# Tram Briefing and Project Delivery Group Joint Meeting AGENDA

Date: 17 April 2012 Time: 8.00 am

Venue: Dunedin Room, City Chambers

Attendees:

Vic Emery (Chair) The City of Edinburgh Council vic.emery@

Lucy Adamson Transport Scotland Lucy.adamson@transportscotland.gsi.gov.uk

Dave Anderson The City of Edinburgh Council Dave.anderson@edinburgh.gov.uk

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Ian Craig Lothian Buses <u>Icraig@lothianbuses.com</u>

 Neil Gibson
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Mark Turley The City of Edinburgh Council Mark.turley@edinburgh.gov.uk

Julian Weatherley Turner and Townsend Julian.Weatherley@turntown.co.uk

Gary Easton

Turner and Townsend

Rob Leech

Turner and Townsend

Shirley Mushet

Turner and Townsend

Turner and Townsend

Turner and Townsend

Martyn Ayres

Turner and Townsend

- 1 Previous Minute 5 April and 26 April 2012 submitted for approval as a correct record (circulated)
- 2 Rolling Actions Log (to follow)
- 3 Turner and Townsend Report Julian Weatherley to speak to this item (circulated)
- 4 Communications Kelly Murphy to speak to this item
- 5 AOCB
- 6 Date of Next Meeting

**Full Report:** 7 June 2012 at 8am in the Chief Executive's Board Room

**Presentation:** 21 June 2012 at 8am in the Chief Executive's Board Room

### Tram Briefing and Project Delivery Group Joint Meeting

### Edinburgh, 5 April 2012

### Attendees:

Vic Emery (Chair) The City of Edinburgh Council vicemery@ Sue Bruce The City of Edinburgh Council sue.bruce@edinburgh.gov.uk Alastair.maclean@edinburgh.gov.uk The City of Edinburgh Council Alastair Maclean

The City of Edinburgh Council csmith@hg-group.co.uk Colin Smith

The City of Edinburgh Council Dave.anderson@edinburgh.gov.uk Dave Anderson Alan Coyle The City of Edinburgh Council alan.coyle@edinburgh.gov.uk Kelly Murphy The City of Edinburgh Council kelly.murphy@edinburgh.gov.uk

Scott Noble Transport Scotland scott.noble@transportscotland.gsi.gov.uk lucy.adamson@transportscotland.gsi.gov.uk Lucy Adamson Transport Scotland **Lothian Buses** icraig@lothianbuses.com Ian Craig

Neil.gibson@bigpartnership.com Big Partnership Julian Weatherley Turner and Townsend Julian.Weatherley@turntown.co.uk Gary Easton Turner and Townsend Gary.easton@turntown.co.uk Turner and Townsend Shirley.Mushet@turntown.co.uk Shirley Mushet

### **ACTION NOTE**

Neil Gibson

ITEM ACTION DEADLINE **OWNER** 

#### 1 INTRODUCTION

Apologies were received from Mark Turley, Bob McCafferty, Ainslie McLaughlin, Graham Porteous, Martyn Ayres and Rob Leech.

#### 2 PREVIOUS MINUTES AND MATTERS ARISING

### Decision

To approve the minute of 1 March 2012 as a correct record.

#### 3 **ROLLING ACTIONS LOG**

Refer to PDG Rolling Action List for updated action status.

Julian Weatherley advised that a Turner and Townsend facilitator for the 'Think before you act' event had been identified. A keynote speaker had yet to be identified and guidance was sought whether it should be an external or internal speaker. Colin Smith added that Vic Emery was set to chair the event and following discussion, it was agreed that the event should not include an external speaker. Sue Bruce enquired whether issues, such as the lorry banking into the ScotRail depot and their staff reporting it as a near miss, be covered by the 'Think before you act' event. Julian Weatherly

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confirmed the event could be opened up to all health and safety issues. Colin Smith and Julian Weatherley would meet to discuss the agenda for the event and ensure that the appropriate facilitator and speaker were identified.

CS/JW

Alan Coyle suggested that the Council financial reports and the Turner and Townsend reports should be considered at separate meetings. This would allow additional time to review each document. It was agreed that a meeting would take place between Colin Smith, Alan Coyle, Ed Foster, Clive Arbuckle and Gavin King to identify an amended reporting schedule

CS/AC/EF/ CA/GK

lan Craig advised that two trams had two controls (horn and brakes) switched round and in setup differently to the other trams. Concern was raised whether the sign off process for the trams was robust enough. Julian Weatherley agreed to investigate the sign off process and ensure that all other configurations were correct. Colin Smith added that this issue would be followed up at control meetings.

JW

Colin Smith advised that water was permeating through the front door of the Tram Depot. A range of solutions had been discussed but a permanent solution had not yet been identified. Julian Weatherley agreed to investigate this issue.

JW

Ian Craig enquired whether the tram mock up at the airport could be transferred to the Lothian Buses depot in Seafield. It was agreed that this could be transferred but that tram information/promotional material should replace it at the airport. Kelly Murphy stated that new tram banners had been erected at Haymarket and she would investigate whether similar materials could be utilised at the airport.

KM

IC

### 4 TURNER AND TOWNSEND REPORT

Julian Weatherley introduced Turner and Townsend's report for the period 25 February 2012 – 27 March 2012. Julian Weatherley, Gary Easton and Shirley Mushet gave a presentation summarising the main points in the report.

Julian Weatherley advised that 24 health and safety incidents had been reported since the last dashboard, of which, six were classified as serious/significant issues. Two incidents had been reported to the HSE and these related to the cable strike in South St Andrew Street and the gas main strike at the airport.

The 'Think before you act' initiative would aim to rectify the

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cultural and behavioural deficiencies in regard to health and safety on the Project.

The resolution of snagging issues at the tram depot was progressing as planned and was 79% complete. The total of NCR's raised was 462 with 77 remaining open.

The soil issue in Baird Drive was still ongoing, with a decision on the soil classification expected next week. Neil Gibson added that the Daily Record was checking when SEPA would issue their decision on a daily basis. Scott Noble added that Ainslie McLaughlin had spoken to SEPA and they had given him a commitment to provide prior warning of their decision. SEPA, BBS and CEC had agreed to issue their individual statements simultaneously.

Tram commissioning continued to be completed in line with the commissioning plan. A new chart had been created by Turner and Townsend to show the progress per tram. Vic Emery added that the overall ambition would be to shorten the commissioning period but maintain the controls and focus on safety.

Ten trams had been delivered to the depot with the eleventh tram due to be delivered on 10 April 2012.

Julian Weatherley gave an update on the on-street section of the project and advised that the majority of South St Andrew Street had now been handed over to Infraco in line with the programme.

McNicholas were undertaking large excavations to clear utility conflicts in Haymarket 2-6. This would enable McNicholas to undertake work on the manhole in that area. This would allow a significant amount of the drainage work to be completed for handover to Infraco. Vic Emery stated that this appeared to be a good example of partnership work in action but enquired if a commercial agreement was in place. Julian Weatherley confirmed that an agreement was not yet in place but the principle had been agreed. Using McNicholas would complete the works quicker but the commercial component had to be addressed. Julian Weatherley stated that he would provide a position paper by next week, on the issue, for Colin Smith. Colin Smith added that Turner and Townsend had prepared a paper on the Scottish Water drainage issue and asked BB to respond by next week. The overall aim was that the best placed party should do the drainage work. It was also key that no-one was paid twice for the same piece of work. Vic Emery enquired what the impact on defect liability was if the work

JW

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was done by another party. Julian Weatherley agreed to investigate the impact on defect liability. Sue Bruce re-iterated that it was critical that the completion of the work was kept separate from the contractual discussions.

JW

Julian Weatherley advised that out off 33 manholes that required solutions only two needed derogations. In response to a question, it was confirmed that even if McNicholas completed the drainage works in Haymarket the solution would be designed by Infraco.

Julian Weatherley explained that a meeting on York Place had been held last week. A design had been produced that would reduce the road to a single lane but would not impact on the adjacent basements. The traffic modelling had supported this approach and it significantly de-risked the tram project. Vic Emery highlighted that a permanent single lane of traffic in York Place was a significant issue for the City and how it managed traffic; and the decision should not be taken lightly. Alastair Maclean added that it was also important that any traffic management proposals take cognisance of the impact when the tramline was extended to Newhaven. Colin Smith suggested, and it was agreed, to hold a briefing session on the proposed traffic management changes for York Place with Mark Turley, Marshall Poulton and BBS.

CS/ASim

Works would commence by the end of April to remedy previous Infraco and Mudfa works related to Forth ports and in Lindsay Road. Julian Weatherley confirmed that the NEC C type contract would be used for the procurement of Scottish Water legacy works in Leith.

Vic Emery enquired how many of the cost engineering initiatives had been secured. Gary Easton explained that £8.62m of the opportunities had been secured with £7.31m still to be realised.

Julian Weatherley advised that Turner and Townsend were in discussions with McNicholas about securing a reduction in fee to 9.3% if CEC took on the public liability risk. McNicholas' initial reaction was unfavourable but discussions were ongoing. Colin Smith added that McNicholas had previously reduced their fee from the original fee.

Shirley Mushet gave an update on the off-street section of the Project and advised that the secant piling at the airport which had previously been behind schedule had now been recovered. The traffic management at the airport had now been removed for the Easter holiday period. There had been

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no request from CEC for any acceleration of works and there were no additional costs to the Project. Colin Smith suggested that Farrans may have been endeavouring to improve their relationship with BAA following the cable strikes in the airport's vicinity. A monthly interface meeting had also been established which would involve representatives from BAA, BBS, CEC, Transport Scotland and Turner and Townsend.

The wording of the SGN/NIL wayleave had been agreed and it was expected that all parties would have signed it by the end of the day. The programme for the SGN works had slipped but 11 hour shifts would be worked 7 days a week to recover the programme and complete work by 18 May 2012.

There had been a complication with the street lighting at the Gogar Roundabout and it was now forecast that works would be completed by 16 April 2012.

The subsidence at the railway track at Murrayfield had been resolved and the track was being monitored three times a day.

The estimate for the Edinburgh Gateway works was scheduled to be provided next week. Scott Noble confirmed that planning for the Gateway was progressing well. There was concern over the programme and cost as this had not been properly defined yet. He suggested that a Gateway workshop of all concerned parties be arranged.

SN

Julian Weatherley stated that Turner and Townsend's programme challenge document was not well received by BBS. It had identified approximately 30 items which Turner and Townsend believed were still valid initiatives to pursue. However, approximately only seven of the 30 items had been agreed. The wording of the document had been carefully managed to avoid being contentious. Colin Smith added that the work of Paul Robinson (T&T) had been good but BBS had picked up on words such as challenge and amnesty and not reacted well. The minute of the meeting would be issued by the Council and the three main levers of the Project (York Place, testing and commissioning process and the track between the airport and the depot) remained on the agenda to be discussed and explored. The aim was still to bring proposals on the programme to the Joint Project Forum on 25 April 2012.

Julian Weatherley explained that although there were a number of delays in the Project, all sectional completions

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were on schedule or ahead of programme. Further detail was provided on each potential delay.

There was a 47 day delay in regard to starting civil works at South St Andrew Street. However, BB had re-sequenced works to recover the delay and it was forecast that works would be completed one day late.

A delay of 88 days was projected for the completion of the Water of Leith Bridge. The construction methodology chosen could mitigate a portion of that delay. BB had a contractual agreement with Siemens that meant damages would be paid for any delay and this could give them a commercial imperative to complete on schedule. Turner and Townsend were of the view that the delay in these works was due to commercial discussions between BB and their subcontractors. BB was likely to be of the view that the Council was liable and the delay was attributable to a delay in gaining a third party agreement. Alastair Maclean observed that if BB believed damages were the liability of CEC then they may not have the same commercial imperative. It was agreed that an update should be provided at a future meeting including any potential liability for CEC.

SM

Vic Emery enquired whether the 140 day delay in the installation of the South Gyle beam, would have an impact on the programme. Shirley Mushet confirmed that it would be monitored but it was not on the critical path.

Vic Emery enquired whether the 114 day delay to the completion of Eastfield Avenue damaged the project's relationship with the airport. Shirley Mushet explained that BAA was comfortable with the works and the fact that it would not impact on their busy summer period.

Gary Easton provided details on the financial aspects of the project and advised that the total approved change had reduced from £1.1m to £74,000 due to the realisation of some cost engineering initiatives. The major change was the reduction of £1.1m due to the cancellation of track materials.

£7.3m had been included in the report for opportunities to secure. The changes to traffic management and cancellation of embargoes had resulted in 22 weeks being banked. However, 16 weeks of this was forecast to be utilised by the clearing of utilities at York Place. Alan Coyle added that the planning discussions regarding York Place aimed to safeguard the 16 weeks and reduce any use of the 22 weeks. Colin Smith explained that by June/July 2012 the risk of utility

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conflicts would be better quantified and would allow a clearer picture of when the project could be completed. Julian Weatherley confirmed that approximately 1000 of the 2800 utility conflicts had been cleared. 700 of these were Scottish Water legacy works, with 600 located in Leith Walk.

Colin Smith stated that a further cost engineering exercise would be undertaken in May 2012 although the returns would be diminished.

Gary Easton provided details on the contingency and stated that £10.9m remained in the contingency allowance.

### 5 FINANCIAL REPORT

It was noted that the financial report had been considered in the previous meeting and was consistent with the Turner and Townsend figures. Future financial reports would be considered on a different date to the Turner and Townsend report.

### 6 COMMUNICATIONS

Kelly Murphy advised that there had been an article in the Evening News that had published that an Easter egg hunt in the West End had cost £70,000 rather than the actual cost of £700.

### 7 AOCB

Julian Weatherley advised that discussions had taken place with CEC on how best to utilise CEC staff to supplement Turner and Townsend. Colin Smith added that a final figure for the blended team would be reported to next Thursday's tram briefing.

CS

### 8 DATE OF NEXT MEETING

The next meeting with Turner and Townsend was scheduled for 12 April 2012, it was agreed to cancel this meeting and the date of the next meeting would be circulated following the meeting on the new reports schedule.

### **Tram Briefing**

### Edinburgh, 26 April 2012

### Attendees:

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Rob Leech Turner and Townsend Rob.leech@turntown.co.uk

### **ACTION NOTE**

ITEM ACTION DEADLINE OWNER

### 1 TURNER AND TOWNSEND PRESENTATION

Julian Weatherley, Gary Easton and Rob Leech gave a presentation providing an update on the Project.

Julian Weatherley provided details of the health and safety issues explaining that there had been 17 (12 by BBS and 5 by McNicholas) incidents reported since 23 March 2012. Four of the incidents had been classified as serious or significant.

The Health and Safety Executive (HSE) had commented on the Project's findings into the 11Kv cable strike in St Andrew Square and had agreed that the client's actions responding to the incident were necessary and the HSE would be satisfied if the actions were implemented.

Following a health and safety audit it was found that of a total of eight actions, McNicholas had implemented only five of the eight. The three actions not implemented were significant. Following a site inspection and subsequent review, Turner and Townsend could not be satisfied with McNicholas continuing work in areas where work practices were judged of an insufficient standard in regard to health

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and safety. Thus, work had ceased in some areas but not across the whole site. Turner and Townsend had produced an action plan for McNicholas and had requested to discuss the issue with the Managing Director of McNicholas to examine the issue and reinforce the seriousness and concern.

Vic Emery enquired whether CEC or Turner and Townsend could do anything further to improve the health and safety situation. Julian Weatherley advised that it was important for health and safety responsibility on-site to remain with the contractor. However, it was Turner and Townsend's view that McNicholas did not have adequate levels of supervision onsite. The number of McNicholas staff had increased from 40 to 100 but the number of supervisors had remained at two. Julian Weatherley was in discussions with Alan Covle and Colin Smith on whether the number of Turner and Townsend staff was sufficient to ensure McNicholas were adequately supervised. Alastair Maclean suggested and it was agreed that the Chief Executive should meet with the Managing Director of McNicholas to stress the seriousness of the situation. Alastair Maclean enquired whether McNicholas works across the full site should be suspended. Julian Weatherley explained that this had been considered but following a comprehensive review this was not thought to be necessary. McNicholas' failings appeared to be a resources issue rather than incompetence.

Colin Smith stated that McNicholas' failings were relatively basic health and safety breaches and enquired whether Turner and Townsend had a 'plan b' if it became necessary to remove McNicholas from undertaking the works. Rob Leech explained that he would investigate possible options but stressed that they were not at the point where that action had to be taken. Bob McCafferty stated that McNicholas had tendered for the legacy works north of York Place and these health and safety concerns should be taken into account when tenders were evaluated. Gary Easton highlighted that the response to the tenders from the industry had been limited.

Sue Bruce stated that it was important that any concerns over the number of alternative providers should not discourage the correct response to health and safety concerns from being undertaken. CEC

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would discuss this issue after the meeting and an instruction would be provided to Turner and Townsend in the near future.

Julian Weatherley advised that the 'Think before you Act' workshop had been scheduled to take place on 10 May 2012. An outline agenda had been agreed and a Turner and Townsend facilitator had been identified.

A second incident had taken place that impacted on a Scottish Water asset. This was despite a new process having been agreed. A review of procedures had taken place with actions implemented and the incident would be raised in discussions with McNicholas. Colin Smith stated that it was important that the report on the incident was clear on liability and on who caused the incident. The previously submitted report on the initial incident with Scottish Water should be supplemented with a paper outlining the liability for the incident. Rob Leech confirmed that the report on the second incident would be clear on the culpability and liability but there was a difference of opinion, with Scottish Water, regarding liability on the first incident and he would discuss this with Colin Smith.

There had been 475 NCRs raised to date with 83 remaining open. The current NCR rate was 20 being raised and closed each week. Sue Bruce enquired whether the NCR regarding levels on Princes Street had been resolved. Julian Weatherley explained that they were still awaiting a report from BBS and it had not been logged as an official NCR. Colin Smith suggested and it was agreed that Turner and Townsend should raise the issue as an NCR and discuss further with BBS.

Vic Emery requested an update on recent incidents where the water supply had been cut off affecting businesses such as the Travelodge in Shandwick Place. Rob Leech explained that the standard work practice was to 'squeeze' the network which avoided having to shut the water supply off. Following a number of incidents under *tie*, Scottish Water withdrew the right for a 'squeeze' of the network to be undertaken in relation to tram works. Turner and Townsend though had recently requested that Scottish Water lift this ban and they had agreed. It was hoped that further incidents of the water supply being shut off could be avoided.

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Technical Support Service had reviewed and witness tested the first electrical substations.

Julian Weatherley advised that twelve trams had now been delivered to the tram, with eight having undergone dynamic testing on the mini-test track. Vic Emery enquired whether the testing and commissioning of the trams would lag behind the construction of the track. Julian Weatherley confirmed that the track between the airport and the depot could be used to test the tram except for the drivers training on the on-street section. There was an employer's requirement for 12 weeks of trial running but that could be revisited.

Sue Bruce stated that it was important that a consistent public message of summer 2014 was used when communicating when the trams would be open for revenue service.

Ian Craig advised that Lothian Buses were concerned about the progress on ticketing machines and their integration. Discussions had taken place on the issue but further work was required. Colin Smith and Alan Coyle agreed to lead on this issue.

Julian Weatherley advised that the valuation process was been affected by a delay in the provision of documentation by CAF. Sue Bruce added that this issue had been raised at the Joint Project Forum and Richard Garner would follow up on the issue within CAF.

An engineering change workshop had been arranged with ETL and CAF to address issues raised by the incorrect positioning of two pedals in two of the trams. Sue Bruce enquired how CEC could be reassured that the trams had been tested comprehensively before passenger service was commenced. Julian Weatherley agreed to investigate and report back to a future meeting.

Julian Weatherley advised that out of 239 snags at the depot, 205 had been resolved. 19 would be completed by the end of April 2012 with the remaining 16 completed by the end of June 2012. A solution had been agreed for the water ingress through the front door.

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Rob Leech gave an update on the on-street section of the project. He stated that there had been a two week delay due to the re-design of drainage but McNicholas had also been instructed to carry out some excavations to formation level and construct some manholes. This would enable Infraco to commence construction as soon as the site was handed over. All drainage redesign work was expected to be completed in the onstreet section by 18 May 2012. Co-operation from Scottish Water had been good on the drainage issue and subsequently the relationship had improved. However, the relationship remained fragile and it was necessary to continue to foster a good relationship. Sue Bruce added that it would be an appropriate time for her to have another meeting with the Chief Executive of Scottish Water.

Significant progress had been made in Haymarket (2-5). It was forecast that utility conflicts would be cleared, drainage designed and constructed and the track bed cut by 18 May 2012 compared to the scheduled date of 8 June 2012. Infraco would be in a position to take control of the site earlier.

