Scottish Water manhole connection issue is resolved.
- Piling for OLE bases will be completed in Shandwick Place and St Andrew Street during the period and excavation for track slab and pile cap construction will commence.
- Track remedial works by Infraco will continue in Princes Street and Turner & Townsend will complete legacy remedial works to utilities in the area ahead of the completion of the non M&E works in the summer of this year. Specific legacy works for Scottish Water will be carried out ahead of the Mound re-opening on 3 March 2012.
- Works at the south end of St Andrew Street are delayed and it is currently anticipated these will be complete on 24 March 2012.



KEY ISSUES

- Infraco drainage connections
- Scottish Water relationship generally
- Legacy works within tram worksites - Possible delays, categorisation being finalized
- Legacy works at North of York Place - PQQ now issued
- Delays at St Andrew Street - Mitigation measures being implemented
- Infraco compliance - Princes Street inspection

CEC ACTIONS / DECISIONS

- Obtaining permissions in support of the location of revised OLEs in Princes Street and design approvals at Dublin Street & Picardy Place
- Assistance in resolving Scottish Water manhole connections issue

SOFT ANALYSIS

<p>SUCCESSSES</p> <ol style="list-style-type: none"> Cost engineering initiative - TM Phasing Good working relationships with BBS Curtail design north of York Place 	<p>OPPORTUNITIES</p> <ol style="list-style-type: none"> Optimize revised traffic phasing Close out works at Forth Ports & Lindsay Road
<p>FAILURES</p> <ol style="list-style-type: none"> Carriageway vertical alignment in south St Andrew St SDS OLE design MUDFA design, as built, contract administration & supervision Lack of clarity over consents requirements & ownership 	<p>THREATS</p> <ol style="list-style-type: none"> Infraco drainage connections Legacy works at Leith Walk Legacy works within tram worksites Scottish Water relationship Unknown utilities Approval of OLE/Dublin Street & Picardy Place Infraco delay to Rev 4 due to utilities Infraco non-conformance in Princes Street

CEC01889974_0035

Produced by	Shirley Mushet & Shirley Collin	SECTION	OFF STREET DASHBOARD REPORT		Employer	City of Edinburgh Council
Approved by	Julian Weatherley	Issue By:	Turner & Townsend Project Management Limited, 9 Lochside Avenue, Edinburgh Park		Address	Waverley Court, Edinburgh, EH8 8BG
Status	DRAFT	Issue Date	27-02-2012	REPORTING PERIOD	14 th to 27 th February 2012	Project: Edinburgh Tram Network

PROGRESS IN PERIOD

PROGRESS IN PERIOD

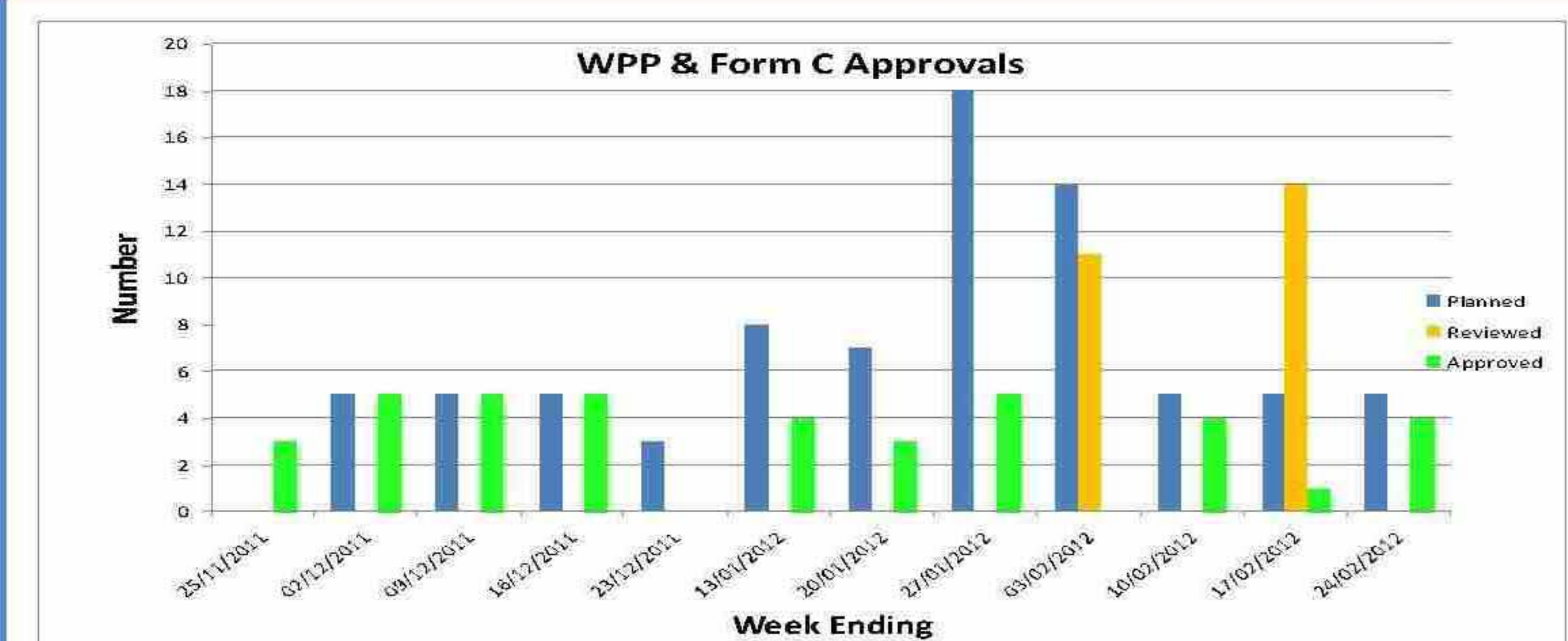
1. **Discussions with Infracore on the Edinburgh Gateway retaining wall tenders have clarified the position being take by the Contractor, this should enable a decision on scope**
2. **Agreement reached with First ScotRail on access to the depot**
3. Haymarket Yards track works commencing adjacent to the railway corridor
4. Rail installed from Haymarket Yards to the viaduct
5. Russell Road bridge abutment construction started
6. W4 wall construction continuing
7. W3 wall enabling works commencement
8. Roseburn Street structures continuing to pile
9. West pile cap on Roseburn Street Bridge commencing
10. Documentation for Piling platform for the ground improvement works submitted by Infracore
11. Murrayfield Tram Stop works ongoing
12. Water of Leith temporary sheet piling for east and west abutment
13. Baird Drive earthworks continuing
14. A8 excavation breakthrough
15. A8 underpass waterproofing completed for last phase
16. Track laying continuing between Gogar and Ingliston Park and Ride
17. NIL Future proofed crossing constructed
18. Gogar landfill; sewer diversion continuing
19. Sheet piling along the Gogar Burn complete
20. Eastfield Avenue; Crossing works continuing
21. Secant pile wall at the airport continuing

LOOK AHEAD

The following items will be progressing during the coming period:

1. CEC to confirm which option should be instructed for the Edinburgh Gateway, this decision is anticipated prior to the 29th February 2012
2. Haymarket Crew Relief Facility to commence with the installation of utilities
3. Russell Road bridge abutment construction continuing
4. W3 enabling works commencing
5. W4 wall construction continuing
6. Water of Leith continuation of abutment construction
7. Bankhead Drive power ducting being installed
8. Gyle Broadway crossing shall commence

NETWORK RAIL APPROVALS



PHOTOS



NIL Future Proofed Crossing



A8 Underpass Waterproofing



Water of Leith Abutment Construction



Russell Road Bridge Abutment Construction

KEY ISSUES

1. The scope of the Edinburgh Gateway project requires to be confirmed.
2. ScotRail interface continues to be of importance due to the quantity of works adjacent to their depot.
3. Progress of the secant piling at the airport has pushed Section B completion out by 25 days, this is looking to be recovered by parallel working.
4. Momentum requiring to be maintained on the Haymarket Station Interface.
5. Proposals required from Infracore on ground improvement works.
6. Wayleave wording between SGN and NIL are back in discussions after changes made by NIL.
7. Potential negative press report on the categorisation of spoil being removed from Baird Drive.

CEC ACTIONS / DECISIONS

1. Clarification on historical commercial position relating to scope of the Roseburn Delta Footpath.
2. Confirmation of scope for Edinburgh Gateway.
3. Scottish Power wayleave at Haymarket.
4. Signing of permanent depot building warrant.

SOFT ANALYSIS

SUCCESSSES

1. Agreement reached with ScotRail on access for construction either side of their road.
2. HV Wayleave signed by EAL and Scottish Power.
3. SGN design team working on the diversion of the high pressure main at Ingliston.
4. Kiosk at the airport being deleted from the scope.

OPPORTUNITIES

1. VE opportunities identified Off Street.
2. Develop closer working relationships with key stakeholders such as First ScotRail, Scottish Water and Network Rail.
3. Analysis to be undertaken to see if programme can be brought forward for running to the IPR and then the airport.

FAILURES

1. Murrayfield proposals not produced in line with the Murrayfield Rev 4 programme timelines.

THREATS

1. Delays by Transport Scotland on a decision on the Edinburgh Gateway works could lead to consequential delays to the Infracore works.
2. Interface with Network Rail/ScotRail along the railway corridor.
3. Verity House access road adjustments will be required.

Produced by	Martyn Ayres & Shirley Collin	SECTION	TRAMS		Employer	City of Edinburgh Council	
Approved by	Julian Weatherley	Issue By:	Turner & Townsend Project Management Limited, 9 Lochside Avenue, Edinburgh Park		Address	Waverley Court, Edinburgh, EH8 8BG	
Status	Draft	Issue Date	27-02-2012	REPORTING PERIOD	14 th to 27 th February 2012	Project:	Edinburgh Tram Network

PROGRESS IN PERIOD

PROGRESS IN PERIOD

The following items were progressed during this period:

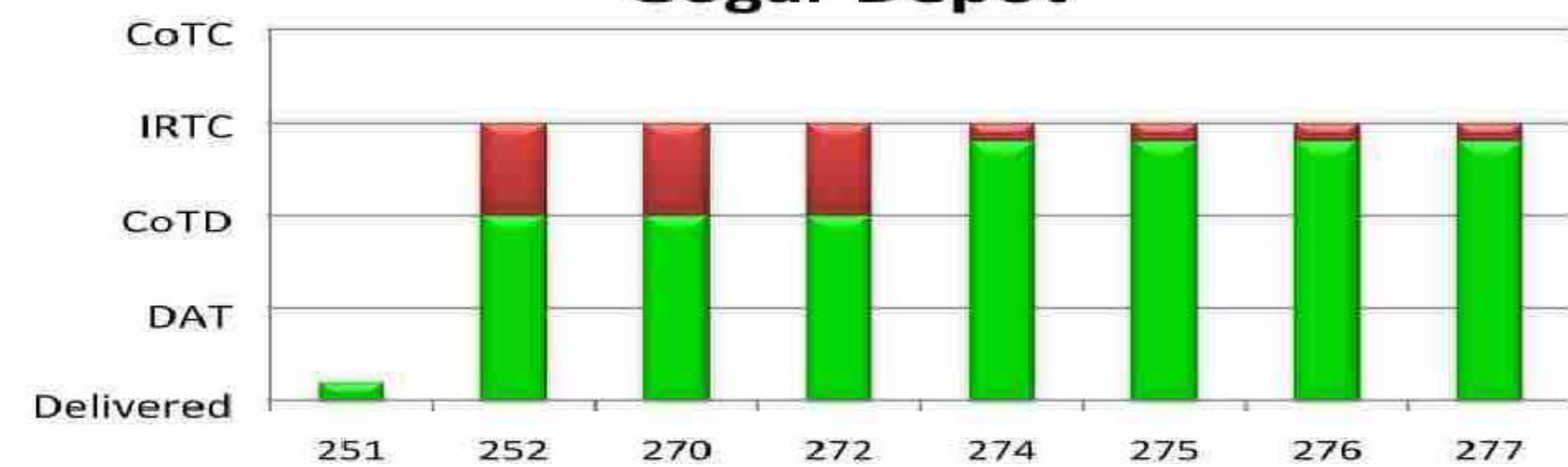
1. Tram Inspector Agreement accepted 'in principle' by all parties - submitted to all stakeholders for final review and signature
2. Tram commissioning continues to be completed in line with the commissioning plan. The Tram Inspector in attendance at all Routine Tests.
3. Detailed spreadsheet now developed showing progress of commissioning at Gogar Depot, with commissioning KPIs being developed (see below).
4. Eight trams now delivered, with seven having undergone dynamic testing on the Mini-Test Track.
5. Delivery of trams is on-going, post Depot handover a month earlier than in the Programme with Tram 251 delivered on the 21st February 2012.
6. Tram Certification process developed - this is to be discussed with CAF (meeting arranged - 28th February 2012)
7. Initial proposal to modify the Tram Wash Plant to ensure all areas of tram are washed has been accepted by all stakeholders - due for completion in May 2012
8. Capital Spares now being delivered, the inspection and sign-off process has started.