Rob Leech stated that the detailed design of York Place was progressing well but there was a need for Infraco to take advantage of the early work in York Place. Colin Smith advised that a meeting had been organised with Martin Foerder to discuss improvements that could be made to the Project, including the programme for York Place. An update would be provided to the Tram Briefing meeting on 1 May 2012 on the programme/planning for York Place.

Rob Leech advised that the Forth Ports remedial works had commenced and were due to be completed by the end of June 2012. The tender for the Leith Walk legacy works had been finalised for issue at the end of April 2012. Alan Coyle requested a cost estimate for those works.

Dave Anderson enquired whether work had been undertaken to liaise with Network Rail in regard to the Haymarket Train Station re-development. Gary Easton confirmed that Shirley Mushet had fortnightly meetings with Network Rail and a number of interface issues had been discussed and resolved. There were no major outstanding issues.

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Julian Weatherley gave an update on the off-street section of the Project highlighting the following issues.

- Seven 3 hour closures of Eastfield Avenue had commenced on 20 April 2012. Four had been completed and there had been no complaints from BAA.
- The SGN works had commenced on the land of New Ingilston Limited.
- BBS had reported that the soil reinforcement works at the Gogar landfill was three weeks behind programme but BBS expected this to be recovered. Sue Bruce enquired what the finish would be on the concrete support and Julian Weatheley agreed to investigate.
- Sheet piling had commenced which were enabling works for the ground improvements at Murrayfield. Due to the sheet piling there had been movement in the railway overhead lines of 7mm. Piling was immediately stopped in that area and a survey would be carried out prior to any re-commencement.
- The schedule for the construction of the retaining wall along the Gogar Burn had slipped by three weeks. Turner and Townsend believed it could be recovered.
- The west abutment at Russell Road had been cast
- BBS had raised issues regarding Network Rail assets encroaching onto the LOD. This would be monitored.
- Siemens had identified a possible solution, whereupon a temporary radio mast would not have to be installed but a permanent one would be put in place. This had still to be confirmed.

Colin Smith and Alan Coyle raised concern over the formulation and presentation of the financial figures. They were currently confusing and estimates were changing significantly on a regular basis. It was suggested that going back to basics when formulating the figures would provide more clarity. To this end a meeting had been arranged to discuss the issue on 9 May 2012.

Vic Emery stated that although the delays off-street did not currently affect sectional completion; there was a possibility that they would delay the project if the on-

# Tram Briefing Meeting 26 April 2012

ITEM	ACTION	DEADLINE
	OWNER	

street construction continued to be delivered ahead of programme. Julian Weatherley agreed and added that Turner and Townsend would not be complacent about the off-street delays.

### Decision

Decis	ion	
1)	That the Chief Executive meets with the Managing Director of McNicholas to discuss health and safety issues.	Sue Bruce/Colin Smith
2)	To investigate alternative options for the work undertaken by McNicholas and the subsequent implications. This was in preparation for a potential scenario where it was necessary to remove McNicholas due to health and safety concerns.	Rob Leech
3)	To note that an instruction from CEC would be provided on the McNicholas health and safety concerns in the near future.	Colin Smith
4)	That Rob Leech would discuss with Colin Smith the liability regarding the first incident to affect a Scottish Water asset.	Rob Leech/Colin Smith
5)	To agree that the report on the second incident affecting a Scottish Water asset should be clear on the culpability and liability for the incident.	Julian Weatherley
6)	To raise the non compliant levels in Princes Street as an official NCR and to chase up BBS on the issue.	Julian Weatherley
7)	That when stating the date for the opening of the tram revenue service - summer 2014 should be used.	AII
8)	That Colin Smith and Alan Coyle lead on the introduction and integration of tram ticketing machines	Colin Smith/Alan Coyle
9)	To investigate a process to ensure that the trams had been tested comprehensively before passenger service was commenced	Julian Weatherley
10)	That Colin Smith would provide an update on the planning/programme for York Place to the Tram Briefing meeting on 1 May 2012.	Colin Smith

# Tram Briefing Meeting 26 April 2012

	ITEM	ACTION OWNER	DEADLINE
11)	To note that the Chief Executive would meet with the Chief Executive of Scottish Water.	Sue Bruce/Colin Smith	
12)	To provide a cost estimate for the Leith Walk legacy works.	Gary Easton	
13)	To investigate the finish of the soil reinforcement at the Gogar landfill.	Julian Weatherley	
14)	To note that a meeting had been arranged for 9 May 2012 to define the method and presentation of the cost summary.	Alan Coyle/Colin Smith/Gary Easton	

### 2 DATE OF NEXT MEETING

Full Report - 10 May 2012 at 8am in the Chief Executive's Board Room

Presentation – 24 May 2012 at 8am in the City Chambers

## Turner & Townsend



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Edinburgh Tram Project Full Progress Report No. 7 24<sup>th</sup> March to 28<sup>th</sup> April 2012 FINAL

CONFIDENTIAL - LEGALLY PRIVILEGED AND FOI(S)A EXEMPT



### Progress Report No. 7 24th March - 28th April 2012

### FINAL

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Appendix 1 - Dashboards

Appendix 2 - Health, Safety & Environment and Consents Tracker

Appendix 3 - Cost Report and Contingency Analysis

Appendix 4 - Change Log

Appendix 5 - Risk Register

Appendix 6 - Route Map

Appendix 7 - Acronyms

Rev	Originator	Approved	Date
0	Shirley-Anne Collin	Julian Weatherley	03-05-2012

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DOCUMENT5

### 1 Executive Summary

This report covers progress made during the period from 24<sup>th</sup> March to 28<sup>th</sup> April 2012. It incorporates progress reported within Infraco and CAF Progress Reports No. 4-14 to 31<sup>st</sup> March 2012.

There were 22 incidents recorded during the period. Five incidents were identified as Serious / Significant and 17 reported as either Member of the Public, Service Damage, Minor Injury or Near Miss/ Unsafe Condition. These included two Lower voltage cable strikes, two members of the public falling and one Scottish water compliance issue.

A number of Health & Safety concerns have been identified in relation to the working and management practices of McNicholas. Remedial actions have been identified and are being implemented. A "Think Before You Act" health & safety review is to be held with the project's contractors on  $10^{\text{th}}$  of May.

Discussions continue between Infraco and SEPA in relation to soil removed from Baird Drive. Further information is to be provided by Infraco to enable conclusion.

Twelve days of the 22 week cost engineering saving have been confirmed as being eroded. Further erosion has occurred during the reporting period but this has yet to be reported by Infraco and therefore has not yet been agreed.

The On Street drainage has now been re-designed to meet Scottish Water's approval requirements. The scope of On Street works undertaken by Infraco and McNicholas has been reviewed as a result, with McNicholas completing drainage works as well as track slab excavation where this results in overall programme improvement.

Significant progress has been made with the detailed planning of the York Place works. Preparation works for Cathedral Lane substation and York Place utilities diversions will commence during the coming period. A CEC instruction on the overall approach to York Place is anticipated.

Good progress is being made in relation to the identification and scoping of Scottish Water legacy works within the On Street Section although a number of items remain for which a solution has yet to be determined. The scope of legacy works is significantly greater than previously envisaged. The tender for the Leith Walk legacy works has been produced and submitted to CEC for comment prior to tender issue. Close out works have now commenced at Tower Place Bridge and Lindsey Road.

Infraco have commenced track slab works within Shandwick Place and St Andrew Street. Princes Street remedial works are progressing ahead of programme and the remaining areas of Princes Street, previously occupied by McNicholas, were handed back to Infraco on the 30<sup>th</sup> of April 2012.

Retaining wall works adjacent to the Gogar Burn at the airport remain marginally behind programme however it is anticipated that this slippage will be recovered.

The works to the Eastfield Avenue Crossing and the A8 Roundabout have been completed during this period. The SGN works to the gas main at New Ingliston remain on programme for completion by the 18<sup>th</sup> of May 2012.

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The progressions of works through the Off Street rail corridor have been impacted by localised ground movements during sheet piling operations. This has resulted in the need to re-sequence sheet piling operations and change construction methods in order to allow works to progress.

Twelve trams have now been delivered to the depot with three vested with CEC. Nine trams have been issued with Interim Tram Routine Test Certificates.

Submissions have been made to the Independent Certifier (IC) regarding Infraco's entitlement to a Pricing Assumption Variation (PAV) for the revised drainage design. The IC has advised that in his opinion, a PAV has occurred and this will be confirmed. Meetings have been held with Infraco to confirm the basis of the omission to the contract sum and the additions based upon the drainage works Infraco are to complete. (Note: McNicholas are undertaking some drainage works to expedite the programme). A further meeting will be held when the drainage design is substantially complete to agree measure and financial evaluation. These principles will be agreed and distributed to enable clarity on the approach.

A Quantative Schedule Risk and Cost Risk Analysis review will be held on the 3<sup>rd</sup> of May and a Cost Report Review will be held on the 9<sup>th</sup> of May 2012. The purpose of these meetings is to confirm alignment between the Master Schedule, the cost savings from the 22 week programme saving and reporting of risk, opportunity and contingency.

### 2 Health, Safety & Environment

During this period, the performance of the On Street Utility contractor, McNicholas has been scrutinised. Comments have now been received from the Health and Safety Executive regarding the investigation into the 11kV incident at South St Andrew Street. The Health and Safety Executive (HSE) have drawn attention to the effectiveness for the current management arrangements and have requested that information is provided to illustrate an improvement in the current policies and procedures. Turner and Townsend are developing a response on behalf of CEC.

This safety initiative will be supported by the 'Think before you Act' session with the project's senior management; this session is now planned for the 10<sup>th</sup> of May 2012. The agenda for the meeting has now been agreed with CEC and invitations issued.

### 2.1 Incident reporting

During week commencing 23<sup>rd</sup> of April 2012 and following a meeting on site between Turner & Townsend and McNicholas a number of safety issues were identified. These included:

- Inadequate site supervision and management Despite the increase in work scope to carry out the drainage and track box works McNicholas had not increased its site resources sufficiently to cope with the additional work.
- 2. Written task sheets introduced following a strike on an 11kV cable were not being issued in all instances to operatives despite the process being formally rolled out by McNicholas.
- The construction Health & Safety plan was inadequate and updates previously identified had not been carried out.
- 4. A lack of control on additional working hours.
- 5. The inspection of excavations highlighted a number of safety issues and works were suspended pending the outcome of a review and the introduction of additional temporary works. The maintenance of emergency access through sites was also being compromised.

A 12 point plan was immediately put in place by Turner & Townsend and meetings were arranged between CEC, Turner & Townsend and McNicholas at a senior level. Turner & Townsend were also formally requested to review the safety breaches and advise CEC on the most appropriate way forward in relation to tram works and the impending legacy works tender.

During the last period there were 22 incidents on the Edinburgh Tram Project, 5 incidents were identified as Serious / Significant and 17 reported as Member of the Public, Service Damage, Minor Injury, Near Miss/ Unsafe Condition. These included 2 Lower voltage cable strikes, 2 Members of the public falling and 1 Scottish water compliance issue.

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### Incident Table:

### Incidents reported within this Period:

Date	Location	Detail	Contractor	Classification
26/03/2012	South St Andrew Street	Damage to live LV cable that was located within a lump of concrete that was removed whilst backfilling excavation. Affected external 3 <sup>rd</sup> Party.	McNicholas	Service damage
30/03/2012	Eastfield Avenue	Damage to a LV cable that supplied power to the gas governor kiosk at Edinburgh Airport.	Farrans	Service damage
27/03/2012	Princes Street / Shandwick Place	Member of Public fell tripped on steel plate on temporary walkway on 19/02/12.	Crummock	Member of the public
18/04/2012	Princes Street	MOP was injured when she slipped on a metal plate forming part of the pedestrian diversion route.	McNicholas	Member of the public
29/03/2012	South St Andrew Street	Breach of DOMS documentation regarding the Go Live Pack for a 90mm main.	McNicholas	Near miss / Unsafe condition
27/03/2012	Princes Street	Damage to a stone coping that covered a buried manhole.	Lagan Construction	Service damage
13/04/2012	West Maitland Street	Damage to a domestic water supply for 3 West Maitland Street	McNicholas	Service damage
17/04/2012	Haymarket Yards	Disconnected BT cable was crushed.	Grahams	Service damage
26/04/2012	Gyle	Damage to street lighting cable.	Coffey	Service damage
25/04/2012	St Andrew Square	Construction of a Scottish Water manhole without ATC process being followed.	McNicholas	Service damage
12/04/2012	Haymarket	During relocation of a bus stop a pole was allowed to fall damaging a Member of the Public's bag.	Class One	Member of the public
21/03/2012	Bankhead Drive	Operative whilst de-nailing wooden travellers slipped and fell forward causing a cut to his nose from a duct box.	Crummock	Minor injury
25/04/2012	Haymarket Yards	Electric shock due to contact with disconnected street lighting cable that was directly beneath paving slab.	Grahams	Minor injury
26/03/2012	Bankhead Drive	Graffiti drawn on the external wall to the substation building.	Siemens	Near miss / Unsafe condition

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Date	Location	Detail	Contractor	Classification
30/03/2012	Roseburn Street	Access into manhole for CCTV survey without ATC being in place.	Grahams	Near miss / Unsafe condition
02/04/2012	Balgreen Rd – Carrick Knowe	Theft of a band saw	Land & Building	Near miss / Unsafe condition
16/04/2012	Carrick Knowe	Arson event at Carrick Knowe. Dozer set on fire.	Bilfinger Berger	Near miss / Unsafe condition
20/04/2012	Carrick Knowe	An excavator was broken into and damaged on site.	Crummock	Near miss / Unsafe condition
19/04/2012	Shandwick Place	Generator within site accommodation was left running out of site working hours.	McNicholas	Near miss / Unsafe condition
20/03/2012	ScotRail Depot	A lorry moved across the pedestrian access path directly in front of ScotRail persons. No warning was given and no banksman was visible.	Expanded	Near miss / Unsafe condition
03/04/2012	Waverley Bridge	Temporary traffic lights at Waverley bridge were stuck on red.	Crummock	Near miss / Unsafe condition
06/04/2012	Princes Street	Reported that the service lane on Princes Street was too narrow at the locations where work was being carried out on BT chambers.	Crummock	Near miss / Unsafe condition

Top 5 Significant Incidents

### 2.2 Safety Initiatives

The agenda for the 'Think before you act' session has been agreed with CEC and initiatives issued to BBS, CAF and McNicholas. This is planned for the 10<sup>th</sup> of May 2012.

The Turner & Townsend Project Delivery Safety Meeting was held on the 25<sup>th</sup> of April, a renewed emphasise was placed on the joint monitoring being undertaken on the project, to strengthen the project's safety culture.

### 2.3 CDM Regulations

The Safety Team and Construction Design Management Co-ordinator (CDMC) have been working closely with the On Street procurement team to provide Pre construction information for the Leith Utility works tender over the last period.

### 2.4 Environmental

BBS continue to have discussions with SEPA regarding the classification of soil being excavated on site at Baird Drive. A follow up meeting was held on the 27<sup>th</sup> of April and further chemical analysis of the samples were agreed with SEPA.

A Joint environmental inspection has been carried out with BBS and Turner & Townsend with Coffey on section 5 (Edinburgh Park). Issues regarding waste control and drip trays were raised. A final report is still to be issued by Infraco.

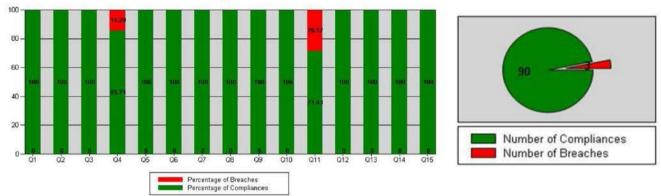
Infraco Environmental Forum was held on the 25<sup>th</sup> of April 2012. Representatives from all of Infraco contractors were present. A review of Non conformances has been raised by Infraco external auditors. This is in relation with to cross contamination of waste, the European waste codes, waste duty of care, diesel leaks and oil storage.

Turner & Townsend have a planned Inspection of the historical monuments being stored by Land Engineering. This is planned for week commencing the 7<sup>th</sup> of May. The monuments being stored are The Hearts Memorial Statue, The Conon Doyle Statue and The Ocean Terminal Monument.

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### CoCP

CoCP compliance was recorded at 97% during Period 1. The results of the CoCP monitoring have been passed to CEC Communication Team to be uploaded to the project web site. Details of these are contained 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	

### 3 Programme

At the request of CEC, Turner & Townsend's programme challenge has now been stood down. Focus is now being turned to maximising the benefits of potential improvements to the York Place programme. An overall strategy, with programme targets, is awaited from CEC.

Based on Infraco's programme update contained within their period 4-14 progress report, twelve days of the 22 week cost engineering programme saving have been eroded as a result of utilities works and the re-design of the On Street drainage. Further erosion has taken place since the last Infraco report however this has yet to be agreed.

According to the Rev4c programme, the critical path currently runs through Shandwick Place track slab and highway works construction. This assessment ignores the impact of utilities enabling works. Turner & Townsend's Master Schedule, which includes the impact of utilities works, shows the critical path to run through the York Place works.

### 4 Commercial

### 4.1 Cost Summary

Contract/Cost Head	Original Budget	AFC 23 March	AFC 28 April	Movement
Infraco – Off Street	360,060	362,668	362,618	-50
Infraco – On Street	38,817	45,449	43,019	-2,430
Infraco – Maintenance	3,218	3,218	3,218	0
Utilities Diversions (Hay-YP)	1,812	12,834	14,658	1,824
Utilities Legacy (Hay-YP)	0	308	1,254	946
Utilities Legacy (YP-New)	1,100	1,100	2,700	1,600
Balance of Risk Forecast	32,747	10,927	9,037	-1,890
TOTAL	500,154	500,154	500,154	0

- The Infraco forecast is based upon the Rev4C target date of 5<sup>th</sup> February 2014 less 12 days as confirmed in the time bank certificate. It does not allow for further delays beyond this.
- Infraco Off-Street change includes the impact delay in signing contract.
- Infraco On-Street incorporates final contract price and impact of On-Street Works changes (Piling to OLE bases, delays from Utilities and Princes St Dec-11 reinstatement).
- Utilities Diversions includes resolution of c. 1,500 Nr conflicts, Infraco track box, duct excavation and drainage works transferred from Infraco works.
- Utilities legacy (Haymarket-York Place) the scope has been developed since mid February 2012 when agreement has been reached with Scottish Water regarding the corrective action that is required. Work is being carried out at the same time as the conflict resolution work where possible. The scope includes 357 Nr SW defects, ranging from correcting valves to separating water mains from gas mains.
- Utilities legacy (York Place-Newhaven) This work is subject to a separate contract currently being tendered. The scope includes 375 Nr SW defects, ranging from correcting valves to separating water mains from gas mains. The forecast is based on an approximate cost per snag type.

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The detailed Cost Report is attached at Appendix 3 and a summary of the key movements are provided below.

(Note: all figures £K)

Reporting Date:	23 March 12	28 April 12	Movement
Original Contract Amount	479,660	479,660	0
Add: Approved Changes	72	3,546	3,474
Add: Changes in Progress	9,602	9,462	-140
Add: Anticipated Changes	15,902	13,917	-1,985
Less: Funding contributions	-8,699	-8,716	-17
Less: Opportunities to secure	-7,310	-6,752	558
TOTAL: Forecast cost	489,227	491,117	1,890
Original Budget	467,407	467,407	0
Variance	21,820	23,710	1,890
Original forecast risk allowance	32,747	32,747	0
Less: Variance (from above)	-21,820	-23,710	-1,890
Forecast balance of risk allowance	10,927	9,037	-1,890
Anticipated Final Cost	500,154	500,154	C

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### 4.2 Infraco

### 4.2.1 Approved Changes (Movement in the Period)

The changes approved this period at the CEC/Turner & Townsend weekly change meetings are provided below.