LOOK AHEAD

The following items will be progressing during the coming period:

1. Tram Inspector Agreement finalised and signed-off
2. Ninth Tram expected 13th March 2012
3. Confirmation that Mini-Test Track Routine Testing has been completed on the first seven Trams
4. Follow-up on outstanding Test Reports from Type and Routine Testing completed to date
5. Tram Certification process to be discussed and agreed with CAF

Tram Commissioning Progress Gogar Depot



CoTC - Certificate of Tram Commissioning
 IRTC - Interim Routine Test Certificate (MTT)
 CoTD - Certificate of Tram Delivery
 DAT - Delivery Acceptance Test

Awaiting Test Reports
 Tests Completed

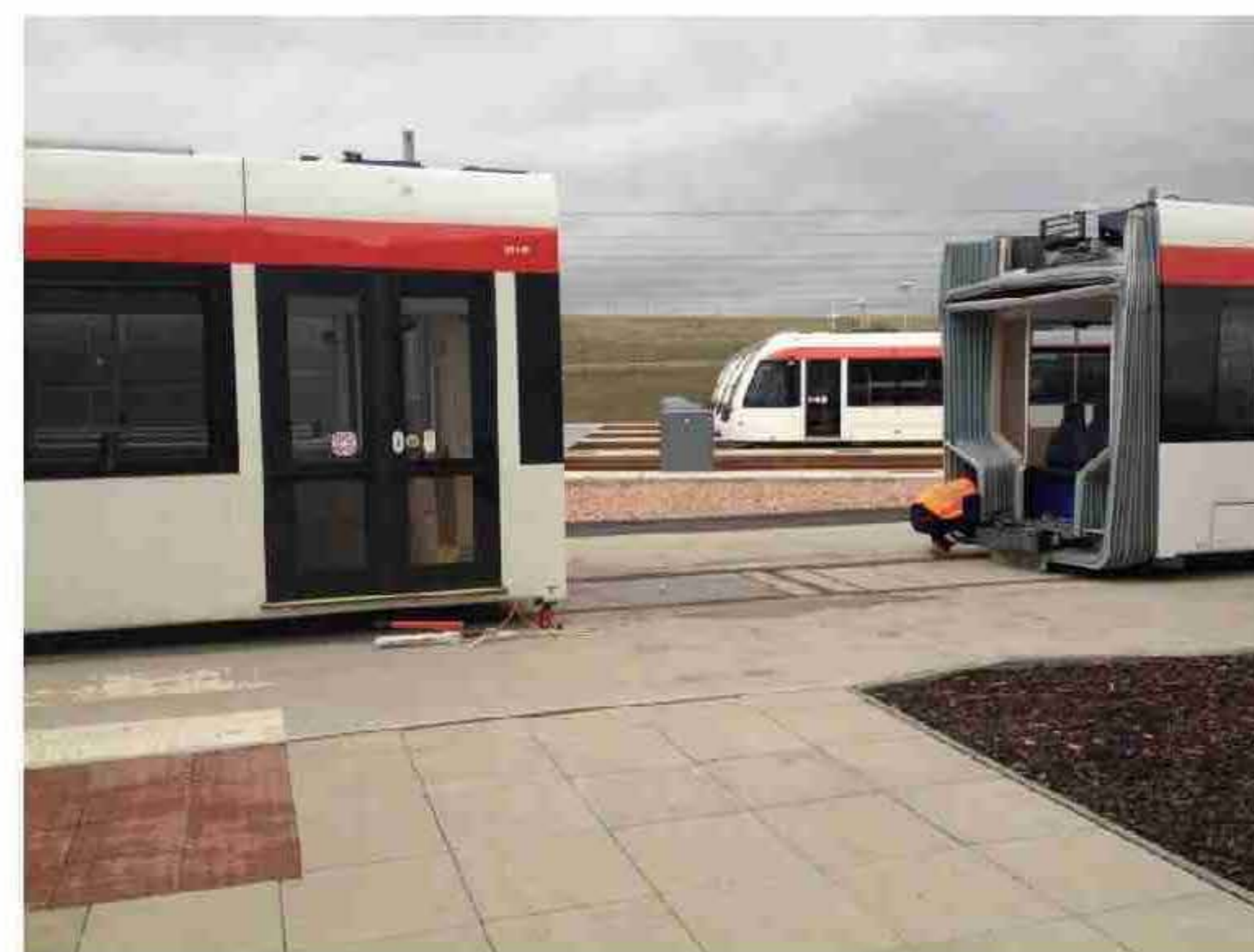
PHOTOGRAPHS



Tram 251 arrives at Gogar Depot (21/02/2012)



Preparation for re-coupling



Re-coupling tram 251 at Gogar Depot

KEY ISSUES

KEY ISSUES

1. It is intended Mott MacDonald will be undertaking the Tram Inspector role, however the formal contract is still to be formally agreed and signed by all parties. Agreement has been agreed 'in principle' by all parties and the agreement has now been circulated for final review and signature.
2. Lothian Buses have yet to take full operational responsibility for the Depot. Negotiations are on going with CEC and are due to be completed on 2nd March
3. Outstanding results from four Type Tests carried out at Wildenrath Test Track preventing the issue of the Interim Tram Commissioning Type Test Certificate. Completed Reports to be provided by CAF, for verification that testing has been completed and passed.
4. Incomplete Dynamic Routine Testing (TCMS Test) this is preventing the issue of the Mini-Test Track Routine Test Certificate. Agreement on requirement and level of testing to be made before certificate is issued (meeting arranged - 28th February 2012)
5. Requirement for an updated Integrated Test Plan to be discussed with CAF, this is to determine how and when outstanding commissioning tests can be completed (meeting arranged - 28th February 2012)
6. Process for the collection of verification evidence for Milestone Payments to be agreed - formal submission of evidence recommended.

CEC ACTIONS / DECISIONS

1. Letter of intent was sent from CEC to Mott MacDonald for the Tram Inspector. Final Tram Inspector Agreement is currently being circulated for final review and signature - Ongoing.

SOFT ANALYSIS

SUCCESSES

1. Dynamic Tram Commissioning being carried out with no major issues identified
2. Tram Inspector (Mott MacDonald) attending all Dynamic Tram commissioning at Gogar Depot
3. Relationship with Project Teams improved.
4. Maintenance Team in place now and learning on the job through commissioning.
5. Tram 6 to 10 planned to be delivered early.
6. Further strengthening of Tram integration technical interface management

OPPORTUNITIES

1. Finalisation and sign-off of the Tram Inspector Agreement
2. Start system testing and commissioning on completion of Off Street Section (Airport to Shandwick Place crossover) leading to earlier commencement of Revenue Service date (early partial service on Off Street Section and early service on full route)
3. Euro Exchange Rate fluctuation against the pound

FAILURES

None identified

THREATS

1. CAF testing documentation appears to be incomplete - discussion arranged
2. Relationship between BBS (primarily Siemens) and CAF needs to be strengthened on integration and coordination of testing.
3. Lack of validation of commissioning tests causing a delay to the issue of commissioning certification
4. Need to convert plan to handover responsibility of depot operations from ETL to Lothian Buses.

Produced by	Shirley Collin, Mike Mackenzie & Peter Smith	Function	COMMERCIAL		Employer	City of Edinburgh Council	
Approved by	Gary Easton	Issued By:	Turner & Townsend Project Management Limited 9 Lochside Avenue. Edinburgh Park		Address	Waverley Court, Edinburgh, EH8 8BG	
Status	DRAFT	Issue date	27 February 2012	Reporting Period	27 Jan to 24 Feb 2012	Project	Edinburgh Tram Network

Summary:				Value Engineering Risk and Commercial		
Reporting Date:	27 Jan 12	27 Feb 12	Movement	Risk	Level	Comments/Actions
Original Contract Amount	479,660	479,660	0	Risk that the project relationship with Scottish Water deteriorates and access to utilities and resolving of delay issues becomes prolonged	RED	New Scottish Water Specific risk Ongoing Liaison and meetings in place Dedicated Scottish Water account Manager appointed Steering Group Set up and attended by Project Director
Add: Approved Changes	3,514	1,104	-2,410	Discovery of additional Track construction conflicts (Live)	RED	Utility owners providing live and dead drawings Slit Trenching New Traffic Management plan being implemented and incorporated in Rev 4c Programme
Add: Changes in Progress	5,749	3,593	-2,156	Tram (CAF) / Infrastructure (Infraco) integration risk. Risk that Infrastructure and Tram meet the employers requirements but are incompatible such that system is inoperable	RED	Tram integration manager appointed CAF Interface manager (Mikel Irizar) to start from mid-January 2012 Section testing ongoing Programmed testing of complete track prior to project completion
Add: Anticipated Changes	15,025	15,227	202	Delayed NR approvals as applicable	RED	3rd party rep approved by NR. Meetings ongoing with NR. Assisting contractor in production of a detailed plan for the submission and approval of NR approval documentation. Co-located team now onsite Delay activity records kept
Less: Funding contributions	-2,678	-3,768	-1,090	Risk that contract is moved to cost reimbursable	RED	Weekly PMC meetings Escalation to control meeting where necessary
Less: Opportunities to secure	-8,322	-7,310	1,012	Late 3rd party claims for utility/property damages from works	RED	Utility provider presence on site SW legacy works included in forecast
TOTAL: Forecast cost	492,948	488,506	-4,442	Design approvals milestones are not met in line with rev4 programme	RED	Fortnightly design team meeting attended by all stakeholders Tracking SDS Design Programme Traffic light system for design approvals SDS design programme is incorporated into Master Schedule
Original Budget	467,407	467,407	0	Additional land required to allow construction	RED	Key areas identified and process for land registry identification etc put into action via CEC
Variance	25,541	21,099	-4,442	Risk that the public, public representatives, media and other stakeholders receive poor quality/ incorrect information about the project and TM plans	RED	New Risk raised by the TS Communications team Strategy & resource plan being developed by joint communications group. This will aim to produce regular, reliable and timely communications of information to the public, council and media
Original forecast risk allowance	32,747	32,747	0	Risk that project delivery team fails to deliver against the Contract Programme Narrative	RED	Mitigation plans to be developed for each assumption Master Schedule to incorporate the dependencies against which the Programme Narrative assumptions are defined Ensure programme assumptions are accommodated in the Rev 4c programme
Less: Variance (from above)	-25,541	-21,099	4,442			
Forecast balance of risk allowance	7,206	11,648	4,442			
Commercial Issues						
PMC	Description	(£M)				
	On - Street					
15	Utility conflicts – investigations (allowance: utility mapping and design changes)	0.02				
25	OLE foundations resulting from discovery of utilities (excludes prolongation costs)	0.27				
28	Temporary accommodation for utilities contractor	0.10				
29	Road re-construction protocol (opportunity to reduce depth)	0.00				
30	Additional CBR/Plate testing – ground strength	0.00				
32	Utilities affecting site clearance - disconnect power to bus trackers	0.02				
33	Contract exclusion - drainage boxes	0.02				
35	Utilities contractor affecting Infraco progress	0.01				
36	BT Fibre Optic affecting progress	0.08				
37	Slit trench to validate utilities	0.01				
38	Move 3 OLE foundations (St Johns Church)	0.01				
40	Scottish Water diversion Princes St	0.25				
43	Christmas embargo – temporary infill Princes St	0.29				
44	BT diversion – Princes St (included PMC 040)	Inc				
52	Install Traffic Management early Shandwick and St Andrew sq	0.13				
68	Utilities affecting track drainage	0.01				
69	Geotextile liner to Clifton Terrace void	0.01				
86	Re-build Scottish Water surface water manholes (c. 25Nr)	t.b.c				
	Off – Street					
t.b.c	Payment for Utility diversions Off Street outwith BBS's scope	0.34				
61	DDA Footpath Roseburn Viaduct	0.30				
t.b.c.	Low voltage supplies to Airport Tramstop cabinet	0.03				
	General					
	Rev3A to Rev 4 programme – evidence of delay costs (BB only, Siemens t.b.c)	0.60				
Cost Engineering Instructions			£M			
Remove embargoes and revised TM			6.46			
Setts (separate CEC budget)			1.00			
De-scope public realm at St Andrew Sq			0.70			
Contributions 3rd Party Agreements			2.68			
De-scope works at Forth Ports			2.44			
Omit Airport Tram Kiosk and Canopy			0.15			
Temporary tram stop at York Place			0.15			
Redeployment of Trams						
Cancel track York Place to Newhaven			1.10			
Omit Siemens works at Tower Place			0.10			
Road re-construction depth			0.70			
Design freeze north of York Place						
Reduced requirement for storage						
Lay off TM at Forth Ports/Leith Walk						
Roseburn Viaduct Cladding			0.30			
Opportunities secured			8.62			
Opportunities to secure			7.31			

1. PMC 032: Disconnections to bus trackers – agreement in principle that the £15K costs incurred by McNicholas can be deducted from Infraco Site Clearance items.
2. Utility diversions Off – Street: Infraco consider SGN diversion is out of scope and that additional costs have been incurred for other diversions.
3. LV supplies to Tramstop Cabinets – Infraco considers that as these were excluded from the price submitted at mediation then it is a legitimate exclusion.
4. Rev3A to Rev 4 programme delay 2nd September to 3rd of October – further evidence required to demonstrate level of mobilisation, Infraco consider that Independent Certifiers opinion authorises costs submitted in full i.e. £4.5M

Appendix 2 – Health, Safety & Environment

Deliver the Tram Safely / Deliver a safe Tram

1.0 Executive Summary

- BBS have responded to SVS Audit report TSA/10/003 and SVS audit report TSA/11/02. A review of the response is underway to close out the report.
- PSCC meeting held 15th February 2012. Significant comments/issues included within body of this report.
- Independent Competent Person (ICP) – 1 open Requests for Information (RFI's) (1 on hold); 2 open Request for Opinion (RFO) and 1 open Advice of Non Compliance (ANC).
- Submissions relating to Section A (Inspection and Test Plans & Design Assurance Statement) are currently under review by Technical Support Service (TSS), initial comments have been received but a more formal response has been requested.
- **Signalling & Traffic** - Reversing crossovers report for Leigh Walk, York Place and Shandwick Place received from SDS. TSS comments are being progressed.
- **OLE Building Fixings** - All locations have now been agreed and consultations have taken place with the property owners, currently awaiting their formal agreement.
- Programme for metrics inspections has now been issued, inspections to resume during period 12.
- **NCR's** - 36 NCRs were raised during the period and 27 NCRs were closed out during the period.