Approved Change	Amount (£K)
Approved to 23 March reporting date	72
UNC 002: Utilities work to June 2012	3,061
tNC 516: Additional Water main requirement at Depot and Mini Test Track	51
tNC 534: SP Insurance Ducts - Install Insurance ducts at various locations	6
tNC 572: Cathedral Lane substation retaining wall design	26
tNC 591: Diversion of Scottish Power Cable at Haymarket Viaduct	22
tNC 613: Temporary Bus Station at St Andrew Square/Waterloo Place - design	50
tNC 615: Haymarket Viaduct - design wall for blocking off void under the bridge deck as a result of the crew relief facility being omitted	.3
tNC 616: Haymarket Viaduct - construct wall for blocking off void under the bridge deck as a result of the crew relief facility being omitted	10
ICCO006: Independent Certifiers Schedule Part 45 Period End Change Order to 3/3/2012 relating to the following PAV's and On Street Works Estimates	245
	£ 3,546

### 4.2.2 Changes in Progress

Changes in Progress include items which cannot be mitigated and the change is agreed in principle. New items included in this section of the cost report during the period are:

- tNC 605: Depot Sub-Station Switching £80k (note: discussions are ongoing to define requirements and resourcing options for switching power on in advance of the SCADA becoming operational following Section B completion);
- tNC 606: Waverley Bridge to York Place £26K works delayed and disrupted as a result of works carried out by Third parties (Scottish Water drainage works being undertaken by McNicholas);
- tNC 607: Delete 110v sockets on the On Street Tram Stops £-5k;
- tNC 608: Delete 110v sockets on Off Street Tram Stops £-17k;

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- tNC 609: completion of Traffic Management provision in the Forth Ports / Leith Walk area £130k, period September 2011 to June 2012 (previously provision made in the Anticipated Change section);
- tNC 610: Edinburgh Gateway Siemens Long Lead Items £0k (covered within the Gateway costs);
- tNC 611: Excavation of Track Slab to be carried out by McNicholas £0k (included within Anticipated Change);
- tNC 612: Tram stops branding changes. Requirement for etched glass is not included £0k
- tNC 614: Rothesay Place Traffic Management Amendment £10k

### 4.2.3 Anticipated Changes

The movements in the period are provided below:

Anticipated Change to 27 February reporting date		
Infraco Works		
Pricing Assumptions - 6.4.2.4 Cathedral Lane Substation	Cost adjusted to reflect current assessment of building requirements for the Tram project and Henderson Global requirements.	-350
Piled OLE base in lieu of utility diversion	Costs transferred to Changes in progress section.	-195
H1 delay costs associated with utilities	Programme delays accounted for in the QSRA.  Opportunity for programme savings to be adjusted in accordance with agreed reduction to time bank.	-847
Delayed commencement to St Andrew Square (from 7/2/12)	Programme delays accounted in the QSRA. Opportunity for programme savings to be adjusted in accordance with agreed reduction to time bank.	-636
Roseburn Delta - non DDA footpath	Cost adjusted to reflect current assessment of "like for like" temporary footpath to suit existing levels.	-270
Ongoing traffic management at Lindsay Road	Transferred to Changes in Progress.	-90
Further design changes to OLE resulting from utilities (York Place)	Costs transferred to Changes in progress section.	-150
Sub station switching - Provision of competent resource to carry undertake	Costs transferred to Changes in	-25

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sub-station switching and equipment monitoring. Allowed for 20 weeks	progress section.	
Additional Siemens supervision as a result of accelerated programme rev 4C	Costs associated with this item incorporated into rev 4c programme shared saving calculation.	-155
Remove excavation of track box from Infraco's contract	Work transferred to McNicholas	-500
Remove ducting in Cathedral Lane from Infraco's contract	Work transferred to McNicholas	-75
Utility Diversions		
Utility works generally	Transfer of utility works to June 2012 to Approved section	-3,061
Adjusted forecast for utility conflict resolution resulting from emerging scope	Amended forecast as a result of emerging design and current conflict numbers	226
Excavation of track box	Work transferred from Infraco contract	500
Cathedral Lane	Installation of ducts transferred from Infraco contract plus further site investigations work improving scope understanding	250
Drainage	Work transferred from Infraco scope. Drainage more extensive than identified in original contract as a result of drainage redesign.	797
SUCs	Amended forecast as a result of emerging design and current conflict numbers	51
Legacy Works - York Place to Airport	Scope definition improved. Original budget replaced by current forecast	1,600
Legacy Works - Leith Walk	Scope definition improved. Original budget replaced by current forecast	946
		£13,917K

### 4.2.4 Contributions Register

Contributions from 3rd party, stakeholder or other CEC budgets are being developed in order that the amounts can be finalised. The current position is as follows.

Works	£K	Status / Action
Edinburgh Gateway – legacy design and project management	940	TS have been provided with details and agreement of expenditure is agreed each period
New Ingliston – ducts & crossings	540	This element is included in the agreement with NIL for land compensation and construction works. This cost is for construction only, CEC to advise any adjustment to the method of reporting.
Cathedral Lane Sub-station	400	Costs submitted to Henderson Global (HG) amounting to £470K for design and the amended construction scope resulting from HG's requirements. £400K is included in the cost report to provide tolerance should the full amount not be recoverable from RBS.
RBS Tramstop	500	The final design and scope has now been confirmed and the estimate has been submitted by CEC to RBS. The estimate is £618K and £500K is included in the cost report to provide tolerance should the full amount not be recoverable from RBS.
St Andrew Sq Public Realm design	130	Contribution received from separate CEC budget
CEC miscellaneous (George St)	320	Contribution received from separate CEC budget
Haymarket Station redevelopment	35	NR have agreed to undertake removal of staircase and parapet, NR to fund costs of substation plinth amendments and re-routing of Scottish Power cable.
Setts in On-Street Works	1,000	Setts areas confirmed, the specification for the "tram" areas to be confirmed (Sika pave or equivalent). Specification and scope confirmed in principle for non-setted areas. Instruction to be issued. Meetings held with Infraco to review adjustments to
Edinburgh Gateway	4,850	A final construction estimate on the agreed scope is currently being prepared by BBS. Costs will be funded by Transport Scotland.
Total	8,715	

### 4.2.5 Risk and Contingency Analysis

The Quantative Schedule Risk Analysis (QSRA) has been developed using the Master Schedule, the Risk Register and has been submitted to CEC for comment.

The Quantative Cost Risk Analysis (QCRA) has been developed using the risk register and is being amended to reflect CEC's confirmation to limit works within York Place to single lane on the south side which then avoids the need to amend the kerb line and the requirement to strengthen the basements.

In addition the Anticipated Change section of the Cost Report has been updated to reflect the scope of the changes which are likely to arise and to ensure consistency with the QCRA.

The Utilities Diversion Costs and Scottish Water Legacy Costs have been revised on the basis of the emerging scope of the Scottish Water Legacy Works (Haymarket to York Place), the tender scope for the Scottish Water Legacy Works (York Place to Leith) and the resource plans for the utility diversion works.

These cost report updates enable the QCRA to be concluded and to show the impact of required change and risk. The revised QSRA/QCRA report will be issued week commencing on the 30<sup>th</sup> of April 2012.

### 4.2.6 Opportunities and Baseline Project Instructions

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	£K	Status
Remove embargoes and revised TM	5,902	Time bank certificate confirms 12 days slippage in 22 week time saving identified in the Rev 4C programme. The Utilities diversion works required in advance of these works will utilise some of this time. Work is ongoing to mitigate this and optimise the Infraco start and finish dates.
Edinburgh Gateway		Instructed, covered in contribution section.
Setts (separate CEC budget)	1,000	Part de-scope and setts funded by separate CEC budget. Initial setts estimate under discussion with BBS and specification solution required for nonsetted areas
De-scope public realm at St Andrew Sq	700	Instructed
Contributions 3rd Party Agreements	2,870	Note: this is the amount for some contributions in the Cost Engineering report. This amount is not carried forward, refer Contribution Register 1.2.4
De-scope works at Forth Ports	2,440	Instructed
Omit Airport Tram Kiosk and Canopy	150	Instructed, Tramstop equipment t.b.c.
Temporary tram stop at York Place	150	Designs in progress
Redeployment of Trams	CEC	Included in CEC budget code
Cancel track York Place to Newhaven	1,100	Instructed
Omit Siemens works at Tower Place	100	Instructed
Turner & Townsend / CEC resources		Ongoing
Shared recovery vehicle		Not taken forward
Road re-construction depth	700	Principles instructed, saving subject to site conditions
Design freeze north of York Place	t.b.c	Infraco design costs expended
Reduced requirement for storage		Included in CEC budget code
Lay off TM at Forth Ports/Leith Walk	t.b.c	TM not included in Infraco budget provision
Roseburn Viaduct Cladding	300	Instructed
De-scope crew relief facilities (Haymarket)	70	Instructed
Opportunities secured	8,730	
Opportunities to secure	6,750	

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## 4.2.7 On Street - Schedule 45 Pricing Assumption Variations and Commercial Issues

Previous Progress Reports, refer Nr 4 27th January 2012 section 4.2.7, have described issues that have arisen regarding interpretation of Infraco's proposal prior to mediation, "the Phoenix Proposal", the Heads of Terms following the mediation and the scope of work deemed to be included in the Settlement Agreement. It has been agreed that each issue will be examined individually to determine what technical solution is in the best interests of the project and then cost liability, contractor or client.

The On-Street Works Estimate (to period end 31 March 2012) and Commercial issues are included 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.

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.

РМС	Description	(£K)
	On - Street	
15	Utility conflicts – investigation	20
25, 72 & 87	OLE foundations resulting from discovery of utilities	699
28	Temporary accommodation for utilities contractor	2
29	Road re-construction protocol (opportunity to reduce depth)	0
30	Additional CBR/Plate testing – ground strength	0
32	Utilities affecting site clearance - disconnect power to bus trackers	-15
35,79	Utilities contractor affecting Infraco progress	34
36	BT Fibre Optic affecting progress	85
37	Slit trench to validate utilities	9
38	Move 3 OLE foundations (St Johns Church)	12
40	Scottish Water diversion Princes St	251
43	Christmas embargo – temporary infill Princes St	218
44	BT diversion – Princes St (included PMC 040)	Inc
52	Install Traffic Management early Shandwick and St Andrew sq	163

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68	Utilities affecting track drainage	13
69	Geotextile liner to Clifton Terrace void	
	Total On-Street Works Estimate	1,494
	Off - Street	
t.b.c	Payment for Utility diversions Off Street outwith BBS's scope	340
61	Temporary footpath and drainage - Roseburn Viaduct	30
t.b.c.	Low voltage supplies to Airport Tramstop cabinet	30
	General	
	Rev3A to Rev 4 programme – evidence of delay costs (BB only, Siemens t.b.c)	600
	TOTAL	2,494

The issues are discussed at the valuation meetings to progress matters.

### 4.3 Utilities

### 4.3.1 Budget

The approved budget is now £7,773K which covers the following:

- the original budget provision of £2,912K which included £1,812K for utilities diversions Haymarket to York Place and £1,100K for correcting defects in the MUDFA works, York Place to Newhaven;
- drawdown for track form, OLE and drainage conflict resolution in St Andrew Sq and Shandwick Place to the 30<sup>th</sup> of June;
- track box and track duct excavation transferred from Infraco to the utilities diversion contract;
- drainage works transferred from Infraco to the utilities diversion contract;
- £500k for the emerging scope of the correcting defects to Scottish Water assets, Haymarket
  to York Place resulting from the MUDFA contract. (Note: the scope and estimate is under
  development and requires validation and agreement with Scottish Water).

### 4.3.2 Contract

The contractor has offered a 2% saving from the 11.48% management fee on the basis that as the contract is NEC Option E, cost reimbursable, the costs are audited and concluded on a quarterly basis. A condition of this proposal is that the client takes the risk of the £10K excess should any claims arise from Public Liability Claims. A final proposal is being concluded for approval with CEC.

In addition savings of 5% to 10% in labour, plant and material costs have been secured for the cost reimbursable elements.

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# 4.3.3 Approved Changes

It has been agreed that owing to scope refinement and development that budget commitments will be made on a quarterly basis through approval of change requests for the defined scope of work on a quarterly basis. The following change requests have been approved:

- UCO Nr 1 dated period 1<sup>st</sup> January to 31<sup>st</sup> March 2012
- UCO Nr 2 dated period 1<sup>st</sup> April to 30<sup>th</sup> June 2012

In addition the following change requests have been approved in principle by CEC:

- Drainage works to expedite programme and minimise impact to Infraco;
- Track box excavation;
- Track duct excavation;
- Cathedral Lane track power duct excavation;

Change request papers have been compiled and CEC's sign off will be requested in accordance with the change process.

# 4.3.4 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.

## 4.3.5 Anticipated Change

The cost estimate was originally developed on the basis of a cost per conflict type. Given a greater understanding of the nature of the diversions required a programme with resources to suit the scope and programme sequence. This resource plan has been used to form the basis of the estimate. This estimate is under continual review, comparing actual progress against planned and actual resources against planned. The sequence of work is as follows.

Priority	Original strategy	Revised strategy
Priority 1: works in advance of Infraco	Overhead Line Bases Road Level Conflicts Tram Ducting Chambers Tram Ducting Track Construction	Overhead Line Bases Road Level Conflicts Tram Ducting Chambers Tram Ducting Track Construction Drainage – some new manholes and removal of some utilities Drainage gulley's Track box excavation Tram duct excavation Duct excavation Cathedral Lane Some kerb realignment
Priority 2: works in parallel with Infraco through call off or isolated work areas	Traffic Signal Pole Street Lighting Column Road Sign Base Kerb Re-alignment Drainage Drainage Gulley	Traffic Signal Pole Street Lighting Column Road Sign Base Remaining kerb re-alignment

The key issues being addressed in the estimate include:

- 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.
- The unit cost per conflict included in the original cost estimate may not account for inefficiencies resulting in the accelerated programmes for Shandwick and St Andrew Sq.
- Scottish Water has submitted a proposal for management and supervision costs for On-Street, Off-Street and Legacy Works for the project until 2014. These costs are being challenged; however they are 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. These potential additional costs have not crystallised and are not included in the cost report and will be reviewed at a meeting with CEC to be held on the 9<sup>th</sup> of May 2012. Following this review, additional costs will either be included in the Anticipated Change section of the Cost Report or provision made in the QCRA.

# 4.3.6 Legacy "snags" / defect correction Scottish Water assets Haymarket to York

The scope of work is being developed through evaluation of the "snagging" lists and engagement with Scottish Water.

The current estimated cost is £1,254K however the scope and costs are being developed to determine the most cost effective solution.

# 4.3.7 Legacy "snags" / defect correction Scottish Water assets York Place to Newhaven

These works are subject to separate procurement and programme arrangements. Similarly the scope of work is being developed through evaluation of the "snagging" lists and engagement with Scottish Water.

The current estimated cost is £2,700K however the scope and costs are being developed to determine the most cost effective solution.

# 4.3.8 Utilities Off - Street

To date a total of £340K 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.

## 4.3.9 Legacy works constructed under MUDFA

Following the handover of the tie cost forecasts for utilities works and the respective utility company costs (supervision costs and cost contribution for cost share, betterment, etc), a commercial position paper was submitted to Scottish Water.

Scottish Water has now submitted revised costs for supervision costs and calculations in relation to cost share. These costs are being reviewed and a meeting is proposed for the 9<sup>th</sup> of May 2012 to review findings with CEC.

Further discussions or meetings have also been held with Scottish Power, the telecoms companies and also Scottish Gas Networks to progress resolution of cost share and betterment.

## 4.4 Tram Vehicles

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

There are no changes to the forecast during the period.

# 4.5 Payments and Cash flow

A summary of the certified amounts are provided below.

	Certified £M	Planned £M	Comment
Infraco	£277.4	£278.2	Planned – based upon Rev 3A programme
Utilities	£4.6	£4.5	McNicholas only plus SUC costs
Trams	£56.8	£56.1	Payments in accordance with milestone schedule.

# 5 On Street - Enabling Works & Utility Legacy Works

## 5.1 General

It was reported previously that as a consequence of manhole connections being rejected by Scottish Water the tram drainage system has been redesigned to accommodate the requirements of Scottish Water. The redesign has progressed well and in order to facilitate Infraco, a decision was taken during the period to de-scope elements of the drainage works from Infraco and to instruct McNicholas to carry out the work to reduce the impact of delay on the overall programme. The primary reason for this relates to the fact that McNicholas are required to clear additional conflicts arising as a consequence of the drainage redesign, once the drain runs are cleared and proved it is appropriate that McNicholas lay the pipes and construct chambers whilst they have possession of the site.

In reaching a decision to instruct McNicholas to carry out the drainage works a decision was also taken to instruct McNicholas excavate the "track box" to provide Infraco with the opportunity to commence track slab works as early as possible once sites are handed back. This has proved successful.

The commercial impacts of the approach to drainage and track box have been discussed with Infraco and it has been agreed in principle how these matters will be dealt with. A meeting was held with Infraco on the 25<sup>th</sup> of April and it has been agreed that going forward this will be held weekly to ensure all matters are captured and dealt with in a timely manner.

There have continued to be instances during the reporting period where Turner & Townsend has had to take remote areas of sites to deal with residual utilities issues that were either not completed prior to handover or which were discovered after the sites were handed back to Infraco. These instances have, however, reduced.

# 5.2 York Place Planning

Detailed planning of works in York Place commenced in the period and a number of opportunities have been identified. These include carrying out some works ahead of the October date for closing York Place including Scottish Water manholes, ducting to the Cathedral Lane sub-station and demolition of the Cathedral Lane sub-station. Some of these works are dependent upon traffic constraints at Princes Street and the Mound being lifted although the team is seeking to maximise any opportunities and is exploring ways of carrying out works with some traffic constraints still in place. Planning of relocation of the bus depot has commenced and Infraco has been instructed to carry out a design relocating the depot to St Andrew Square. In parallel, CEC are progressing discussions with Infraco to identify potential Infraco programme opportunities. CEC are seeking internal notification prior to advising Turner & Townsend. Following advice Turner & Townsend will update the overall Project Master Schedule.

# 5.3 Legacy Works

There remain some key water issues that have the potential to cause significant difficulty for the project. These include apparatus falling within the tram Dynamic Kinematic Envelope and the tram DKE+2m that cannot be diverted and apparatus without the necessary separation distance from other utilities as a consequence of congested areas. Good progress is being made with Scottish Water on how to best deal with these issues although, as reported last month, this has been delayed somewhat as resources have been re-directed in the short term to deal with the drainage re-design.

Regarding the legacy works north of York Place the Invitation to Tender was issued on 30 April in line with the agreed programme. The tender is progressing on the basis of an amended Option C under the NEC form of contract. This has been agreed with CEC. The target date for commencement of the works is early July with completion in October, tenderers will be asked to bid on this basis.

Work has commenced at Tower Place Bridge and Lindsay Road with McNicholas retained to complete the reinforced concrete works at Tower Place Bridge. The remainder of the works will be carried out by CECs term contractor Tarmac and are expected to be completed by the end of June.

## 5.4 McNicholas Safety

During week commencing the 23<sup>rd</sup> of April 2012 and following a meeting on site between Turner & Townsend and McNicholas a number of safety issues were identified and these are discussed in more detail in Section 2 of the report. These safety issues had an impact on the drainage works programme although these delays were minor delaying the works by no more than a week in Haymarket and less in other areas.

# 5.5 Look Ahead

Focus will be on completing the drainage works and handing back all sites to Infraco. Planning at York Place needs to conclude with some works commencing at Cathedral Lane. Turner & Townsend will also continue to react to utility discoveries by Infraco and will work with Infraco in planning any "type 2" conflict works not diverted prior to sites being handed back, these include conflicts in footpaths under sign and signal bases that are best dealt with as Infraco carries out its works.

# 6 On Street - Main Works

## 6.1 Progress in Period.

OLE piling works have been completed and Infraco has commenced track slab construction in areas not affected by the drainage redesign.

Works have been stalled in Haymarket 1 due to the re-design and construction of the tram drainage. Works in Princes Street continue to progress well and it is likely all civil engineering works will be completed early ahead of the Rev 4 programme July completion date. The Electrical & Mechanical Works, including the overhead wires, are then due to commence in early November 2012. St Andrew Street north to Waverley junction was handed back to Infraco at the end of April and sites at Haymarket 2-5 and Shandwick Place are currently due to be handed back to Infraco in mid May.

Third party approvals and consents for the Princes Street OLE re-design and York Place single lane running were progressed during the period and permissions were granted by CEC. The decision in relation to York Place is important and allows the project to finalise detailed planning through the area. The pre-planning consultation period was launched by CEC during the period in relation to Dublin Street Steps, this is due to conclude on the 10<sup>th</sup> of May 2012 which will allow the formal planning application to be made. The current target date for the planning committee is the 20<sup>th</sup> of June 2102.

# 6.2 Key Issues

## 6.2.1 Scottish Water Manhole Connections

Good progress has been made during the period in redesigning the tram drainage and resolving the manhole connection issues with Scottish Water. The flow modelling work which posed a risk to early resolution was agreed in good time and a significant amount of the drainage is not only redesigned but has been installed, tested and handed back to Infraco. (See above 6.1).

In parallel with the re-design and drainage works Turner & Townsend prepared a briefing note setting out the history of the manhole connections issue; and a commentary on the possible apportionment of responsibility. The matter was referred to the Independent Certifier during the period and a decision is expected imminently. The overall impact is currently being quantified and will be reported in the next full period report.

# 6.3 Look Ahead

## 6.3.1 Haymarket 1

It is anticipated the Haymarket 1 area will be handed back to Infraco on the 18<sup>th</sup> of May 2012. The drainage has delayed works in this area but it is not anticipated that the overall sectional completion of these works will be delayed.

# 6.3.2 Haymarket 2-5

Turner & Townsend took possession of this site on the 28<sup>th</sup> of March 2012. It had been agreed with Infraco that the utility conflict works through the area would take in the region of 10 weeks. Despite increasing the scope of works to include the drainage works and track box excavation the site is due to be handed back early in mid May ahead of programme.



- Haymarket

# 6.3.3 Shandwick Place

It is anticipated that Shandwick Place will be handed back to Infraco on the 14<sup>th</sup> of May 2012. The drainage has delayed works in this area but it is not anticipated that the overall completion of these works will be delayed.



- Shandwick Place

# 6.3.4 Princes Street

Track remedial works by Infraco will continue in Princes Street.



- Princes Street

# 6.3.5 St Andrew Square including Waverley Junction

In order to complete drainage works in the area Turner & Townsend took back a large proportion of the site through St Andrew Street. This was handed back to Infraco on the 30<sup>th</sup> of April 2012 with some areas handed back earlier to allow Infraco works on the outbound track slab to commence. As reported previously this area is on the tram project critical path and the closure of York Place is dependent on St Andrew Street and the east end of Princes Street being completed. Early indications suggest that the delays through this area as a consequence of drainage can be mitigated to a large extent although Infraco is reporting a two week delay to completion and anticipates commencing in York Place at the beginning of November. Turner & Townsend will be working with Infraco and CEC over the coming weeks to explore ways of improving on this date.



- St Andrew Square

# 6.3.6 York Place

Planning is well underway and the target is to commence some ducting work at Cathedral Lane in May.

# 7 Off Street Works

## 7.1 Progress in Period

# 7.1.1 Airport

The retaining wall construction has commenced along the Gogar Burn following the line of the secant wall. The secant piling has been affected by operative absence however the parallel working of these two activities should minimise any further delay to the programme.

Eastfield Avenue crossing works have been completed, the airport have highlighted that issues may exist with the gradients between the two tram lines. The works on site shall be checked against the design tabled and agreed to the Airport the design process shall ensure that the road conforms to the relevant design standards for a 30mph road. A stage 3 road safety audit shall also be conducted when the junction construction is finished in its entirety; this is programmed for the last quarter in 2012.

Daily coordination and weekly meetings are being held with the airport in line with the agreed protocol. The weekly meetings are recorded by the use of an Issues Log.

The remaining scope following deletion of the kiosk and canopy has been defined be CEC. Marked up drawings and an instruction shall be submitted to Infraco to allow the continuation of these works.

# 7.1.2 Edinburgh Gateway

Infraco have produced a draft design for the slope option; this consists of a gabion basket solution in place of the permanent retaining structure that had been proposed. This solution negates the need for temporary works in relation to the 33kV electrical cable. A programme for the works is due from Infraco on the 8<sup>th</sup> of May 2012.

CEC are responsible for achieving the approvals related to the design and this has been discussed with CEC and Turner & Townsend. Any changes to planning shall be addressed through a letter advising the planning department of the temporary situation. CEC have an action to speak to the Building department to discuss any affect that leaving the project in a temporary state would have on the building warrant.

Infraco have agreed that they shall submit the design for CEC technical approval. The Scottish Water temporary build-over agreement is being progressed by CEC however this needs to be enabled by the agreement from Transport Scotland to Scottish Water via Network Rail to a permanent diversion being undertaken. A meeting was held with Scottish Power and Turner & Townsend as the works are adjacent to their 33kV cable and they have agreed that no formal approval is required however the project should keep them informed of the design.

A meeting shall be arranged with the Network Rail project team to define scope. A further meeting shall then be required to define the boundary of their site and the timeline by which Network Rail and Scottish Water can access the area.

CEC have requested that equipment and materials are procured to allow the completion of the Gateway stop to tie in with the other stops on the route. Turner & Townsend have produced a list of materials to assist CEC and Transport Scotland to decide the items that are to be purchased in advance.

## FINAL

A letter has been received from Infraco stating that due to the delay to Edinburgh Gateway a temporary radio mast would be required for Section B completion. Through discussions with Siemens the aerial that currently exists within the depot could be used by increasing the wattage to it. Siemens require to undertake tests to this aerial to ensure that this would provide the necessary coverage. Siemens stated that these tests could be undertaken prior to the need for instruction for the temporary mast.

## 7.1.3 Scottish Gas Network Diversion

The works to divert the gas pipeline at Ingliston are progressing well, with the specialist subcontractor due to arrive on the 5<sup>th</sup> of May 2012 to tie the diversion into the live pipeline. Works are being undertaken to meet the original completion date of the 18<sup>th</sup> of May 2012.

# 7.1.4 Other items of progress:

- Scottish Power completed the High Voltage connection to the Ingliston Park and Ride substation.
- Ingliston substation fit out completed.
- Soil reinforcement is being installed at the Gogar Landfill; progress is slower than anticipated however; growing familiarity with the method of work should see an increase in the rate of work.



- Soil Reinforcement - Gogar Landfill Site

- The A8 was reopened to two lanes of traffic in both directions on the 25<sup>th</sup> of April 2012 following the successful excavation and formation of the underpass.
- Progression of the Gyle Broadway crossing.
- Overhead Line Mast foundations have commenced along Edinburgh Park Corridor.
- Baird Drive soil reinforced wall continuing.

# Progress Report No. 7 24th March - 28th April 2012

## FINAL



- Baird Drive - reinforced earth embankment



- West Abutment S504

- Interface issues between the sewer and piling location at Carricknowe has been agreed with Scottish Water and the sewer diversion now underway. This allows track laying to progress.
- Crew Relief wall construction and Scottish Power cable diversion costs are now agreed with Network Rail, these works have been instructed to Infraco for construction shall be undertaken by Infraco.
- Russell Road earth retaining structures are being installed around the junction at the Roseburn Corridor.
- The laying of track from Haymarket Yards to Balbirnie continues.

# 7.2 Key Issues

## 7.2.1 Railway Corridor

Sheet piling works commenced along the Murrayfield corridor adjacent to Network Rail infrastructure. This is to enable access for the ground improvement methodology. As the sheet piling operations have advanced, movement of a Network Rail overhead line mast (shunt line and Fife lines) were recorded by the monitoring team. Works ceased adjacent to the area where movement has occurred while an alternative methodology for the area was established. An alternative system of work utilising a hydraulic ram which pushes the piles into the ground has been proposed and accepted by Network Rail. This reduces the amount of vibration induced into the embankment. Works may re-commence following the completion of a survey of the overhead line height and stagger by Infraco.

# Progress Report No. 7 24th March - 28th April 2012

## FINAL

Movement has also occurred within the ScotRail depot adjacent to the construction of wall structure 4 (W4). ScotRail has reported signs of movement between concrete slabs within the depot on the crest of where sheet piling and soil nailing operations are taking place. Further monitoring was installed in the area and further movement was recorded. Operations were stopped and the methodology reviewed and similarly to the Murrayfield works a hydraulic ram method proposed.

Both sites shall be carefully monitored during the start of the alternative methods of work.

The ScotRail interface remains an area of sensitivity with construction works taking place on all sides of their Depot. The recent movements that have occurred within the depot have caused ScotRail concern. Turner & Townsend have daily communications with the ScotRail staff to ensure they are aware of the measures put in place to mitigate against any further movement.

# 7.2.2 Edinburgh Gateway

A boundary and timeline needs to be established with Infraco to allow access for the purposes of the permanent sewer diversion. Scottish Water may use the non instruction of the permanent diversion as a reason not to issue a temporary build over for the tram alignment.

## 7.3 Look Ahead

- Secant and retaining wall construction continuing along the Gogar Burn
- Completion of the SGN/NIL diversion
- Continuation of Gogar Landfill earthwork reinforcement
- Continuation of Gyle Broadway crossing and Edinburgh Park Corridor
- Bankhead Drive earthworks and drainage continuing
- Water of Leith centre pier construction continuing with west abutment excavation
- Ground Improvements being undertaken on Murrayfield Corridor S21B and S21C
- Track continuing to be laid at Balbirnie and Carrick Knowe



- Carrick Knowe to Balgreen Bridge

# Progress Report No. 7 24<sup>th</sup> March – 28<sup>th</sup> April 2012 FINAL



- Murrayfield Tram Stop Light weight Aggregate Fill

- Continuation of construction for the Roseburn Structures and Murrayfield Tram Stop
- Continuation of the Russell Road Retaining wall (W4)
- Equipment to Haymarket substation being installed early May
- Continuation of the cladding works on Haymarket Viaduct

# 8 Trams

## 8.1 Progress in Period

Twelve trams have now been delivered, with three having been vested with CEC. Nine trams have been issued with Interim Tram Routine Test Certificates, having successfully completed the required level of testing on the Mini Test Track.

# 8.2 Key Issues

The process for the valuation of Milestone Payment requirements has been agreed with CAF; however there are still some difficulties with the collection of evidence to support this valuation. Evidence requirements will now be agreed monthly in advance, such that no further misunderstanding of requirements occurs.

Two technical concerns were identified during the period;

- The incorrect placement of pedals in the cabs of all trams.
- The detachment of a roof panel on tram 252.

Action has been taken to address the immediate risks, with both issues currently being investigated further by CAF.

An initial proposal to modify the Tram Wash Plant to allow all areas of tram to be washed has been accepted by all stakeholders and is due to be closed in May.

# 8.3 Look Ahead

## Tram Delivery, Test & Commissioning:

A workshop has been arranged with all parties; Lothian Bus, CAF and Turner & Townsend to develop an Engineering Change Control process. This is to allow technical issues identified during the initial operation of trams to be recorded and managed to completion.

There is one tram due to be delivered to Gogar Depot in the next period (tram 257 – due the 4<sup>th</sup> of May 2012), with three trams scheduled to complete Routine Testing on the Mini Test Track.







# 9 Assurance

## 9.1 Progress in Period

Further discussions have been held with BBS to develop the System Testing & Commissioning for section B Completion. A draft Testing and Commissioning Plan is due to be issued by Infraco during week commencing 30<sup>th</sup> of April 2012.

Good progress has been made with the Employer's Requirements Management Process. A number of workshops have now taken place. Verification and Validation method has now been agreed for 83% of the requirements.

The technical support services contractor has been on site to inspect the installation of the first electrical substations. The electrical functionality exceeded the employer requirements; however some workmanship issues were raised to Infraco for rectification.

During this period Technical support services (TSS) have completed their review on the Section A submission. Two key concerns were noted; the level of detail provided within each document and the section A documents containing system wide information. These comments have now been submitted to BBS for response.

The Overhead Line Equipment building fixings have now been agreed with the property owners the Princes Street areas, this is currently the last area requiring such approval.

## 9.2 Consents

The Overhead Line Equipment building fixings have now been agreed with the building owners; however formal fixing contracts are now being signed for the last 3 properties.

Planning approval was granted on the 18th of April 2012 for the York Place Tram Stop.

Table below is a summary of the current outstanding consents required for the project.

Combined Consents requ	uired	Ţ		
	Total Required	Total On Hold	Total Outstansding	Total Closed
Third party	18	4	12	2
Technical Informatives	6	1	. 1	4
Planning Consents	38	15	13	10
Other Approvals	12	0	10	2
Legal Agreements	15	0	10	5

Key Consents due in the next period, with full list in the appendix.

- 1. Network Rail Asset Protection Agreement.
- 2. Earthing and Bonding technical informative.
- 3. Planning consent for Hearts memorial Relocation.
- 4. Road safety audit approval for Section 1C.

# 9.3 Quality

Infraco have undertaken further survey works on the levels for the rail road interface on Princes Street. They have indicated that there are some sections that are out of tolerance which may require an NCR to be raised.

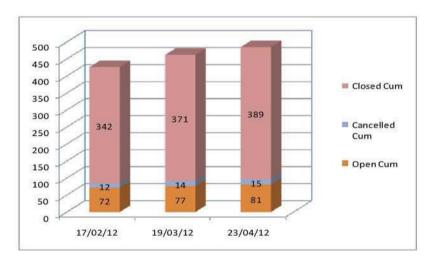
BBS have undertaken a survey of the rails and concrete works in Princes Street to quantify the workmanship issues; the report is now overdue and is anticipated for week commencing 30/04/12.

There are 36 Depot snagging items still to be resolved. 12 of which are to be monitored until the end of June 2012. The remaining items are being resolved on a weekly basis.

The total No of NCRs raised to date is 485.

23 NCR's were raised during the period and 18 NCR's were closed out during the period.

13 no open NCR's are greater than 6 months old. Details may be found within Section 6 of Deliver a Safe Tram (See Appendix 2).





Appendix 1 – Dashboards

Approved by	Julian Weatherley & Shirley-Anne Collin Julian Weatherley	SECTION  CONFIDENTIAL – LEGALLY PRIVILEGED AND FOI(S)A EXEMPT  Issue By:  Turner & Townsend Project Management Limited,		Management Limited, Address 88G	City of Edinburgh Council Waverley Court, Edinburgh, EH8 88G		
Approved by	Julian Weatheriey	issue by:		9 Lochside Avenue, Edinb	Address		
Status	FINAL	Issue Date	09-05-2012	REPORTING PERIOD	24 <sup>th</sup> March to 28 <sup>th</sup> April 2012	Project:	Edinburgh Tram Network

CEC Actions / Decisions

- There were 22 incidents recorded during the period. Five of which were identified as Serious / Significant.
- Remedial actions have been identified and are being implemented following concerns raised in relation to McNicholas' health &safety practices. A "Think Before You Act" health & safety review is to be held with the project's contractors on 10th of May.
- Discussions continue between Infraco and SEPA in relation to soil removed from Baird Drive.
- Discussions continue between infractional SEPA in relation to soil remove from Saint Derve.

  Twelve days of the 22 week cost engineering saving have been confirmed as being eroded. Further erosion if forecast for the coming period.

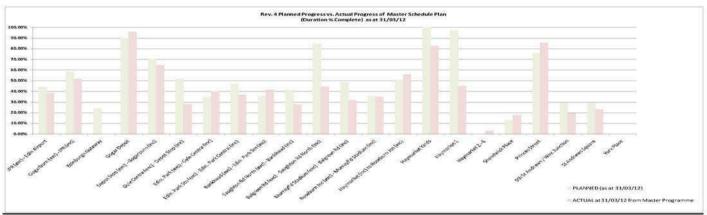
  The On Street drainage has now been re-designed to meet Scottish Water's approval requirements and McNicolas have been instructed to construct drainage and formation works instead of Infraco in order to optimise the overall project programme.
- Significant progress has been made with the detailed planning of the York Place works. Enabling works to Cathedral Lane substation and York Place utilities diversions will commence during the coming period.

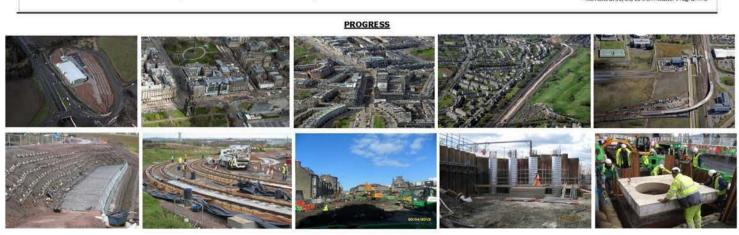
  Good progress is being made in relation to the identification and scoping of Scottish Water legacy works although the scope of works is significantly greater than previously envisaged. The tender for the Leith Walk legacy works has been produced and submitted to CEC for comment prior to tender issue. Close out works have now commenced at Tower Place Bridge and Lindsey Road.
- Infraco have commenced track slab works within Shandwick Place and St Andrew Street. Princes Street remedial works are progressing ahead of programme.
- Retaining wall works adjacent to the Gogar Burn at the airport remain marginally behind programme.
- The works to the Eastfield Avenue Crossing and the A8 Roundabout have been completed during this period. The SGN works to the gas main at New Ingliston remain on programme for completion by the 18th of May 2012.
- The progression of works through the Off Street rail corridor have been impacted by localised ground movements during sheet pilling operations.
- Twelve trams have now been delivered to the depot.
- Submissions have been made to the Independent Certifier (IC) regarding Infraco's entitlement to a Pricing Assumption Variation (PAV) for the revised drainage design. The IC has advised that in his opinion, a PAV has 13.
- A Quantative Schedule Risk and Cost Risk Analysis review will be held on the 3rd of May and a Cost Report Review will be held on the 9th of May 2012. The purpose of these meetings is to confirm alignment between the Master Schedule, the cost savings from the 22 week programme saving and reporting of risk, opportunity and contingency.

- Wayleave Haymarket Progress the wayleave with Scottish Power and Network Rail.
- 2. Haymarket. Progress temporary build-over at Haymarket.
- Bus Tracker. Decision to be made on whether Bus Tracker equipment is to be fitted to trams.
- York Place Confirmation of approach to programme at York Place.
- Dublin Street Steps Support in obtaining permissions at Dublin Street Steps.
- **Advance Purchase of Equipment** Definition from Transport Scotland on equipment to be advanced purchased for Edinburgh Gateway and subsequent approval from CEC.
- Asset Protection Agreement Close out of Asset Protection Agreement.



## **Histogram**





Produced by	Julian Weatherley & Shirley-Anne Collin	SECTION	CONI			RIVILEGED A roject Managen	ND FOI(S)A EXEMPT nent Limited,	Employer	City of Edinburgh Council Waverley Court, Edinburgh, EH8 8BG
Approved by Status	Julian Weatherley FINAL	Issue By:	00.0			nue, Edinburgh		Address	
Status	FINAL	issue Date	09-0	KEY MILESTO		G PERIOD 2	4 March to 28 April 2012	Project:	Edinburgh Tram Network
- a									
		A	В	B-A=C					
		Rev 4 Schedule	Forecast/						
Section	Description	Date Date	Actual	Var. (d's)		Crit. Path		Comments	
			Date		Completed		-		
Section Completions		_		1					
ALL	Section A; Depot complete	16-Dec-11	16-Dec-11	0	*	Y	Due to support delayer in Off face	-ttt	
ALL	Section B; Test Track complete	08-Mar-13	20-Mar-13	12		Y	recover delays.	et construction, mea	sures are being put in place by Infraco
ALL	Section C; All construction complete	09-Apr-14	10-Mar-14	-30		Y			
ALL	Section D; open for revenue	08-Jul-14	09-Jun-14	-29		Y			
On Street									
Haymarket	The state of the s							10 No. 11	
On-Street	Haymarket 1 – Utility moves in advance of Infraco Works Complete	28-0xt-11	16-Dec-11	49	*	N	Full hand back was 16 Dec 11		rith only minor utilities works remainin
On-Street	Haymarket 1 Complete	04-Apr-12	14-Aug-12	132		N	Further delay to H1 due to Scotti- to H1 completion does not affect		nd drainage connection issues. N.B. De pletion date.
On-Street	Haymarket Phase 2 Utilities Work Complete	N/A	08-Jun-12	N/A		N	All Haymarket Utilities works to b	be carried out in adv	ance of construction works.
Shandwick Place									
On-Street	Start Shandwick Place Traffic Management	07-Mar-12	14-Jan-12	-53	V	N	Complete		
On-Street	Start Shandwick Place Utilities Moves	N/A	03-Jan-12	N/A	*	N	Complete		
On-Street	Shandwick Place Utility Moves Complete	N/A	15 Feb 12	N/A	×	N	Complete		
St Andrews Square & S	St Andrews St North	V.					The style		
On-Street	St Andrews Sq Traffic Management	14-Feb-12	07-fan-12	-38	×	N	Complete		
On-Street	Start St Andrews Square Utility Moves	N/A	09-Jan-12	N/A	×_	N	Complete		
On-Street	St Andrews Square Utilities Work Complete	N/A	14-Feb-12	N/A	Y	N	Complete		
On-Street	St Andrews Square Civils Complete	15-0xt-12	10-Oct-12	>+5		N	111		
South St Andrews St /		1					les		
On-Street	Start Utilities Works South St Andrew St / Waverley St Junction	N/A	09-tan-12	N/A	×	Y	Complete		
On-Street	Utilities Works South St Andrew St / Waverley St Junction Complete	N/A	26-Mar/12	N/A	×	Y	Complete		
On-Street	Start Civil Work South St Andrews/Waverley Junction St.	08-Feb-12	26-Mar-12	47	¥	Y	Complete		
On-Street	South St Andrews/Waverley Junction St. Civils Complete	15-Oct-12	16-Oct-12	(1)		Y	On-Street works have been re-se	quenced in line with	Cost Engineering initiatives
York Place									
On-Street	Start York Place Utility Moves	N/A	29-Oct-12	N/A		¥	On-Street works have been re-se at SAS/Waverley are required to		Cost Engineering initiatives. Traffic light fore starting this phase.
Princes Street		4							
On-Street	Princes St Highway Re-instatement and non-M&E works Complete	05-Jul-12	06-Jun-12	-29		N	Discussions ongoing with BBS ind date.	licate that works in P	St area may be completed ahead of Re
Off Street							.ui		
Off-Street	Murrayfield ground improvements Complete	25-Mar-12	13-Jun-12	80		N	Sheet Piling Commenced 16th Ap mast, Full impact still to be deter		eet Piling causing movement to NR OH
Off-Street	Haymarket Yards Complete	27-Feb-12	12-Jun-12	106		N	Delay accom'd within float, no ef	fect on forecast com	pletion of AIR-HAY route
Off-Street	South Gyle Beam Installation Complete	11-Jul-12	28-Nov-12	140		N	Ground Improvement Works bein	ng finalised by SDS	
Off-Street	Water of Leith Bridge Complete	31-Aug-12	21-Nov-12	82		¥			nethodology in lieu of design for ground tion programme, in conjunction with B
on succe	Trace of territorings complete	STAUB II	*******	DE.			may result in improvement to to		oon programme, in conjunction with o
Off-Street	W4, 19-29; Russell Rd. Retain Complete	29-Oct-12	04-Dec-12	36		,N	Sheet Piling Commenced however Structures. Full impact still to be		et Piling causing movement to Scotrail
DH CL	1111200100213-0440	Characteristics	gg/gg/years	12.0	-	722			
Off-Street	S21A Roseburn St. Complete	19-Sep-12	12-Oct-12	23		N	Delay accom'd within float, no ef		1 TO PRODUCE OF THE PROPERTY O
Off-Street Depot & Test facilities	S22A Balgreen Road Bridge Complete	18-Sep-12	08-Jan-13	112		N	Delay accom'd within float, no ef	rect on forecast com	piecion of Aik-HAY foute
Depot & Test facilities  Depot & Test	TOTAL CAR AL ARRAY	W4 E		نيز	31	<u> </u>	Complete		
Facilities Depot & Test	Mini Test Track available	02-Dec-11	12-Dec-11	10	# ·	N	Complete		
Facilities	Soil nails, test, @ Gogar Landfill Complete	16-Jan-12	08-Feh-12-	23	*	N	Complete	0	
Depot & Test Facilities	Reinf'd Earth Embank't Gogar Landfill Complete	16-Mar-12	25-May-12	70		N	availablity. However, further slip	page noted and bein	**************************************
Depot & Test Facilities	Eastfield Avenue Complete	21-Feb-12	22-May-12	91		N	Delay accom'd within float, no ef to Airport by end of April.	fect on forecast AIR	Depot test track available Road return
Depot & Test Facilities	Ingliston Gas Mains Diversion Construction Complete	N/A	18-May-12	N/A		N	Delayed Start due to wayleave ag recover to original programme.	greement. SGN to su	bmit programme with aspirations to
Depot & Test Facilities	A8 Underpass Completion & Traffic Back	13-Jun-12	25-Apr-12	-49	8	N	Anticipated completion was 31-M		ay in confirmation of streetlighting ncrete pouring and footpath works. Sti
Depot & Test Facilities	Gogar Burn Tram Stop Complete	17-Oct-12	14-Sep-12	-33		N	Ahead of Schedule		
Depot & Test	IPR-GBN Interim Test Track available		18-Sep-12	N/A		N	The interim test track, IPR-GBN, i	is a proposed milestr	ine
Facilities Depot & Test		07.0	MICHAEL STATE			W			
Facilities	AIR-Depot Test Track available	07-Dec-12	20-Dec-12	13		Y	Delay due to late start of the reta	anning wall at the Ain	ort, Infraco feel this is recoverable.