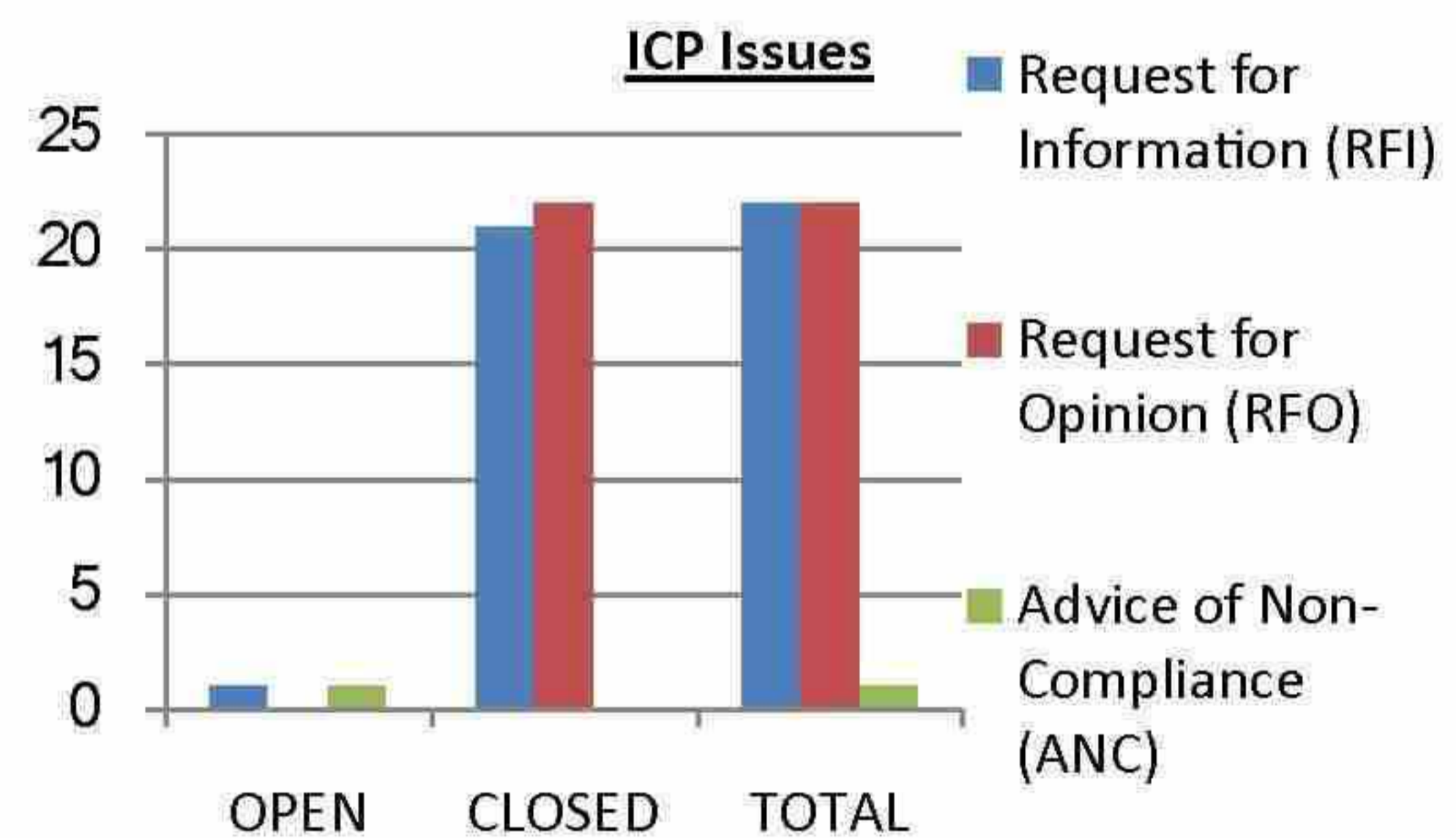
2.0 Safety Verification Scheme (SVS)

System Assurance

- SVS Audit TSA/11/02 – Systems Integration and Engineering (Integrated Design Check (IDC) Process) held 23rd November 2011. Report issued to BBS December 2011; Response to be reviewed.
- SVS Audit findings TSA/10/03/002 & 004 require further clarification.
- SV reports tie-SVS-REP-11-03 for Junction 91. Response to be reviewed.
- Evidence File - information received in Dec 2011 has now been uploaded to the project evidence file. Further O&M information and training records have now been received, and uploaded. BBS have advised that further Inspection and Test Plans have been put on their BIW system relating to Section A handover, formal issue now received.
- A number of requirements management workshops have now been scheduled, we are now progressing well to ensuring the Verification and Validation method is agreed for all requirements.

ICP Issues

- RFI-021 - Action outstanding BBS provided an updated drawing, however it was noted that 1 CCTV camera was omitted. Drawing to be updated and re-issued prior to the 29th February 2012.
- RFI-014 and RFI-017 have been closed during the period.
- RFO 021 Being progressed to closure during period 13
- RFO-022 re Emergency Isolation to be closed during the period following submission of appropriate risk assessment.



3.0 BBS Design Construction and T&C Assurance

Electromagnetic Compatibility (EMC)

- No EMC issues to report this period

Trackform

- Following the site walk through with BBS, Turner & Townsend and the ICP, BBS are undertaking a survey of the rail and concrete levels along Princes Street to quantify the differences in levels across the trackform. Following the review of the survey any areas which are outwith the tolerance will be processed through the NCR system.

OLE Building Fixings

- All locations have now been agreed and consultations have taken place with the property owners, currently awaiting their formal agreement.

Signalling and Traffic signals

- Reversing crossovers at Leith Walk, York Place and Shandwick Place - SDS report is under review and comments are being issued in period 13.
- Point controller cabinet & layout foundation previously reviewed. It was noted that the layout of cabling and equipment was missing from the submission. System schematics for these cabinets now received and under review. Checking Points control equipment for motorised points. Revised drawings are awaited from BBS to remove clashes
- Meetings held to agree preferred option for communication connections between UTC, Junctions and the control Room with fail over. Integrated solution discussed which will look at the most cost effective data provision for CCTV and Emergency fall back provision at Annandale Street as well. Meeting to be arranged by BBS with CEC to agree connection details with BT.
- 2 options outstanding for Traffic light controller units (TLCs) and UTC BBS have intimated no cost differential between the two options. CEC attended Nottingham Traffic Control Centre on 5th December 2011 and Sheffield on 6th December 2011 to see how the options are managed. CEC to circulate notes from visits (including previous visit to Bradford) on alternatives. Change now issued to BBS following CEC approval of preferred option.