### SUMMARY

- Health and Safety The team have remained focused on the incidents that have occurred and McNicholas continue to develop their site management team, their Managing Director have given assurances that he will oversee the ongoing improvements on site.
- The "Think before you Act" meeting has been arranged for the 10th of May 2012.
- Environmental- Continuing discussions are ongoing with Scottish Environmental Protection Agency regarding the classification of material from Baird Drive.
- Assurance Technical Support Services have been on site to inspect the electrical substation, good progress reported.
- The verification of the Employers requirements is progressing well, with regular workshops being attended by all parties.



Total No of NCRs raised is 485.

23 NCRs were raised during the period and 18 NCRs were closed out during the period. 13 no open NCRs are greater than 6 months old

BBS have undertaken a survey of the rails and concrete works in Princes Street to quantify the workmanship issues, the report is now overdue and is anticipated for week commencing 30/04/12.

## ENVIRONMENT

### Environmental

- BBS continue to have discussions with SEPA regarding the classification of soil being excavated. On site meeting to be held on the 27<sup>th</sup> of April 2012 BBS continue to have discussions with SEPA regarding the classification of soil being excavated on site at Baird Drive, There is a follow up meeting planned for the 27th of April to close
- A Joint environmental inspection carried out with BBS and Turner & Townsend with Coffey's on section 5. Issues regarding waste control and drip trays were raised, final report still to be issued
- BBS Environmental Forum held on the 25th of April 2012. Representative from all of BBS's contractors were present. Review of Non Conformances raised by BBS's external auditors, relating to cross contamination of waste, European waste codes, waste duty of care, diesel leaks and oil storage.
- Inspection of monuments currently held in storage by Land Engineering will be arranged for week commencing 7th of May 2012.

- CoCP compliance for period 1 was recorded at 97%.
- 3 issues required action. These comprised:
- Site fencing to be moved
- Poor housekeeping / site tidiness.

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



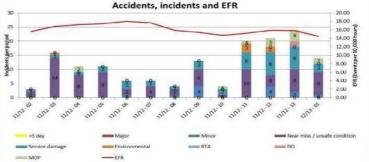


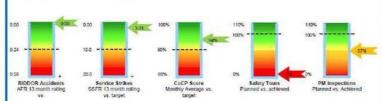
## **HEALTH & SAFETY**

- There were 22 incidents reported during the period since the last dashboard. 5 were classified as serious / significant incidents. A summary is provided below; full details can be obtained on page 6 of the Progress Report.
- The five serious / significant incidents relate to two falls by a member of the public and two lower voltage cable strikes. The other incident involved a procedural Scottish Water.
- Turner and Townsend continue to work with McNicholas to close out the actions related to the 11kV cable strike in South St Andrews Street. Once the improved processes and procedures have been implemented this information will be sent to the Health and Safety Executive (HSE) in response to the comments received on the incident investigation.
- The 'Think before you act' safety focus session has now been agreed for the 10th of May, formal invitations are now to be sent.
- The rolling 14 Period AFR remains at 0.00, better than the benchmark KPI of 0.23 for the project.

Classification	Number of incidents	Major incidents	Serious / significant incidents	Other incidents	RIDDOR Reportable incidents
Member of public	3	0	2	1	0
Service damage.	7.	0	2	5	0
Environmental	0	0	0	0	0
Major	0	0	0	0	0
Injury > 3day	0	0	0	0	0
Injury < 3 day	2	0	0	2	0
Dangerous occurrence	0	0	-0	0	0
Road traffic accident	0	0	0	0	0
Near miss / unsafe condition.	10	0	1	.9.	0
TOTAL	23	0	- 5	17	0

## TREND



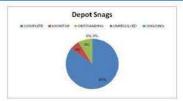


## PROJECT INITIATIVES

### **Deliver the Tram Safely**

- The Turner & Townsend Project Delivery Safety Meeting was held on the 25th of April, a renewed emphasise was place on the joint monitoring being undertaken on the project, to strengthen the project
- Investigation has now commenced into initiatives to support the local community information has been passed to CEC communication team for discussions with the contractors, they have agreed to sponser a

### DEPOT SNAGS



### Key snags to be closed are;

- 1. Castell key sockets modification, BBS to complete remedial work by the 11th of May.
- Water ingress to the wheel lathe due to be closed by the 18th of May
- Sealing of Depot shed door, Tie Notice of Change to be drafted and issued by the 18th of May.
- Work shop tool air supply piping. Tie Notice of Change to be drafted and issued by the 18th of May.
- Depot plf drainage resolution, proposal to be agreed with CAF and Lothian Buses by the 25th of May.

### CONSENTS

Combined Consents requ	uired .	1		
	Total Required	Total On Hold	Total Outstansding	Total Closed
Third party	18	4	12	2
Technical Informatives	6.	1	1	a
Planning Consents	38	15	13	1.0
Other Approvals	12	0	10	2
Legal Agreements	15	n	10	- 5

Key Consents due in the next period, with full list in the appendix.

- Network Rail Asset Protection Agreement
- Earthing and Bonding technical informative
- Planning consent for Hearts memorial Relocation
- Road safety audit approval for Section 1C.

## SOFT ANALYSIS

## SUCCESSES

- Targeted inspection of excavations
- All stakeholders are cooperating well at the
- New assurance system implemented for Tram delivery

## 4. 'Think before you act' session

### Review of supervisor competencies

- Lack of availability of GIS information from Scottish Water
- Introduction of additional staff and working

Increased monitoring of onsite activities.

Project Management resources are will

become part of integral assurance process.

Safety seminars to be arranged for project

No Safety Tours were carried out within the

### THREATS

OPPORTUNITIES

- Statuary bodies co-operation.
- 2 Late issue of documentation by BBS.
- Potential gaps between contracted
- Visibility of BBS design and assurance
- Concerns have been raised that site safety is potentially being compromised by inadequate resources to meet Programme.
- Continuing issues with regard to service strikes and compliance with statutory utility body procedures.

Produced by	Willie Delaney & Martyn Ayres	SECTION	CONFIDENTIA	TRAMS AL – LEGALLY PRIVILEGED AN	Employer	City of Edinburgh Council	
Approved by	Julian Weatherley	Issue By:	Turner & Townsend Project Management Limited, 9 Lochside Avenue, Edinburgh Park				Waverley Court, Edinburgh, EH8 8BG
Status	FINAL	Issue Date	09-05-2012	REPORTING PERIOD	24 <sup>th</sup> March to 28 <sup>th</sup> April 2012	Project:	Edinburgh Tram Network

PROGRESS IN PERIOD PHOTOGRAPHS KEY ISSUES

### PROGRESS IN PERIOD

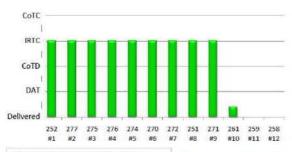
- Tram Inspector now fulfilling all requirements and attending 100% of Routine Testing at Gogar Depot
- 2. Tram commissioning continues to be completed in line with the commissioning plan:
  - Twelve trams now delivered to Gogar Depot.
    - 9 have completed Interim Routine Testing.
    - 3 to be coupled and tested.
    - Next tram (#257) due delivery on 4th May 2012.
- 3. Tram Test and Commissioning workshop held to discuss commissioning procedure.
  - All parties now agreed on test and commissioning requirements.
  - Turner & Townsend procedure issued as a formal document.
  - Procedure now being followed for all tram testing.
- 4. Two additional trams vested with CEC
  - Total of three trams now vested (#252, #276 and #277)
- Information on CAF requirements for Systems Integration Testing provided to BBS awaiting issue of BBS Systems Integration Plan.



The following items will be progressing during the coming period:

- Workshop arranged (1<sup>st</sup> May 2012) with all stakeholders to develop an Engineering Change Control procedure for Trams – may also be used for changes to Gogar Depot.
- 2. Tram Commissioning Plan;
  - Thirteenth tram (#257) due to be delivered on 4th May 2012.
  - Routine Testing scheduled to be completed on three trams in next period.

# **Tram Commissioning Progress**



CoTC - Certificate of Tram Commissioning

IRTC - Interim Routine Test Certificate (MTT)
CoTD - Cerificate of Tram Delivery

DAT - Delivery Acceptance Test





Tram arrival at Gogar Depot



Tram Cab



Tram fleet at Gogar Depot

## **KEY ISSUES**

- Lothian Buses have yet to take full operational responsibility for the Depot. Negotiations are on going with CEC.
- Process required to manage the identification, investigation and rectification of issues raised during tram operation – workshop arranged with all relevant stakeholders (LB, CAF, Turner & Townseq)
- Process for the collection of verification evidence for Milestone Payments has been agreed, but collection of evidence to validate Milestone Payment still difficult – evidence requirements to be agreed monthly in advance, as part of the valuation process.
- 4. Two major technical issues were identified during the period; the incorrect placement of pedals in the cabs of all trams and the detachment of a roof panel on tram 252 action has been taken to address the immediate risks, with both issues currently being investigated further by CAF.

### **OPERATIONAL ISSUES**

 Ticket Vending Machines (TVM's) – Lothian Buses are currently reviewing the contract to complete the procurement. This report is due on the 4th of May 2012.

### **CEC ACTIONS / DECISIONS**

1. Decision to be made on whether Bus Tracker equipment is to be fitted to trams.

## SOFT ANALYSIS

# Role of Tram Inspector (Mott MacDonald) now clear. Tram Inspector now attending all Tram commissioning at Gogar Depot

- Tram commissioning now progressing smoothly in accordance with new procedures
- BBS now clear on Tram System Integration requirements for Section B

## OPPORTUNITIES

 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)

## FAILURES

None identified

## THREATS

- Relationship between BBS (primarily Siemens) and CAF needs to be strengthened, to avoid any affect on integration and coordination of testing.
- Need to convert plan to handover responsibility of depot operations from ETL to Lothian Buses
- Valuation process must be managed to ensure evidence is obtained and invoices processed in line with contract requirements

Produced by	Rob Leech & Shirley Collin	SECTION	CONFIDENT	ON STREET DASHBOARD REPORT  IAL – LEGALLY PRIVILEGED AND FOI(S)A EXEMPT	Employer	City of Edinburgh Council
Approved by	Julian Weatherley	Issue By:	Т	urner & Townsend Project Management Limited, 9 Lochside Avenue, Edinburgh Park	Address	Waverley Court, Edinburgh, EH8 8BG
Status	FINAL	Issue Date	09-05-2012	REPORTING PERIOD 24 <sup>th</sup> March to 28 <sup>th</sup> April 2012	Project:	Edinburgh Tram Network

**PHOTOGRAPHS** 

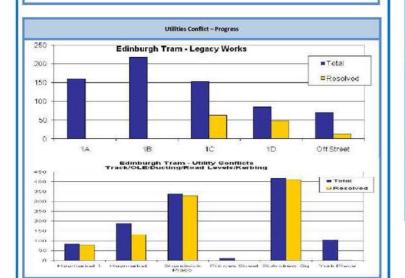
## PERIOD PROGRESS

- 1. Majority of OLE piling works have been completed and Infraco has commenced track slab construction in areas not affected by the drainage redesign.
- 2. St Andrew Street to Waverley junction has been handed back to Infraco allowing main works to resume and works in Princes Street are due to be completed early ahead of July.
- 3. Drainage redesign has progressed well and decision was taken to de-scope elements of the drainage works from Infraco to reduce the impact of delay on the overall programme. Track box construction has also been de-scoped in some areas to benefit programme.
- The commercial impacts of the approach to drainage and track box have been discussed with Infraco and it has been agreed in principle how these matters will be dealt with.
- Detailed planning of works in York Place has commenced and a number of opportunities have been identified. These include carrying out some works ahead of the October date for closing
- 6. The Invitation to Tender for Leith walk legacy works was issued on 30 April on the basis of an amended NEC Option C form of contract.
- 7. Third party approvals and consents for the Princes Street OLE re-design and York Place single lane running were progressed during the period and permissions were granted by CEC.
- 8. Work has commenced at Tower Place Bridge and Lindsay Road with works expected to be completed by the end of June.

### LOOK AHEAD

The following items will be progressing during the coming period:

- 1. Focus will be on completing the drainage works and handing back all sites to Infraco by mid
- 2. Planning at York Place needs to conclude with some works commencing at Cathedral Lane.
- Turner & Townsend will continue to react to utility discoveries by Infraco and will work with Infraco in planning any "type 2" conflict works not diverted prior to sites being handed back.
- Work will continue on dealing with legacy works, including issues of the tender for the legacy works north of York Place.
- 5. Planning approval for Dublin Street Steps will continue to be monitored.
- Support will be provided to CEC in delivering the Forth Ports remedial works.
- 7. Close out of commercial issues arising as a consequence of the drainage and track box re-



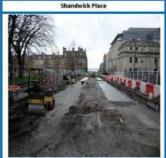


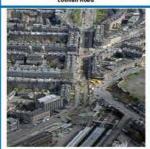


Shandwick Place













**Princes Street** 

### KEY ISSUES

- 1. McNicholas Safety issues.
- 2. Infraco drainage connections and finalisation of outstanding commercial/programme
- 3. Scottish Water relationship generally.
- 4. Legacy works within tram worksites Possible delays, categorisation being finalised.
- 5. Legacy works at North of York Place.

## CEC ACTIONS / DECISIONS

- 1. Support in obtaining permissions at Dublin Street Steps.
- 2. Confirmation of approach to programme at York Place.

### SOFT ANALYSIS

### SUCCESSES

- 1. Working relationships with BBS remains good, particularly on site
- 2. Speedy reaction to drainage issues

## **OPPORTUNITIES**

- 1. Optimize revised traffic phasing
- 2. Close out works at Forth Ports & Lindsay Road
- 3. Look to accelerate some enabling works in York Place ahead of the October traffic management

### FAILURES

- 1. Carriageway vertical alignment in south St Andrew St
- 2. SDS OLE design
- 3. MUDFA design, as builts, contract administration & supervision

### THREATS

- 1. McNicholas safety issues
- 2. Infraco drainage connections although this threat is reducing significantly
- 3. Legacy works at Leith Walk
- 4. Legacy works within tram worksites
- Scottish Water relationship
- Unknown utilities
- 7. Approval of Dublin Street Steps
- 8. Infraco delay to Rev 4 due to utilities
- 9. Infraco non-conformance in Princes

Produced by	Shirley Mushet & Shirley Collin	SECTION	CONFIDENTI	OFF STREET DASHBOARD REF AL – LEGALLY PRIVILEGED AN	Market Control of the	Employer	City of Edinburgh Council
Approved by	Julian Weatherley	Issue By:	Turner & Townsend Project Management Limited, 9 Lochside Avenue, Edinburgh Park				Waverley Court, Edinburgh, EH8 8BG
Status	FINAL	Issue Date	09-05-2012	REPORTING PERIOD	24 <sup>th</sup> March to 28 <sup>th</sup> April 2012	Project:	Edinburgh Tram Network

PROGRESS IN PERIOD

### PROGRESS IN PERIOD

- 1. Retaining and secant wall construction continued at the Airport.
- 2. Eastfield Avenue crossing completed.
- 3. Daily and weekly coordination meetings with the airport continuing.
- 4. Scottish Gas Networks diversion at Ingliston progressing well.
- 5. Scottish Power completed the High Voltage diversion to the Ingliston Park and Ride substation.
- 6. Soil reinforcement of the Gogar landfill continuing.
- 7. Draft design produced for Edinburgh Gateway.
- 8. AS reopened to two lanes of traffic in both directions.
- 9. Progression of the Gyle Broadway crossing.
- 10. OHLE mast foundations commenced along Edinburgh Park Corridor.
- 11. Edinburgh Park station construction continuing.
- 12. Baird Drive soil reinforced wall continuing.
- 13. Roseburn Street structures progressing well.
- 14. W3 wall soil nails complete and bored piling commenced.
- Interface issue between sewer and piling location at Carricknowe agreed with Scottish Water with the sewer diversion underway.

### LOOK AHEAD

The following items will be progressing during the coming period:

- 1. Secant and retaining wall construction continuing along the Gogar Burn.
- 2. Completion of the SGN/NIL diversion.
- 3. Continuation of Gogar Landfill earthwork reinforcement.
- 4. Continuation of Gyle Broadway crossing and Edinburgh Park Corridor.
- 5. Bankhead Drive earthworks and drainage continuing.
- 6. Water of Leith centre pier construction continuing with west abutment excavation.
- 7. Ground Improvements being undertaken on Murrayfield Corridor S21B and S21C.
- 8. Continuation of construction for the Roseburn Structures and Murrayfield Tram Stop.
- 9. Installation of bridge beams across Roseburn Street.
- Continuation of the Russell Road Retaining walls (W3 and W4).
- 11. Equipment to Haymarket substation being installed mid May.
- 12 Continuation of the cladding works on Haymarket Viaduct

# PHOTOS



**Eastfield Avenue Crossing** 



**Edinburgh Park Stop** 



**W3 Piling Operations** 



**Balgreen Abutment** 

### **KEY ISSUES**

- 1. Movement due to piling works at the ScotRail depot and on Network Rail's track assets.
- Airport have raised concern over the gradients between the two trams lines and that this may affect the operation of their road.
- 3. Edinburgh Gateway late design change by SDS; king post wall now being progressed.

## **CEC ACTIONS / DECISIONS**

- 1. Close out the temporary buildover at Haymarket.
- 2. Close out of the wayleave with Scottish Power and Network Rail.
- Definition from Transport Scotland on equipment to be advanced purchased for Edinburgh Gateway and subsequent approval from CEC.
- 4. Close out of Asset Protecti9on Agreement.

## SOFT ANALYSIS

## SUCCESSES

- 1. Signed SGN/NIL wayleave.
- Working with SGN to produce a programme to maintain the completion date for the diversion.
- A8 reopened to two lanes of traffic in both directions.
- Maintaining a good relationship with ScotRail despite damage to their assets.
- There is a good working relationship with Network Rail.
- Off Street BBS and T&T relationship positive.
- Timely installation of HV meters into substations shall save on capacity charge.

### OI I MINE ISIS

## OPPORTUNITIES

- Early diversion of the Edinburgh Gateway sewer.
- OHL masts purchased for the on street section, investigation into whether these can be utilised off street.
- Purchase of the temporary mast maybe negated by using the current aerial within the depot.

## FAILURES

1. Continued utility strikes.

## THREATS

- Movement of Network Rail and ScotRail assets may lead to programme and cost implications.
- Eastfield Avenue gradients may be raised as an issue by the airport.

Produced by	Shirley Collin, Mike Mackenzie & Peter Smith	Function	CONFIDENTIAL - L	COMMERCIAL CONFIDENTIAL - LEGALLY PRIVILEGED AND FOI(S)A EXEMPT			City of Edinburgh Council
Approved by	Gary Easton	Issued By:		Turner & Townsend Project Management Limited 9 Lochside Avenue. Edinburgh Park			Waverley Court, Edinburgh,EH8 8BG
Status	FINAL	Issue date	09-05-2012 <b>Reporting Period</b> 24 Mar to 28 Apr 2012		Project	Edinburgh Tram Network	

VALUE ENGINEERING

Reporting Date:	23-Mar-12	28-Apr-12	Movement
Original Contract Amount	479,660	479,660	0
Add: Approved Changes	72	3,546	-1,032
Add: Changes in Progress	9,602	9,462	6,009
Add: Anticipated Changes	15,902	13,917	675
Less: Funding contributions	-8,699	-8,716	-4,931
Less: Opportunities to secure	-7,310	-6,752	C
TOTAL: Forecast cost	489,227	491,117	721
Original Budget	467,407	467,407	0
Variance	21,820	23,710	721
Original forecast risk allowance	32,747	32,747	o
Less: Variance (from above)	-21,820	-23,710	-1,890
Forecast balance of risk allowance	10,927	9,037	-1,890

CHMMADY

Cost Engineering Instructions	£K
Remove embargoes and revised TM	5,902
Setts (separate CEC budget)	1,000
De-scope public realm at St Andrew Sq	700
Contributions 3rd Party Agreements	2,870
De-scope works at Forth Ports	2,440
Omit Airport Tram Kiosk and Canopy	150
Temporary tram stop at York Place	· · · · · · · · · · · · · · · · · · ·
Redeployment of Trams	CEC
Cancel track York Place to Newhaven	1,100
Omit Siemens works at Tower Place	100
Road re-construction depth	760
Design freeze north of York Place	1,60
Reduced requirement for storage	CEC
Lay off TM at Forth Ports/Leith Walk	3,000
Roseburn Viaduct Cladding	300
De-scope crew relief facilities	70
Opportunities secured	8,730
Opportunities to secure	6,750

- Embargoes and TM subject to actual time saving vs 22 weeks, current position 22.1
  weeks however programme requirement for utilities diversions in York Place under
  review.
- 2. York Place Tramstop design principles established, cost check in progress
- Road reconstruction depth McNicholas undertaking track box and tram ducting excavation. Residual saving from not reconstructing existing road way being established.

## RISK - Significant Movement in Period (Mar/Apr 12):

Risk ID	Risk Description	Old Level	Movement	New Level	Comments
R034	Delayed NR approvals as applicable	RED	Time Impact reduction	THER	Time impact mitigated down so reduction from 4 to 3. NR co-operating within specified time frames and Relationship improved in recent weeks
ED074	Design approvals milestones are not met in line with rev4 programme and construction is delayed as a consequence	RED	1	AMBER	Reduced as project de-scopes
ED112	Discovery of old Tram tracks and equipment	RED	1	AMBER	Time and cost impacts not as high as initially assessed
ED084	Late 3rd party claims for utility/property damages from works	RED	1	AMBER	Reducing as works progress (Not a top Red risk)
R032	Utilities encountered during BBS Construction Works	AMBER	Merged	CLOSED	Merged with ED072
ED063	Scotrail stop works at depot	AMBER	Probability Increased	AMBER	Probability raised to 3 as Scotrail have again voiced concerns over working practices around the depot.
R066	Approval/consent for remaining wayleaves associated with Scottish Power works	AMBER	Probability Increased	AMBER	Probability raised to 3 due to SP wayleave issue at Haymarket
R021	Industrial Action	GREEN	1	AMBER	Fuel Strikes forecast, potential to cause disruption. Probability Increased
R041	Approval of plans for Edinburgh Gateway.	RED	Potential	RED	Once full approval received this risk will dramatically decrease and possibly close. Potential opportunity to save time on current plan.
ED115 (New)	Risk that the scope and extent of the Leith walk utility works will increase	NEW	NEW	RED	

## CHANGE

## BBS On-Street Works Estimate (Period end 31 March) and Commercial Issues

		£K
	On - Street	
15	Utility conflicts - investigation	20
25, 72 & 87	OLE foundations resulting from discovery of utilities	699
28	Temporary accommodation for utilities contractor	2
29	Road re-construction protocol (opportunity to reduce depth)	0
30	Additional CBR/Plate testing - ground strength	0
32	Utilities affecting site clearance - disconnect power to bus trackers	-15
35,79	Utilities contractor affecting Infraco progress	34
36	BT Fibre Optic affecting progress	85
37	Slit trench to validate utilities	9
38	Move 3 OLE foundations (St Johns Church)	12
40	Scottish Water diversion Princes St	251
43	Christmas embargo - temporary infill Princes St	218
44	BT diversion - Princes St (included PMC 040)	Inc
52	Install Traffic Management early Shandwick and St Andrew sq	163
68	Utilities affecting track drainage	13
69	Geotextile liner to Clifton Terrace void	3
	Total On-Street Works Estimate	1,494
	Off - Street	
t.b.c	Payment for Utility diversions Off Street outwith BBS's scope	340
61	Temporary footpath and drainage - Roseburn Viaduct	30
t.b.c.	Low voltage supplies to Airport Tramstop cabinet	30
	General	
	Rev3A to Rev 4 programme – evidence of delay costs (BB only, Siemens t.b.c)	698
	TOTAL	2,494

- Drainage Infraco consider that Scottish Water have changed the approvals process and papers have been submitted to the Independent Certifier for determination.
- Utility diversions Off Street: Infraco consider SGN diversion is out of scope and a compromise is required since additional costs have also been incurred for other diversions.
- LV supplies to Tramstop Cabinets Infraco considers that as these were excluded from the price submitted at mediation, however it is not a Settlement Agreement exclusion.
- Rev3A to Rev 4 programme delay 2nd September to 3rd of October further evidence required to demonstrate cost incurred, 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** 





# Project Report - Period 1

# 1.0 Executive Summary

- Independent Competent Person (ICP) 1 open Advice of Non Compliance (ANC), RFO 021 closed during period; RFI 022 raised during the period.
- A number of Requirements Management workshops have now taken place Verification and Validation method now agreed for 83% of the requirements.
- Record of Review for the Section A handover documentation to be issued to BBS 27/4/12
- Signalling & Traffic Reversing Strategy the design has now been considered by all parties.
   Report to be updated and presented to the ICP at the next ICP liaison meeting on the 9<sup>th</sup> May 2012
- OLE Building Fixings All locations have now been agreed and consultations have taken place with the property owners, Now agreed.
- NCR's 23 NCRs were raised during the period and 18 NCRs were closed out during the period.

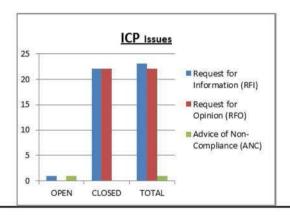
# 2.0 Safety Verification Scheme (SVS)

# System Assurance

- SVS Audit (Maintenance SMS) was carried out at the depot 19<sup>th</sup> April 2012. Evidence is currently being reviewed and a report will be issued during the next period.
- Evidence File Currently no information is being uploaded to the evidence file as the section 6 information has not been transferred over to the new SharePoint site.
- A Record of Review of the Section A handover documents will be sent to BBS 27/4/2012.
- A number of requirements management workshops have now taken place with good progress being made towards agreeing the Verification and Validation method for each requirement. Process is now 85% complete
- Next SVS Audit TSA 12/002 Scheduled for 30<sup>th</sup> May 2012 – Section 5 Electrocution Sub Station Earthing and Bonding failure Jenners.

# ICP Issues

- PSCC meeting help 11<sup>th</sup> April 2012, next PSCC meeting to be held 6<sup>th</sup> June 2012
- Next ICP Liaison meeting to be held 9<sup>th</sup> May 2012 – 3 topics Reversing Strategy; Change Management and Requirements Management
- RFO 021 was closed during the period
- A new RFI; RFI 022 was raised during the period regarding measurements of the OLE poles potentially infringing the DKE.







# Project Report – Period 1

# 3.0 BBS Design Construction and T&C Assurance

# Electromagnetic Compatibility (EMC)

No EMC issues to report this period

## Trackform

 A survey has been undertaken of the rail and concrete levels along Princes Street to quantify the differences in levels across the trackform. A report is due to be issued week commencing the 30<sup>th</sup> of April.

# **OLE Building Fixings**

 Locations of additional building fixings at Princess Street now agreed. Consultations have taken place with property owners; Agreements now in place.

# Signalling and Traffic signals

- Reversing Strategy the design has now been considered by all parties. Report to be updated and presented to the ICP at the next ICP liaison meeting on the 9<sup>th</sup> May 2012
- 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 has been held with BT, CEC and BBS to agree connections, formal proposal now
  expected from BBS.

## SCADA and Comms

No issues to report this period.





# Project Report - Period 1

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

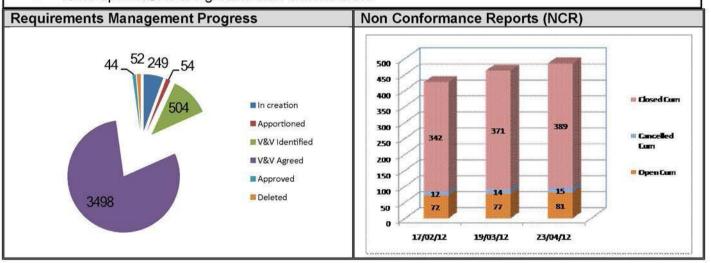
- Depot and mini-test track operations continue. 12 vehicles have now been delivered and are undergoing static and dynamic testing.
- Edinburgh Trams and CAF have introduced a forum to track and close out vehicle design, construction, ergonomic and driver familiarisation issues which are emerging during this testing.
- A protocol for visitors to the depot has been introduced, which has taken into account the comments of other project partners.
- Current procedures for depot work safety assessments, access and isolation permits and movement control are under review to ensure the safety and security risks continue to be robustly controlled, but with the minimum amount of bureaucracy and inconvenience.
- An operations, recruitment and training plan for test track operations to the airport has been
  produced. This also details the infrastructure, systems and vehicle functionality required for safe
  and efficient test operations and identifies key tasks, including safety verification, advice of
  energisation and liaison with key stakeholders and regulators.
- Familiarisation visits for the emergency services continue, as do schools liaison and road safety partnership visits.
- A successful visit from HMRI and the ICP took place on the 22<sup>nd</sup> March.
- A Safety Management Group has been set up involving the maintenance and operations teams from Edinburgh Trams, Siemens, CAF and Bilfinger Berger.
- The Quality Management System, Maintenance Management System and Testing and Commissioning Plan have been reviewed and updated to reflect the transfer of responsibility for operations from Edinburgh Trams Ltd. to Edinburgh Trams as part of Lothian Buses. Other key documents, such as those covering Work on or Near the Tramway and System Assurance, are under review to ensure they reflect the requirements of the emerging organisation.

# 5.0 Metrics

No progress to report during period

# 6.0 NCR's

- Total No of NCRs raised is 485.
- 23 NCRs were raised during the period and 18 NCRs were closed out during the period.
- 13 no open NCRs are greater than 6 months old.







# Project Report - Period 1

# 7.0 Deliver a Safe Tram - Required Action

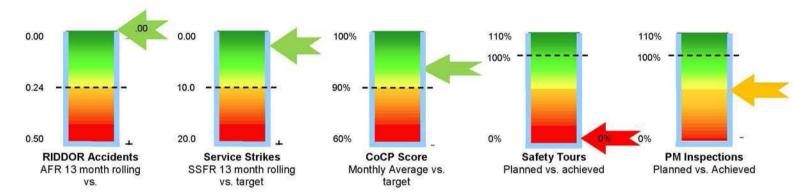
- Record of review on section A handover to be issued to BBS 27/4/2012
- Metrics inspections QM73 and QM 78 to be progressed to closure.
- Next ICP liaison meeting to be held 9<sup>th</sup> May 2012, 3 subjects reversing strategy; change management and requirements management.





# Project Report - Period 1

Total	Total Hours	>3 day	Major	Injury	NM/Unsafe Condition	Service Damage	ENV	RTA	МОР	AFR	SFR
Period	128,148	0	0	1	8	3	0	0	2	0.00	2.34
13 period rolling	1,054,193	0	0	13	78	41	6	0	13	0.00	3.89
INFRACO											
Period	87,680	0	0	1	4	2	0	0	1	0.00	2.2
13 period rolling	799,989	0	0	13	53	23	6	0	10	0.00	2.8
OTHER TRAM											
Period	27,344	0	0	0	4	1	0	0	1	0.00	3.66
13 period rolling	102,080	0	0	0	24	18	0	0	3	0.00	17.63



# **EXECUTIVE SUMMARY**

- There were 2 serious / significant incidents involving member of public incidents since the issue of the last DtTS Report. Both involved a persons tripping or slipping at temporary walkways around construction sites.
- There were 3 other serious / significant incidents. 2 involved LV service strikes and 1 involved a breach of DOMS documentation procedureson on Scottish Water works.
- There were 17 other incidents (1 member of public incident, 7 service damages, 2 minor injuries, 10 near miss/unsafe conditions) See Appendix A for details.
- The rolling 13 Period AFR remains at 0.00, better than the benchmark KPI of 0.23 for the project.
- · CoCP compliance was recorded at 93% during Period 1
- 57% of planned PM joint inspections have been carried out during Period 1.
- 0% of planned safety tours were carried out during Period 1.

Record: CR8235.3





# Turner & Townsend

# Project Report - Period 1

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	0	4				

# **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

- The 'Think before you act' session has been agreed with CEC and planned for 10<sup>th</sup> May 2012. It
  is anticipated at all the senior managers from the Edinburgh tram project will participate in this
  initiative.
- The Turner & Townsend Project Delivery Safety Meeting was held on the 25<sup>th</sup> April, a renewed emphasise was place on the joint monitoring being undertaken on the project, to strengthen the project safety culture.

Record: CR8235.3



# Project Report - Period 1

# **ENVIRONMENTAL SUMMARY**

List any significant environmental events, initiatives, breaches etc

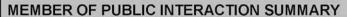
- BBS currently having on-going discussions with SEPA re soil movements. Meeting was held on 27<sup>th</sup> April 2012, it was agreed at this meeting that further testing was required.
- Joint environmental inspection carried out with BBS and Turner & Townsend at the Coffey site section 5. Issues regarding waste and drip trays raised, report to be issued.
- BBS Environmental Forum held on 25th April 2012. Representative from all of BBS's contractors
  present. Review of Non Conformances raised by BBS's external auditors, relating to cross
  contamination of waste, European waste codes, waste duty of care, diesel leaks and oil storage.
- Inspection of monuments currently held in storage by Land Engineering to be inspected by Turner & Townsend and CEC week commencing 7<sup>th</sup> May 2012.

Record: CR8235.3



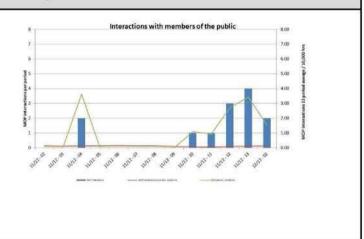


# Project Report - Period 1



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

There were two reported Member of Public incidents during Period 1. One involved a woman slipping on a metal plate forming part of the pedestrian diversion route around the McNicholas site at Princes Street. There is an insurance claim associated with this alleged occurrence. The other incident involved damage to a woman's bag when a pole was allowed to fall during relocation of a bus stop at Haymarket by Class One. This incident also involves an insrance claim.

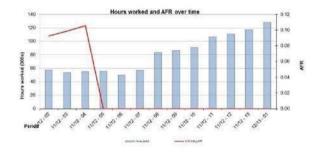


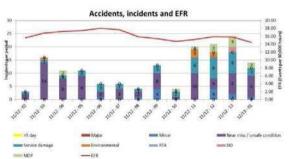
# **CDM Compliance**

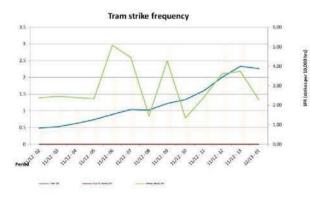
List any significant quality events, initiatives, breaches etc

• The Turner and Townsend safety team have been working closely with the On street procurement team to provide Pre construction information for the Leith Utility works tender over the last period.

# **GRAPHS**







Record: CR8235.3





# Project Report - Period 1

# APPENDIX A

There were 26 incidents in total since the issue of the last DtTS report. Of these 5 were classified as serious / significant and details are provided below:-

# Significant Incidents

AIIR Ref:	1640	Contractor:	McNicholas			
Location:	South St Andrew Street					
Project:	Utility works	Date & Time: 26/03/12 15:15				
Sub Contractor:		Contractor Reference:				
Project Manager:	Stephen Lewcock	Is the accident / incident Yes No Serious / Significant or Major?				
Description:	Damage to live LV ca cable duct.	able that was located within a	n unused V	irgin M	edia	
Action taken by Contractor:	Scottish Power called to site. Power restored at 19:30.					
Action taken by Project Team (if required):	Formal review of investigation findings and recommendations to prevent recurrence.					

AIIR Ref:	1643	Contractor:	Crummock			
Location:	Princes Street / Shandwick Place					
Project:	Infraco Date & Time: 19/02/12 19:06					
Sub Contractor:		Contractor Reference: CEC Claim, A-9458C				
Project Manager:	Stephen Lewcock	Is the accident / incident Yes No Serious / Significant or Major?				
Description:	Member of Public fell tripped on steel plate on temporary walkway.					
Action taken by Contractor:	Repairs made to footpath surface.					
Action taken by Project Team (if required):	Formal review of inversecurrence.	estigation findings and recom	mendations	to pre	vent	

Record: CR8235.3 ELECTRONIC COPY – UNCONTROLLED IF PRINTED





# Project Report - Period 1

AIIR Ref:	1644	Contractor:	Farrans		
Location:	Eastfield Avenue				
Project:	Infraco	Date & Time: 30/03/12 08:00			
Sub Contractor:		Contractor Reference	ə:		
Project Manager:	Cath Leech	Is the accident / incident Yes No Serious / Significant or Major?			
Description:	Damage to a LV cable that supplied power to the gas governor at Edinburg Airport.				
Action taken by Contractor:	BAA and Scottish Power notified.				
Action taken by Project Team (if required):	Meetings held with BAA, Bilfinger Berger & Turner & Townsend. Formal review of investigation findings and recommendations to prevent recurrence.				

AIIR Ref:	1645	Contractor:	McNicholas			
Location:	South St Andrew Street					
Project:	Utility works Date & Time: 29/03/12					
Sub Contractor:		Contractor Reference:				
Project Manager:	Andy Scott Is the accident / incident Yes No Serious / Significant or Major?					
Description:	Breach of DOMS documentation regarding the Go Live Pack for a 90mm main.					
Action taken by Contractor:	Meeting to be held on 02/04/12 AM to review issues and identify what went wrong with the testing / sampling procedures.					
Action taken by Project Team (if required):	Formal review of investigation findings and recommendations to prevent recurrence.					