Depot Equipment

- Re Test of Lifting Jacks following modifications (for integration of the crane) takes place 23rd February 2012.
- Testing of depot measuring equipment takes place 24th February 2012

SCADA and Comms

- SCADA Site Acceptance Test due to take place 28th February 2012.

4.0 Operator/Maintainer Safety Management System (inc. T&C)

- Eight vehicles have now been delivered and are undergoing static and dynamic testing.
- Training progressed in accordance with the integrated training plan; further assessment of training is ongoing.
- The first ISO9001 certification audit took place in January, with the auditors advising that the processes were at a state of readiness for certification.
- HSQE-SYS-02 Safety Management System and the Safety Policy have been reviewed and updated; these will be formally issued to Turner & Townsend Safety Verification Team for review.

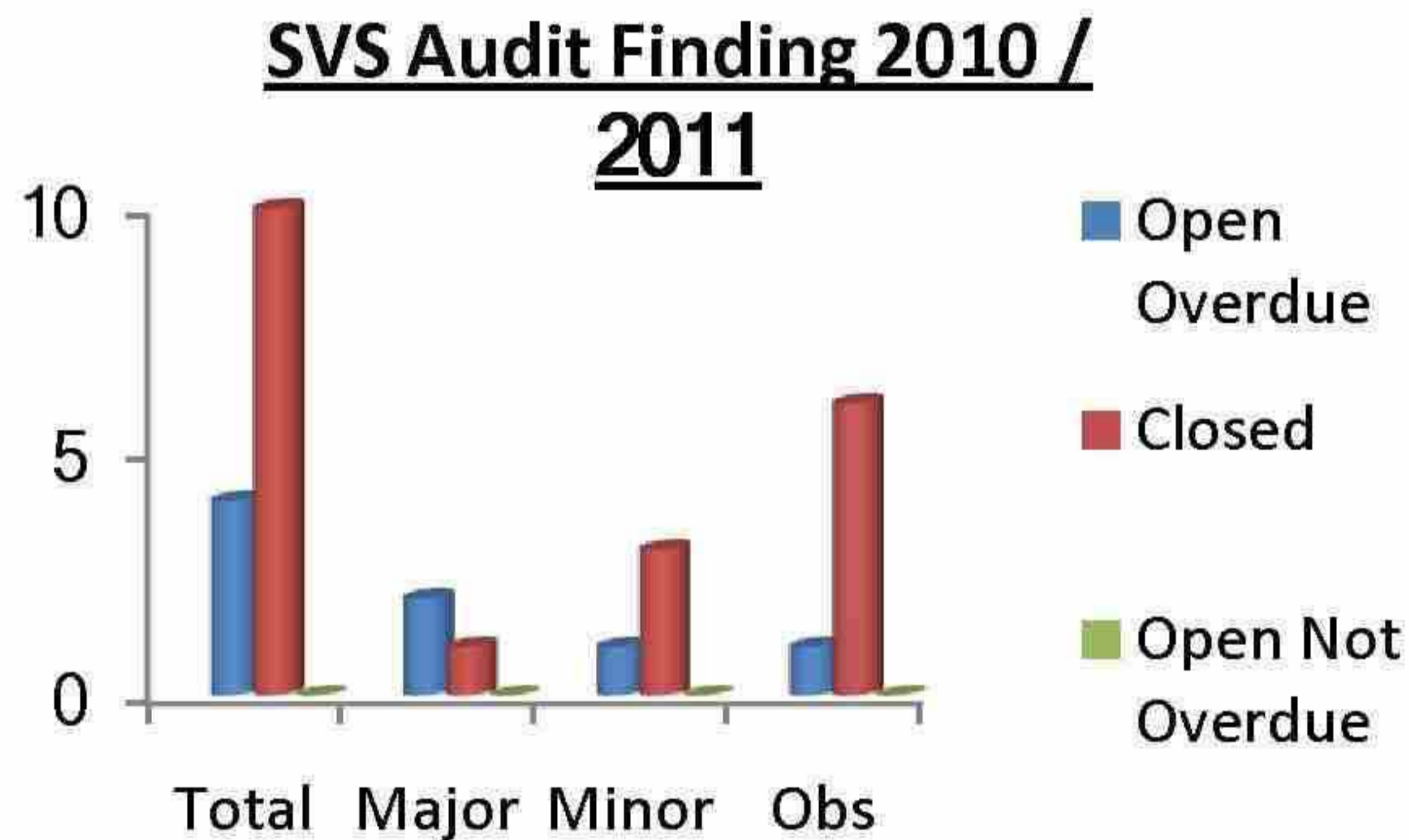
5.0 Metrics

- Currently progressing two metrics inspection; QM73 – reviewing the risk of electrocution/electric hazard at the depot. Inspection progressing well with a number of questions answered as a result of Section A handover. However, a number of hazards associated with electrocution remain open thus the inspection cannot be finalised. It is expected that subsequent to review these hazards will be closed within the next two periods.
- QM78 – reviewing the risks associated with machinery, namely crushing, trapping, moving parts and extreme temperatures at the depot. Inspection progressing well with a number of questions answered as a result of Section A handover. This inspection should be progressed to closure.