Record: CR8235.3





## Project Report - Period 1

AIIR Ref:	1654	Contractor:	McNicholas						
Location:	Princes Street								
Project:	Utility Works	Date & Time:	06/04/12 11:25						
Sub Contractor:		Contractor Reference:							
Project Manager:	Stephen Lewcock	Is the accident / incident Serious / Significant or Ma	Yes No ajor? X						
Description:	MOP was injured when she slipped on a metal plate forming part of the pedestrian diversion route.								
Action taken by Contractor:	Investigation of pedestr to chambers.	ian route – not able to loca	te metal plate, only covers						
Action taken by Project Team (if required):	Formal review of invest recurrence.	igation findings and recomi	mendations to prevent						

Record: CR8235.3





## Project Report - Period 1

### **APPENDIX A (Continued)**

### Other Incidents since last DtTS report

Date	Location	Detail	Contractor	Classification
27/03/2012	Princes Street	Damage to a stone coping that covered a buried manhole.	Lagan Construction	Service damage
13/04/2012	West Maitland Street	Damage to a domestic water supply for 3 West Maitland Street	McNicholas	Service damage
17/04/2012	Haymarket Yards	Disconnected BT cable was crushed.	Grahams	Service damage
26/04/2012	Gyle	Damage to street lighting cable.	Coffey	Service damage
25/04/2012	St Andrew Square	Construction of a Scottish Water manhole without ATC process being followed.	McNicholas	Service damage
12/04/2012	Haymarket	During relocation of a bus stop a pole was allowed to fall damaging a MoP's bag.	BBS / Class One	Member of the public
21/03/2012	Bankhead Drive	Operative whilst denailing wooden travellers slipped and fell forward causing a cut to his nose from a duct box.	Crummock	Minor injury
25/04/2012	Haymarket Yards	Electric shock due to contact with disconnected street lighting cable that was directly beneath paving slab.	Grahams	Minor injury
26/03/2012	Bankhead Drive	Graffiti drawn on the external wall to the substation building.	Siemens	Near miss / Unsafe condition
30/03/2012	Roseburn Street	Access into manhole for CCTV survey without ATC being in place.	Grahams	Near miss / Unsafe condition
02/04/2012	Balgreen Rd - Carrick Knowe	Theft of a band saw	Land & Building	Near miss / Unsafe condition
16/04/2012	Carrick Knowe	Arson event at Carrick Knowe. Dozer set on fire.	Bilfinger Berger	Near miss / Unsafe condition
20/04/2012	Carrick Knowe	An excavator was broken into and damaged on site.	Crummock	Near miss / Unsafe condition
19/04/2012	Shandwick Place	Generator within site accommodation was left running out of site working hours.	McNicholas	Near miss / Unsafe condition
20/03/2012	ScotRail Depot	A lorry moved across the pedestrian access path directly in front of ScotRail persons. No warning was given and no banksman was visible.	Expanded	Near miss / Unsafe condition
03/04/2012	Waveley Bridge	Temporary traffic lights at Waverley bridge were stuck on red.	Crummock	Near miss / Unsafe condition
06/04/2012	Princes Street	Reported that the service lane on Princes Street was too narrow at the locations where work was being carried out on BT chambers.	Crummock	Near miss / Unsafe condition

Record: CR8235.3

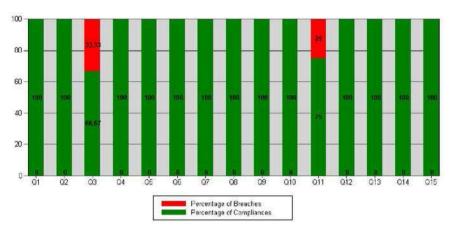




## Project Report - Period 1

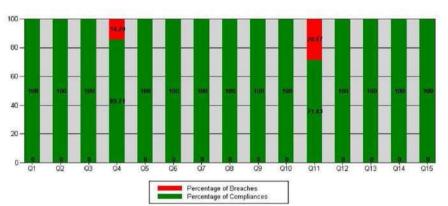
#### APPENDIX B - COCP INSPECTIONS

### Period 13 (previous period)





#### Period 1





Q3. Notices	
Q4. Fencing and H	loarding
Q5. Noise	
Q6. Waste Manage	ement
Q7. Waste Water a	and Run-Off
Q8. Water	
Q9. Emergency Ac	cess
Q10. Parking	
Q11. Litter and ger	neral housekeeping
Q12. Dust	
Q13. Smoking	
Q14. Members of t	he Public
Q15. PPE and Beh	aviours

Record: CR8235.3





## Project Report - Period 1

#### Summary of issues and action taken

No	Date of Inspection	Location	Contractor	Question Number	Issue detail	Action taken or required to be taken by contractor	Date to rectify or rectified
1	13/04/12	Murray field	BBS/ Grahams	11	Fuel depot yard required to be cleaned.	Yard cleaned by roadsweeper on day of inspection.	Closed 13/04/12
2	19/04/12	Airport	BBS/ Expanded	4	Hoarding repair required.	Hoarding re- erected by Expanded	Closed 19/04/12
3	20/04/12	Russell Road	BBS/ Grahams	11	Pavement area required to be cleaned after fencing move.	Pavement swept by Grahams on day of inspection.	Closed 20/04/12

Record: CR8235.3



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Appendix 3 – Cost Report and Contingency Analysis

#### City of Edinburgh Council



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#### Section 1 - Project Summary

		Buc	lget Informati	ion		Committed				Forecast			Third Party 0	Contributions	Vari	ance	Actu	ıals
		A	8	C = A + B	D	ε	F = D + E	G	н	i	j	K = F + G + H + I + J		M=K-L	N=M-C	0=M/C-1	P	q
		Original Budget	Budget Variation	Current Budget	Original Contract Value	Approved Contract Changes	Current Contract Value	Changes in Progress	Anticipated Change	Opportunities	Risk / Mitigated	Anticipated Final Cost	Estimated Contribution Value	Anticipated Final Project Cost	Budget Variance (Value)	Budget Variance (%)	COWD to Date	Outstanding Amount
	Edinburgh Tram Programme	500,154	0	500,154	479,660	3,546	483,206	9,462	13,917	-6,752	9,037	508,870	-8,716	500,154	0	0%	338,581	144,625
1	Infraco - Off Street	360,060	-2,525	357,535	362,501	-2,525	359,976	9,795	30	0	0	369,801	-7,183	362,618	5,083	1%	268,234	91,742
2	Infraco - On Street	38,817	1,205	40,022	47,384	1,205	48,589	-333	3,048	-6,752	0	44,552	-1,533	43,019	2,997	7%	8,482	40,107
3	Infraco - Other	3,218	0	3,218	3,218	0	3,218	0	0	0	0	3,218	0	3,218	0	0%	662	2,556
4.1	Utilities (Post Mediation)	1,812	5,461	7,273	1,812	5,461	7,273	0	7,385	0	0	14,658		14,658	7,385	102%	4,628	2,645
4.2	Legacy Utilities (Revised Tram Route)	0	500	500	0	500	500	0	754	0	0	1,254		1,254	754	151%	404	96
4.3	Legacy Utilities (Leith Walk)	1,100	-1,100	0	1,100	-1,100	0	0	2,700	0	0	2,700		2,700	2,700		0	
5	Tram vehicles	62,400	5	62,405	63,645	5	63,650	0		0	0	63,650		63,650	1,245	2%	56,171	7,479
6	Project Management (refer to CEC Repo	ort)	0	0			0					0		0	0			
7	Preparing for Operations (refer to CEC F	Report)	0	0			0					0		0	0			
8	Specified Risk Allowance	32,747	-3,546	29,201	0	0	0	0			9,037	9,037		9,037	-20,164	-69%	0	1

#### Comments:

Report excludes Enabling work packages reported under T19 and utilities reported under T18

Contributions include amounts relevant to reported budgets only. Any further contributions are reported by CEC.

#### Risk

The specified risk allowance is adjusted to match the forecast with the budget. This will be updated once a full QSRA and QCRA is completed

#### Actions

QCRA and QSRA required to inform the amended risk allowance

#### City of Edinburgh Council



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#### Infraco Cost Report Section 1 - Commercial Summary

		Buc	lget Informat	ion	1	Committed				Forecast			Third Contrib	330713550 C	Vari	ance	Act	uals
		A	В	C = A + B	D	E	F = D + E	G	н	i.	J	K=F+G+H +I+J	L	M≈K-L	N = M - C	O = M / C - 1	Р	Q
		Original Budget	Budget Variation	Current Budget	Original Contract Value	Approved Contract Changes	Current Contract Value	Changes in Progress	Anticipated Change	Opportunities	Risk / Provision	Anticipated Final Cost	Estimated Contribution Value	Anticipated Final Project Cost	Budget Variance (Value)	Budget Variance (%)	COWD to Date	Outstanding Amount
	Infraco Contract	402,095	-1,320	400,775	413,103	-1,320	411,783	9,462	3,078	-6,752	C	417,571	-8,716	408,855	8,080	4.19%	277,378	134,405
	Off Steet	360,060	-2,525	357,535	362,501	-2,525	359,976	9,795	30	0	(	369,801	-7,183	362,618	5,083	3.43%	268,234	91,742
00	Preliminaries and Other Items	150,408	317	150,725	150,409	317	150,726	4,541	0			155,267	0	155,267	4,542	3.01%	108,467	42,259
01	Newhaven Road to Haymarket	85,368	-2,579	82,789	87,738	-2,579	85,159	355	0			85,514	-318	85,196	2,407	3.29%	86,517	-1,358
02	Haymarket Corridor	8,692	-8	8,684	8,692	-8	8,684	0	0			8,684	-13	8,671	-13	0.00%	5,662	3,022
05	Roseburn Junction to Gogar	80,035	-153	79,882	80,105	-153	79,952	4,789	30			84,771	-5,812	78,959	-923	6.12%	39,277	40,675
06	Depot	19,979	190	20,169	19,979	190	20,169	80	0			20,249	0	20,249	80	0.40%	18,543	1,626
07	Gogar to Edinburgh Airport	15,578	-292	15,286	15,578	-292	15,286	30	0			15,316	-1,040	14,276	-1,010	0.20%	9,768	5,518
	On Street	38,817	1,205	40,022	47,384	1,205	48,589	-333	3,048	-6,752	(	44,552	-1,533	43,019	2,997	11.32%	8,482	40,107
00	Preliminaries and Other Items	21,837	87	21,924	21,837	87	21,924	42	0			21,966	0	21,966	42	0.19%	5,163	16,761
01	Newhaven Road to Haymarket	16,980	1,118	18,098	25,547	1,118	26,665	-375	3,048	-6,752		22,586	-1,533	21,053	2,955	24.80%	3,319	23,346
	Other	3,218	0	3,218	3,218	0	3,218	0	0	0	(	3,218	0	3,218	0	0.00%	662	2,556
00	Maintenance & Mobilisation	2,205	0	2,205	2,205	0	2,205	0	0			2,205	0	2,205	0	0.00%	662	1,543
00	Spare Parts	1,013	0	1,013	1,013	0	1,013	0	0			1,013	0	1,013	0	0.00%	0	1,013

#### Comments:

Summary sheet values in £k. All other sheet values in £.

Opportunities include for time saving based on current QSRA.

Excludes £3.2m phase 1b payment (refer to budget T19.C)

#### Risl

Refer to Risk register for risks identified against infraco programme All risk is held at programme level. This section of the cost report makes no allowance for risk.

Refer to the outputs of the QCRA/QSRA for further information on risk.

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#### Infraco Cost Report Section 2A - Approved Change - Clause 80

TNC No.	Description	Forecast Amount	Previous Period	Change from Previous Period	Notes	Section Code	Chang Code
501	Hawthornevale Cycle Link - Change the design to widen the footway alongside the south side of Lindsay Road	20,021	20,021	0		01	01
502	Amend the design of Ocean Drive to reinstate the footpath to the north of Ocean Drive	10,231	10,231	0		01	01
503	OLE temporary portals at depot access bridge to allow finalisation without Edinburgh Gateway	67,646	67,646	0	Edinburgh Gateway funding	05	01
504	Review of the banned right turn into Blenheim Place as part of the design for Section 1C2 roads	46,247	46,247	0		01	01
505	York Place Terminal Point - Production of a feasibility report, initial feasibility design for option ii), run time modelling etc	228,653	228,653	0		01	01
506	Design for providing a new cycleway from the Mound to Princes Street	9,437	9,437	0		01	01
506.1	Design for providing a new cycleway from the Mound to Princes Street	1,669	1,669	0		01	01
507	Provide a clarification report and completion of the St. Andrew's Square Public Realm design	133,075	133,075	0	Included within contributions	01	01
508	Obtain EAL approval for the highways design drawings at Eastfield Avenue tram crossing	10,025	10,025	0		07	01
509	Design of Cathedral Lane Substation	233,596	233,596	0		01	01
511	Storm Water Connection from Gogar Lodge to the landowners new septic tank	5,750	5,750	0		05	08
512	Re-design of Ocean Terminal Bypass Road	53,685	53,685	0		01	01
513	Revised design to minimise utility diversions / conflicts - used for slit trenching and trial holes	156,870	156,870	0		01	08
514	Utility Mapping	92,756	92,756	0	Time chargeable costs. L&M Surveys and Class One. Complete	01	08
516	Additional Water main requirement at Depot and Mini Test Track	51,282	51,282	0	·	06	08
517	Additional BT Ducts at Depot and Mini Test Track	2,996	2,996	0		06	08
520	Valve chamber access and alteration works to 800mm water main at the Depot	105,326	105,326	0		06	08
526	Airport to Gyle - Tram Delivery Temporary Works	6,878	6,878	0		07	08
529	Design Gogar Castle Access Road tram crossing and approaches	31,308	31,308	0		05	08
530	Amend the design of the Depot Road turning head as per RDC191. Option 2	30,458	30,458	0		06	08

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#### Infraco Cost Report Section 2A - Approved Change - Clause 80

TNC No.	Description	Forecast Amount	Previous Period	Change from Previous Period	Notes	Section Code	Change Code
531	Edinburgh Gateway - Advance Temporary Works design	9,349	9,349	0		05	08
534	SP Insurance Ducts - Install Insurance ducts at various locations	5,637	5,637	0	Liability for change still to be agreed	07	08
536	System Wide - Tramstop Cabinets - reduction in 10 years maintenance liability	0	0	0	No saving to contract	01	08
538	Depot - Tramwash Continuous Mode - Requirement for additional hand lances washers	0	0	0	Change rejected - included within contract	06	08
540	Section 7 - Plot 304 - Omit Landscaping works	-201,120	-201,120	0		07	08
544	Extension to Edinburgh Park Office to accommodate CEC / Transport Scotland	159,900	159,900	0		00	08
550	Shandwick Place OLE & Landscape Design Revision	0	0	0	Costs included in other tNCs for design work	01	08
553	SDS to provide the services of Matt Fell until end March 2012	69,131	69,131	0		00	01
558	Site Wide - Provision of a CAD Technician	1,693	1,693	0		01	08
559	Detailed Design of York Place	56,438	56,438	0	tnc issued - awaiting BBS estimate	01	08
561	Omit all works at the Forth Ports area	-2,443,000	-2,443,000	0	Work deleted from scope.	01	08
562	On Street Generally - OLE Design Changes for On Street Section (PMC 045) - SIEMENS DESIGN WORKS	20,000	20,000	0	All design costs to be grouped under the 562 (BBS PMC 045)	01	08
563	On Street - Amend pile caps from square / rectangular to circular	5,000	5,000	0	All design costs to be grouped under tnc 562 (BBS PMC 045)	01	08
564	On Street Generally - Worksite Modelling - TNC & TCO (531) WITHDRAWN 12.1.12	10,000	10,000	0		01	08
565	Advanced design works for Edinburgh Gateway Minimum Option	2,650	2,650	0		05	08
565.1	Advanced design works for Edinburgh Gateway Minimum Option	3,350	3,350	0		05	08
566	On Street Generally - Ducting Design Changes Due to Utilities Conflicts	10,000	10,000	0		00	08
567	On Street Generally - Drainage Design Changes Due to Utilities Conflicts	10,000	10,000	0		00	08
568	On Street Generally - Trackform Design Changes Due to Utilities Conflicts	10,000	10,000	0		00	08

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#### Infraco Cost Report Section 2A - Approved Change - Clause 80

TNC No.	Description	Forecast Amount	Previous Period	Change from Previous Period	Notes	Section Code	Chang Code
569	Additional Running Costs associated with the extension to the Edinburgh Park offices	79,200	79,200	0		00	08
572	Cathedral Lane Substation - Retaining Wall Design	31,013	5,000	26,013	Value based on submitted estimate from BBS	01	08
574	Haymarket Station - Delete viaduct cladding	-10,000	-10,000	0		02	08
576	Depot - Reinstatement to 250mm Water main Remedial Works	36,788	36,788	0		07	04
577	Haymarket Viaduct - Deletion of Sub Station Retaining Wall and Plinth	1,580	1,580	0		02	08
578	SI Provisional Sum Allowance	-57,984	-57,984	0		01	08
580	Cancellation of trackwork materials York Place to Newhaven	-1,100,000	-1,100,000	0	Change resulting from value engineering exercise	01	08
581	Omit Siemens work to Tower Place and Victoria Dock bridges	-100,000	-100,000	0	Change resulting from value engineering exercise	01	08
582	Delete proposed cladding installation costs on Roseburn Viaduct Structures	-308,004	-308,004	0	Change resulting from value engineering exercise	05	08
585	Descope of Service Vehicle	-21,565	-21,565	0		00	08
589	Descoping airport tramstop kiosk and canopy	-150,000	-150,000	0		07	08
591	Diversion of Scottish Power Cable at Haymarket Viaduct	21,789	50,000	-28,211	NR contribution	05	08
597	Section 1D - Omit disconnection of Bus Tracker	-14,928	-14,928	0		01	08
602	Omit purchase of poles for PIDs North of York Place	-23,740	-23,740	0		01	08
613	Temporary Bus Station at St Andrew Square/Waterloo Place - design	50,000	0	50,000		01	08
615	Haymarket Viaduct - design wall for blocking off void under the bridge deck as a result of the crew relief facility being omitted	3,000	0	3,000		05	08
616	Haymarket Viaduct - construct wall for blocking off void under the bridge deck as a result of the crew relief facility being omitted	10,000	0	10,000		05	08
617	Tram stops branding changes. Requirement for etched glass to be confirmed	0	0	0	Value TBC	05	08
Total		-2,525,913	-2,586,715	60,802			

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#### Infraco Cost Report Section 2B - Approved Change - Schedule 45

C Ref No	Description	Agreed Amount	Previous Period	Change from Previous Period	Notes	Section Code	Change Code
001	Independent Certifiers Schedule Part 45 Period End Change Order to 15/10/2011 relating to the following PAV's and On Street Works Estimates	8,593	8,593	0	Includes TNC 513, TNC 543, TNC 521	01	08
002	Independent Certifiers Schedule Part 45 Period End Change Order to 12/11/2011 relating to the following PAV's and On Street Works Estimates	102,135	102,135	0	Includes TNC513, TNC 521, TNC 528, TNC 535, TNC 543, TNC 547, TNC 548, TNC 549	01	08
003	Independent Certifiers Schedule Part 45 Period End Change Order to 10/12/2011 relating to the following PAV's and On Street Works Estimates	357,140	357,140	0	Includes TNC535, TNC543, TNC548, TNC549, TNC551	01	08
004	Independent Certifiers Schedule Part 45 Period End Change Order to 6/1/2012 relating to the following PAV's and On Street Works Estimates	158,870	158,870	0	Includes TNC535, TNC543	01	08
005	Independent Certifiers Schedule Part 45 Period End Change Order to 4/2/2012 relating to the following PAV's and On Street Works Estimates	332,812	332,812	0	Includes TNC535, 543, 551, 554, 596, 598	01	08
006	Independent Certifiers Schedule Part 45 Period End Change Order to 3/3/2012 relating to the following PAV's and On Street Works Estimates	244,645	0	244,645	Includes TNC543, 547, 554, 600, 604, 606	01	08
Total		1,204,195	959,550	244,645			

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#### Infraco Cost Report Section 3A - Change in Progress - Clause 80

TNC No.	Description	Forecast Amount	Previous Period	Change from Previous Period	Notes	Section Code	Change Code
524	Airport to Gyle - NIL Design Finalisation (also includes Construction)	30,000	30,000	0		07	01
525	Airport to Gyle - Site Access for Remedial Works	0	0	0	all costs asociated with this change allocated to TNC 576	07	08
527	Ingliston - Reimbursement of Costs paid directly to SGN for the diversion of approximately 120m of 10" steel IP gas main to accommodate the new Edinburgh Tram at Ingliston	0	0	0	Saving from Infraco, not included during the period as cost not shown in utility budget	07	04
539	System Wide - Delay in signing - impact on commencement and completion	4,541,161	4,541,161	0	Meeting scheduled to review cost incurred at delay commencemnt	00	02
541	Princes Street - City Chamber - Annandale Street Communication Links. Usage of CEC available BT-Lines to avoid provision of direct FO link from Princes Street to City Chambers	50,000	50,000	0	Allowance for ducting	01	08
555	Haymarket - OLE 196B design revision to avoid main sewer	10,000	10,000	0		01	08
556	Track Work Materials York Place to Newhaven - Price Fixing for Rheda City C and D	0	0	0	Included in VE register	01	12
557	Haymarket 1 - OLE Base Relocations (Design mods)	100,000	55,000	45,000	All design costs to be grouped under tnc 562 (BBS PMC 045)	01	08
571	Hope Street Junction Design	5,000	5,000	0		01	08
573	Roseburn Delta - Non DDA Compliant Footpath	0	0	0	TNC covers design only. Costs associated with this change included in the anticipated change section	05	08
575	Haymarket Station - Take Down Viaduct Staircase and Parapet. TNC now withdrawn - Network Rail carrying out work	0	121,315	-121,315	Verbal update - NR have indicated that they will remove the staircase and parapet in Haymarket contract. Current cost report allowance offset by contribution (cost neutral).	02	08
586	St Andrew Square - tie in detail	30,000	30,000	0	Change resulting from value engineering exercise	01	08
587	Revise design for amendments to setts areas and specification	30,000	30,000	0	Subject to separate CEC budget?	01	08
592	Haymarket Yards - Realign kerbs at Car Park Entrance	0	0	0	Currently on hold pending A. Sim review.	05	08
593	Secondary Phase 1a - Cessation of Design Work North of York Place	0	0	0	Saving opportunity being investigated in relation to future ownership of design etc prior to finalising value.	01	08
594	Edinburgh Gateway slope option. Awaiting construction estimate	4,850,000	4,850,000	0		05	08
595	Haymarket Viaduct - Deletion of fitting out of Crew Relief Facility	-70,000	0	-70,000	Assume credit from NR (yet to be established)	05	08
599	Floating track slab	0	0	0	Refer to anticipated change for costs	01	08