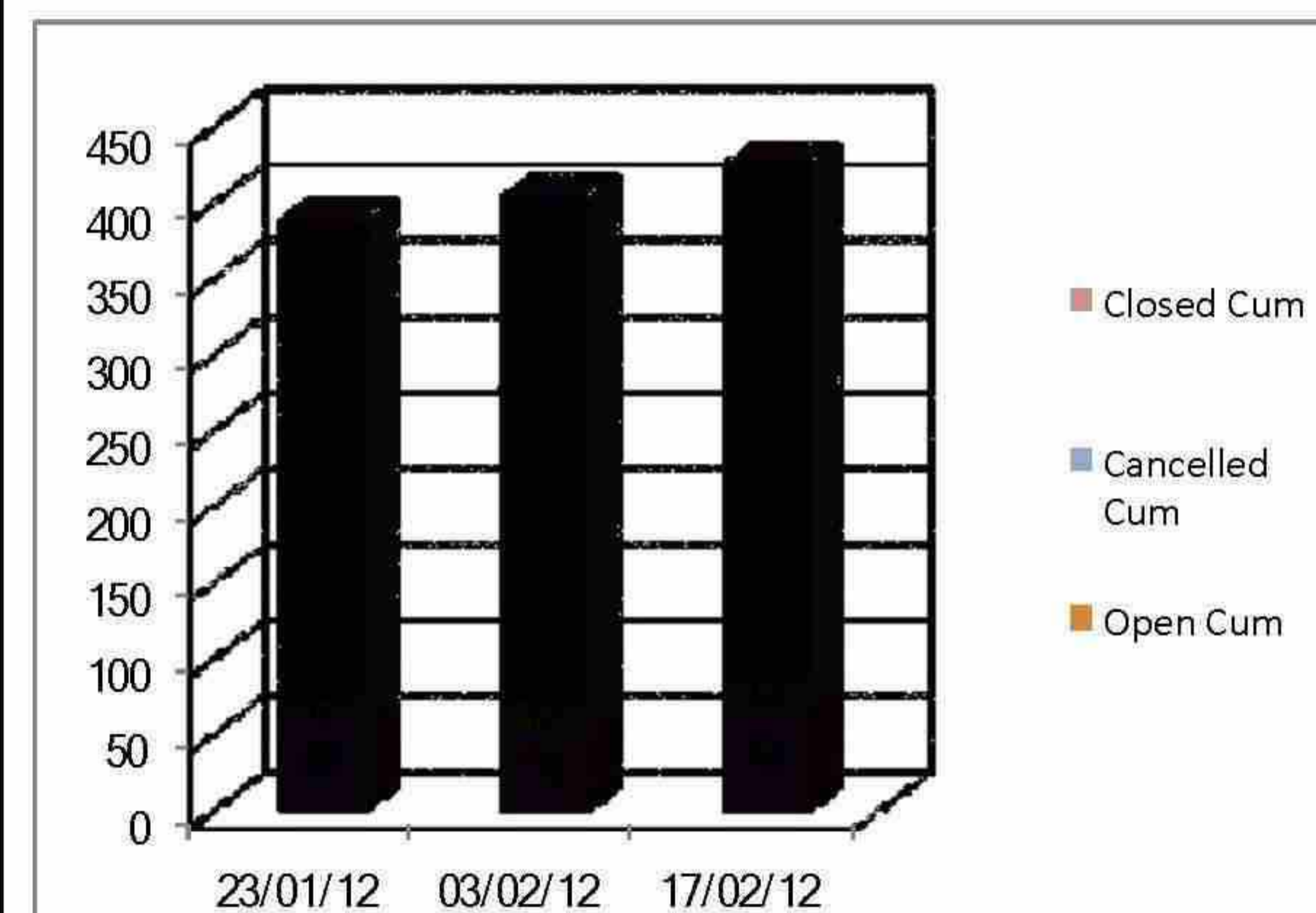
6.0 NCR's

- Total No of NCRs raised is 426.
- 36 NCRs were raised during the period and 27 NCRs were closed out during the period.
- 13 no open NCRs are greater than 6 months old.

Safety Verification Scheme (SVS) Audit Findings



Non Conformance Reports (NCR)

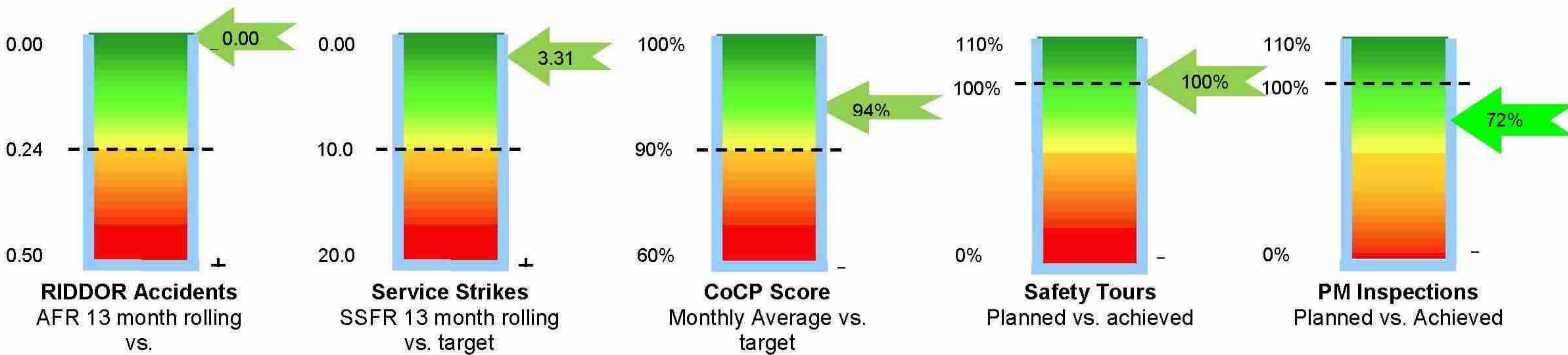


7.0 Deliver a Safe Tram – Required Action

- Ongoing review of Section A handover documentation with particular reference to the Body of Evidence.
- Closure of metrics inspection QM78

HS&E ACCIDENTS and INCIDENTS SUMMARY

Total	Total Hours	>3 day	Major	Injury	NM/Unsafe Condition	Service Damage	ENV	RTA	MOP	AFR	SFR
Period	68,327	0	0	3	0	5	0	0	2	0.00	7.32
13 period rolling	847,148	0	0	9	81	28	7	0	7	0.00	3.31
INFRACO											
Period	57,279	0	0	3	0	2	0	0	1	0.00	3.49
13 period rolling	667,924	0	0	9	58	17	6	0	4	0.00	2.55
OTHER TRAM											
Period	2,762	0	0	0	0	3	0	0	1	0.00	108.61
13 period rolling	25,938	0	0	0	22	11	0	0	2	0.00	42.41



EXECUTIVE SUMMARY

- There were no reportable incidents since the issue of the last DtTS report. The rolling 13 Period AFR remains at 0.00, better than the benchmark KPI of 0.24 for the project.
- There were 2 reported Member of Public incidents during Period 12. One involved a woman falling on the temporary pedestrian walkway at Haymarket, and the second involved a person snagging a jacket on a heras fence panel. (See Appendix A for details)
- 20 other incidents occurred since the issue of the last DtTS Report (1 near miss, 12 service damages, 5 minor injuries and 2 environmental) See Appendix A for details.
- CoCP compliance was recorded at 94% during Period 12
- 72% of planned PM joint inspections have been carried out during Period 12.
- 100% of planned safety tours were carried out during Period 12.

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

Project Running Totals	HS&E Tours (Directors)	HS&E PM Inspection
Number planned	1	7
Number achieved	1	5

HSQ&E KEY ACHIEVEMENTS

- The rolling 13 Period AFR remains at 0.00, better than the benchmark KPI of 0.23 for the project.

Key Issues – Points to Note

- Following an alleged MoP slip at a wooden temporary walkway at Haymarket, Turner & Townsend raised concerns with BBS over the management of safety at the installation. The walkway has subsequently been removed and replaced with a tarmac surface.
- A meeting has taken place with BBS, McNicholas and Scottish Water to review safe digging practices and the Scottish Water requirements for piling and accessing manholes. A further event focussing on foreman / supervisor responsibilities is planned for the 07 / 08 March.
- Concerns were raised by McNicholas that site safety is potentially being compromised by unrealistic delivery timescales. This is being investigated by Turner & Townsend H&S Team.
- Work has commenced on the next stage of Targeted Inspections. These will focus on excavation / temporary works and vehicle movements. The results of these will be reported in the next DtTS Report.
- The increased pedestrian movements around the construction sites as a result of the rugby international held at Murrayfield on the 04th February passed off without incident.
- A meeting was held between First ScotRail, Turner & Townsend and BBS regarding access for works in the proximity of the Haymarket Depot. A protocol for arrangements for access to the depot was agreed. The effectiveness of the arrangements will be formally reviewed after implementation.

ENVIRONMENTAL SUMMARY

List any significant environmental events, initiatives, breaches etc

1. Archaeological works associated with the air raid shelter at Haymarket now complete.
2. John Lawson CECAS expressed concerns that protocols were not being followed with regard to the agreed archaeological watching briefs. John Lawson is to be contacted prior to any decisions being made with regard to archaeology.
3. Site inspection carried out at Section 7 on 15th February 2012 to cover works being carried out under the CAR licence, the site was in good order with good environmental awareness.
4. Site inspection carried out with McNicholas on the 20th February 2012 covering the city centre works being carried out. There are minor issues regarding availability of spill absorbent material which were address during inspection.
5. It has been agreed that copies of reports produced by Ecological Clerk of Works (John Darbyshire) will be provided to Turner & Townsend for information.
6. Updated environmental legal register issued to project team during period 12.
7. BBS held their second monthly environmental forum which Turner & Townsend were invited to. This will now take place every month with a representative from all sub contractors invited.
8. BBS have agreed to submit a monthly report/updated on the Site Waste Management Plans as is required by the CoCP.
9. Turner & Townsend will accompany BBS environmental advisor on the Network Rail Safety Bus to communicate relevant environmental tool box talks to the site staff, during period 13.

BEST PRACTICE

List any significant quality events, initiatives, breaches etc

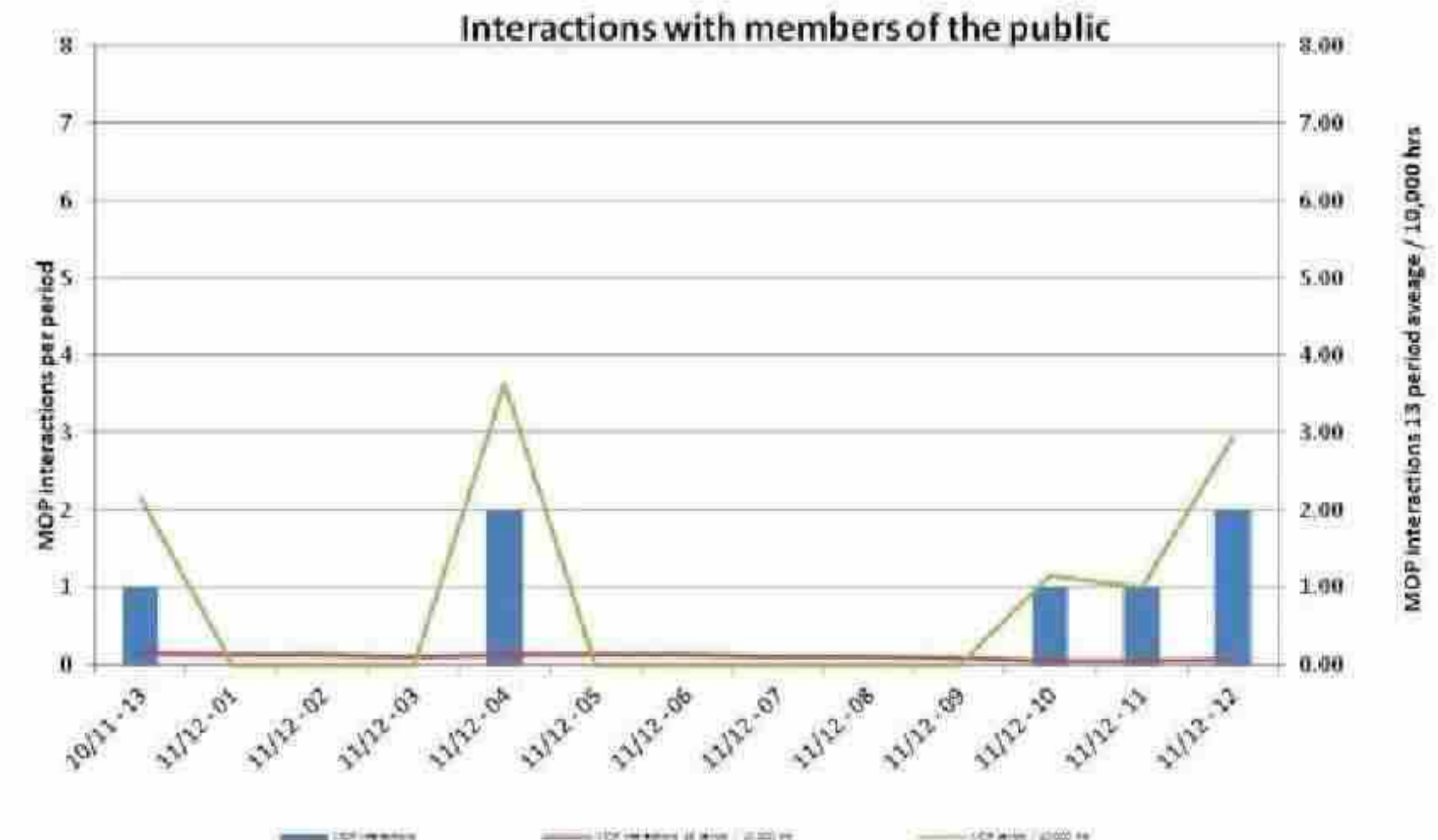
- The Network Rail Safety Bus visited site to provide information regarding the implementation of the Work Package Plan process, and what Network Rail would be looking for in their review process.
- The Turner & Townsend Project Delivery Safety Meeting is being held monthly and provides a review of previous performance and the identification of future issues of note.

MEMBER OF PUBLIC INTERACTION SUMMARY

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

There were 2 reported MoP incidents during Period 12. One involved a woman falling on the temporary pedestrian walkway at Haymarket, and the second involved a person snagging a jacket on a heras fence panel.

(See Appendix A for detail)



CDM Compliance

List any significant quality events, initiatives, breaches etc

- There has been one incident where a utility company required access to a Tram project worksite to undertake emergency works. There was some ambiguity regarding the management arrangements relating to the requirements of the Tram project Principal Contractor and the Contractor managing the work site. This has been discussed with BBS at the weekly health & safety meetings.
- The role of the utility companies as CDM client when undertaking some Tram related work is being clarified by Turner & Townsend.

GRAPHS