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#### Infraco Cost Report Section 3A - Change in Progress - Clause 80

TNC No.	Description	Forecast Amount	Previous Period	Change from Previous Period	Notes	Section Code	Change Code
601	Clarification on length of shelter to RBS tram stop (8m)	25,000	25,000	0	Liability for change still to be clarified - basis of contract price unclear	05	08
603	Bus Tracker Interface Specification	0	0	0		01	08
605	Depot - Sub-Station Switching	80,000	0	80,000	Includes allowance up to Section B completion date (8/3/13)	06	08
608	Delete 110v sockets on Off Street Tram Stops	-16,500	0	-16,500	Assume £1.5k per tram stop. Awaiting estimate	05	08
609	Traffic Management provision in section 1A	130,000	0	130,000		01	08
610	Edinburgh Gateway - Siemens Long Lead Items	0	0	0	Cost covered within the Edinburgh Gateway costs.	05	08
Total		9,794,661	9,747,476	47,185			

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#### Infraco Cost Report Section 3B - Change in Progress - Schedule 45

TNC No.	Description	In Progress	Certified	Total Forecast	Previous Period	Change from Previous Period	Notes	Section Code	Change Code
513.1	Revised design to minimise utility diversions / conflicts - used for slit trenching and trial holes	0	17,210	17,210	17,210	0		01	08
521	Haymarket - Temporary Accommodation	0	1,543	1,543	1,543	0		01	08
522	Haymarket 1 - Road Reconstruction	0	0	0	0	o	Included in VE register	01	08
523	Haymarket 1 - Additional CBR / Plate Testing	0	0	0	0	200	Included within on street priority works (contract milestones)	01	08
528	Haymarket 1 - Slit trench excavation to validate utilities	0	6,565	6,565	6,565		Included within on street priority works (contract milestones)	01	08
532	Princes Street - Temporary traffic management design - WITHDRAWN	0	0	0	0	0	Further information required	01	10
533	Princes Street - 500mm Water Main Diversion	0	0	0	0	0	Costs contained within 535	01	08
535	Princes Street - 500mm Water Main Diversion - rev 3 dwg	0	252,986	252,986	252,986	0		01	08
537	Haymarket 1 - Additional visit of Tar planer to facilitate slewing of BT ducts - WITHDRAWN	0	0	0	0	0	Withdrawn	01	08
543	Haymarket H1 - Utilities affecting the construction of OHLE foundations	3,482	280,169	283,651	297,934		Only covers section H1. H2 to YP included in item 7 of Anticipated Change.	01	08
545	Site Wide - Power to bus trackers affecting the ability to remove site clearance items	20,000	0	20,000	20,000	200	McNicholas to remove. Contra charge BBS; allowance included for BBS attendance	00	08
546	Site Wide - Increased number of drainage boxes including installation	21,482	0	21,482	21,482	0		00	08
547	Haymarket H1 - Third Party (McNicholas) affecting ability to progress the works	307	3,481	3,787	3,348	439		00	08
548	Haymarket H1 - BT Fibre Optic Service requires diverting	0	83,053	83,053	83,053	0		00	08
549	Princes Street - Amend the design of the St. Johns Church OLE bases	0	12,284	12,284	12,284		Opportunity to deduct original scope to be persued once acceptance of revised pole locations is achieved.	01	08
551	Princes Street - 2011 Christmas Embargo - Temporary Surfacing of Track Infills	0	203,511	203,511	203,511	0		01	08
552	Princes Street - BT diversion @ junction of Princes Street and South St. David Street	0	0	0	0	0	Costs included within TNC 535	01	08
554	St Andrew Square & Shandwick Place - Traffic Management Requirements	92,000	127,758	219,758	209,267	10,491	Refer to Revised issue of TNC	01	10
560	St. Andrew Square - Omit £0.7m of repairs to road surface finishing	-700,000	0	-700,000	-700,000	0		01	08

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#### Infraco Cost Report Section 3B - Change in Progress - Schedule 45

TNC No.	Description	In Progress	Certified	Total Forecast	Previous Period	Change from Previous Period	Notes	Section Code	Change Code
570	Omit the Removal of Trees in Shandwick Place	-9,066	0	-9,066	-9,066	0		01	08
579	Removal of embargo and revised traffic management	0	0	0	0	0	Change resulting from value engineering exercise	01	07
583	Ordering setts for on street works	0	0	0	0	0	Assume any cost is funded by CEC	01	08
584	Road Reconstruction specification	0	0	0	0	0	Change resulting from value engineering exercise	01	08
588	Stafford St Return of Parking Spaces	0	0	0	0	0		01	08
590	New cycleway from The Mound into Princes Street	20,000	0	20,000	70,000	-50,000		01	08
596	Section 1D - Utilities clashing with manhole 1D/NO4/03	0	12,626	12,626	20,000	-7,374		01	08
598	Section 1D - Incorporate geotextile liner into Clifton Terrace void in accordance with requirements from Archaeologist	1,740	1,760	3,500	3,500	0		01	08
600	Shandwick place - OLE bases affecting utilities (Piling)	182,197	136,899	319,096	135,155	183,941		01	08
604	St Andrew Sq - OLE bases affecting utilities (Piling)	8,665	58,202	66,867	59,275	7,593		01	08
606	York Place - Waverley Bridge - Works Delayed and disrupted as a result of works carried out by Third parties	20,124	6,148	26,272	0	26,272		01	08
607	Delete 110v sockets on On Street Tram Stops	-4,500	0	-4,500	0	-4,500	Assume £1.5k per tram stop. Awaiting estimate	01	08
611	Excavation of Track Slab to be carried out by McNicholas	0	0	0	0	0	Refer to Anticipated change section for costs	01	08
612	Tram stops branding changes. Requirement for etched glass to be confirmed (cost excluded)	0	0	0	0	0	Value TBC	00	08
614	Rothesay Place Traffic Management Amendment	10,000	0	10,000	0	10,000		01	08
Total		-333,570	1,204,195	870,625	708,046	162,579			

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#### Infraco Cost Report Section 4 - Anticipated Change

TNC No.	Description	Forecast Amount	Previous Period	Change from Previous Period	Notes	Section Code	Change Code
1	Pricing Assumptions - 6.4.2.1 Floating Track Slab	980,000	980,000	0	Verbal advice from Siemens and Bilfinger Berger of cost of providing floating slab at all locations identified. Potential opportunity to reduce if marginal locations are omitted. Subject to final report from BBS.	01	08
2	Pricing Assumptions - 6.4.2.3 York Place Terminal Point	944,000	944,000	0	Excludes design costs (in change section of report) and sheet piling work to strengthen basement (included in risk allowance).	01	08
3	Pricing Assumptions - 6.4.2.4 Cathedral Lane Substation	250,000	600,000		This allowance is for the extra over cost included in the contract for construction of the new tram substation only. There is no allowance for any works in constructing Henderson Global's substation. Design work is included in TNC 509	01	08
4	Pricing Assumptions - 6.4.2.6 Dublin Street	50,000	50,000	0	Excludes piling if required.	01	80
6	Track Lowering - bridging trackform over utilities in St Andrew Square	500,000	500,000	0		01	08
7	Piled OLE base in lieu of utility diversion	165,000	360,000		Total of 49 piles. Awaiting on street estimates from BBS to confirm value. Original estimate value £750k. Reduced for piles completed and included within the On Street change in progress section.	01	08
10	Settlement Agreement exclusions not included elsewhere	404,378	404,378	0	Refer to Schedule E, items 7,8,10,11,12,14. 6 removed - now included in change in progress	01	08
12	H1 delay costs associated with utilities	0	847,000		Wider working areas and rev 4c programme shows completion in advance of rev 4 contract dates	01	02
13	Delayed commencement to St Andrew Square (from 7/2/12)	0	636,000		Wider working areas and rev 4c programme shows completion in advance of rev 4 contract dates	01	02
14	Roseburn Delta - non DDA footpath	30,000	300,000	-270,000	No design required. Temporary footpath alignment to be agreed on site. Potential modifications to surface water drainage resulting from revised earthworks and Scottish Water approvals.	05	08

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#### Infraco Cost Report Section 4 - Anticipated Change

TNC No.	Description	Forecast Amount	Previous Period	Change from Previous Period	Notes	Section Code	Change Code
15	MUDFA Reinstatement - Hope Street / Lothian Road	30,000	30,000	0	CEC may undertake this work	01	08
16	Ongoing traffic management at Lindsay Road	0	90,000	-90,000	Additional TM cost in excess of contract agreement - 6 months allowed at £15k per month. Now contained within tNC 609.	01	08
20	Further design changes to OLE resulting from utilities (York Place)	50,000	200,000	-150,000	Initial value of £200k drawn down into tNCs	01	08
21	Sub station switching - Provision of competent resource to carry undertake sub-station switching and equipment monitoring.  Allowed for 20 weeks	0	25,000	-25,000	Costs associated with this work are now conytained within tNC 605	06	08
22	Additional Siemens supervision as a result of accelerated programme rev 4C	0	155,277	-155,277	Incorporated into rev 4c programme shared saving calculation.	01	08
23	Drainage redesign and amendments to numbers / depths of manholes, carrier drains / drainage connections.	250,000	250,000		Design £50k; deeper manholes / drainage £50k; BBS standing time / disruption £150k. Note McNicholas undertaking part of this work, therefore reallocation to utilities estimate is required. New drainage design reduces number of connections and drainage tracks, therefore full impact of omits and additions to be determined following conclusion of design.	01	08
24	Remove drainage from Infraco scope			0	Extent of add and omit to be agreed. Currently included in item 23	01	08
25	Remove excavation of trackbox from Infraco's contract	-500,000		-500,000	Value to be determined by detailed site measure and application of Schedule 45 rates.  Quantification to be agreed with BBS.	01	08
26	Remove ducting in Cathedral Lane from Infraco's contract	-75,000		-75,000		01	08
Total		3,078,378	6,371,655	-3,293,277			

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#### **Infraco Cost Report Section 5 - Opportunities**

Ref No	Description	Approved Changes	Changes in Progress	Anticipated Changes	Contribution s	Secured	To be secured	Total Opportunity	Value per CS report Jan 2012	Notes
	Remove embargoes and revised TM	O	0		0	0	-5,902,091	-5,902,091		Subject to completion of sections in advance of contract dates (22 week time saving assumed in the Rev 4C programme). Current master programme indicates 4 week saving as a result of York Place utilities.
02	Edinburgh Gateway	0	0		-4,850,000	-4,850,000	0	-4,850,000	0	Awaiting instruction from Transport Scotland
03	Setts (separate CEC budget)	0	0		-1,000,000	-1,000,000	0	-1,000,000	-1,000,000	Funded by separate CEC budget (added to contributions register
04	De-scope public realm at St Andrew Sq	0	-700,000		0	-700,000	0	-700,000	-700,000	Instructed
05	Contributions 3rd Party Agreements	0	0		-2,866,077	-2,866,077	0	-2,866,077	-2,500,000	Refer to contributions register
06	De-scope works at Forth Ports	-2,443,000	0		0	-2,443,000	0	-2,443,000	-2,450,000	Instructed
07	Omit Airport Tram Kiosk and Canopy	-150,000	0		0	-150,000	0	-150,000	-150,000	Approved, replacement materials t.b.c
08	Temporary tram stop at York Place	0	0		0	0	-150,000	-150,000	-150,000	Design optimisation
09	Redeployment of Trams	0	0		0	0	0	0	-5,000,000	Included in CEC budget code
10	Cancel track York Place to Newhaven	-1,100,000	0		0	-1,100,000	0	-1,100,000	-1,100,000	Instructed
11	Omit Siemens works at Tower Place	-100,000	0		0	-100,000	0	-100,000	-100,000	Instructed
12	Turner & Townsend / CEC resources	0	0		0	0	0	0	0	Ongoing
13	Shared recovery vehicle	0	0		0	0	0	0	0	Not taken forward
14	Road re-construction depth	0	0		0	0	-700,000	-700,000	-700,000	Principles instructed, saving subject to site conditions
15	Design freeze north of York Place	0	0		0	0	0	0	-250,000	Infraco design costs expended
16	Reduced requirement for storage	0	0		0	0	0	0	-1,000,000	Included in CEC budget code
17	Lay off TM at Forth Ports/Leith Walk	0	0		0	0	0	0	-180,000	TM not included in Infraco budget provision
18	Roseburn Viaduct Cladding	-308,004	0		0	-308,004	0	-308,004	-300,000	Instructed

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#### **Infraco Cost Report Section 5 - Opportunities**

Ref No	Description	Approved Changes	Changes in Progress	Anticipated Changes	Contribution s	Secured	To be secured	Total Opportunity	Value per CS report Jan 2012	Notes
19	Delete Crew Relief Facility	0	-70,000		0	-70,000		-70,000		Instructed
Total		-4,101,004	-770,000	0	-8,716,077	-13,587,081	-6,752,091	-20,339,172	-22,040,000	

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#### Infraco Cost Report Section 6 - Credits & Contributions

Ref No	Description	Included in Contract Sum	Approved Changes	Changes in Progress	Anticipated Changes	Total Forecast	Previous Period	Change from Previous	Contributio n Received	Notes	Section Code	Change Code
01	Edinburgh Gateway Feasibility	860,000	82,995	0		940,000	940,000	0	SAMPLE	£1.2m in total. Remainder of the costs included in CEC sections of the project budget.	05	08
02	New Ingliston Future Proof measures	540,000	0	0		540,000	540,000	0		This contribution will be offset by a land cost reported within the relevant section of the CEC cost report	07	08
03	Henderson Global - Cathedral Lane substation	166,404	233,596	0		400,000	246,549	153,451		Full extent of agreement with Henderson Global to be established. Allowance assumes all design costs and proportion of construction costs associated with future substation will be borne by Henderson Global. Cost of £470k has been submitted to Henderson Global	01	08
04	RBS Tramstop	500,000	0	0		500,000	500,000	0		Allowance included subject to final agreement with RBS	07	08
05	St Andrew Square Public Realm design		133,075	0		133,075	133,075	0		As per agreed change value. Assumed to be recovered from separate budget	01	08
06	Forth Ports		0	0		0	0	0		Forth Ports work removed from scope - no further contribution from Forth Ports assumed	01	08
07	CEC Miscellaneous. Mainly George Street CEC costs (£298k)	318,213	0	0		318,213	318,213	0		CEC finance have confirmed that a credit has been received in the amount shown. The extent of the workscope associated with this credit is not clear.	01	08
80	Network Rail - Haymarket station refurbishment	0	13,000	0		13,000	121,315	-108,315		Majority of this work now being carried out by Network Rail. Remaining allowance for wall to crew relief facilities	02	08
09	Contribution from CEC for public realm work (granite setts) at St Andrews Square	1,000,000	0	0		1,000,000	1,000,000	0		No change in scope allowed for - setts funded by CEC	01	08
10	Network Rail - Scottish Power Cable diversion - Haymarket Station (TNC 591)		21,789	0		21,789	50,000	-28,211			05	08
11	Edinburgh Gateway Construction		0	4,850,000		4,850,000	4,850,000	0			05	08
otal		3,384,617	484,455	4,850,000	0	8,716,077	8,699,152	16,925	979,213			

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#### Infraco Cost Report Section 7 - Change Summary

Change Code	Description	Approved Change	Change in Progress	Anticipated Change	Contributions	Total
01	Scope Change	-1,653,380	4,939,000	-515,000		2,770,620
02	PAVs (Utilities, etc)	321,661	-229,070	3,593,378		3,685,969
03	Miscellaneous Client Risk Items	10,000	210,000	0		220,000
04	Time Delay	0	4,541,161	0		4,541,161
05	Project Contributions	0	0	0	-8,716,077	-8,716,077
Total		-1,321,719	9,461,091	3,078,378	-8,716,077	2,501,673

#### Notes:

Some CE's have costs which relate to more than one change code. In such instances they have been allocated to the predominant reason.

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## Infraco Cost Report Section 8 - Period Movement

Ref No.	Description	Approved Off	Approved On	In Progress Off	In Progress On	Total
516	Additional Water main requirement at Depot and Mini Test Track	51,282		-51,282	0	(
534	SP Insurance Ducts - Install Insurance ducts at various locations	5,637		-5,637	0	(
543	Haymarket H1 - Utilities affecting the construction of OHLE foundations	0		0	-14,283	-14,283
547	Haymarket H1 - Third Party (McNicholas) affecting ability to progress the works	0		0	439	439
554	St Andrew Square & Shandwick Place - Traffic Management Requirements	0		0	10,491	10,49
557	Haymarket 1 - OLE Base Relocations (Design mods)	0		45,000	0	45,000
572	Cathedral Lane Substation - Retaining Wall Design	26,013		0	0	26,013
575	Haymarket Station - Take Down Viaduct Staircase and Parapet. TNC now withdrawn - Network Rail carrying out work	0		-121,315	0	-121,31
590	New cycleway from The Mound into Princes Street	0		0	-50,000	-50,000
591	Diversion of Scottish Power Cable at Haymarket Viaduct	21,789		-50,000	0	-28,21
595	Haymarket Viaduct - Deletion of fitting out of Crew Relief Facility	0		-70,000	0	-70,000
596	Section 1D - Utilities clashing with manhole 1D/NO4/03	0		0	-7,374	-7,374
600	Shandwick place - OLE bases affecting utilities (Piling)	0		0	183,941	183,94
604	St Andrew Sq - OLE bases affecting utilities (Piling)	0		0	7,593	7,59
605	Depot - Sub-Station Switching	0		80,000	0	80,00

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### Infraco Cost Report Section 8 - Period Movement

Ref No.	Description	Approved Off	Approved On	In Progress Off	In Progress On	Total
606	York Place - Waverley Bridge - Works Delayed and disrupted as a result of works carried out by Third parties	0		0	26,272	26,27
607	Delete 110v sockets on On Street Tram Stops	0		0	-4,500	-4,50
608	Delete 110v sockets on Off Street Tram Stops	0		-16,500	0	-16,50
609	Traffic Management provision in section 1A	0		130,000	0	130,00
613	Temporary Bus Station at St Andrew Square/Waterloo Place - design	50,000		0	0	50,00
614	Rothesay Place Traffic Management Amendment	0		0	10,000	10,00
615	Haymarket Viaduct - design wall for blocking off void under the bridge deck as a result of the crew relief facility being omitted	3,000		0	0	3,00
616	Haymarket Viaduct - construct wall for blocking off void under the bridge deck as a result of the crew relief facility being omitted	10,000		0	0	10,00
Total		167,720	0	-59,733	162,579	270,56
nticipated	Change			-295,000	-2,998,277	-3,293,27
pportuniti	ies .				557,909	557,90
lovement		167,720	0	-354,733	-2,277,789	-2,464,8

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## Utilities Cost Report: Section 1 - Utilities Summary

		Buc	dget Informat	ion	i	Committed				Forecast				l Party butions	Vari	ance	Actu	als
		A	В	C = A + B	D	E	F=D+E	G	н	i i	J	K=F+G+H +I+J	L	M = K-L	N = M - C	O = M / C - 1	Р	Q
		Original Budget	Budget Variation	Current Budget	Original Contract Value	Approved Contract Changes	Current Contract Value	Changes in Progress	Anticipated Change	Opportunities	Risk / Provision	Anticipated Final Cost	Estimated Contribution Value	Anticipated Final Project Cost	Budget Variance (Value)	Budget Variance (%)	Cost of Work Done	Outstanding Amount
	Post Settlement Utilities	2,912	4,861	7,773	2,912	4,861	7,773	0	10,839	0	C	18,612		18,612	10,839	139.4%	5,032	2,741
	McNicholas	1,812	4,763	6,575	1,812	4,763	6,575	0	5,747	0	C	12,322	0	12,322	5,747	87.4%	4,147	2,428
01	Conflicts	1,812	2,547	4,359	1,812	2,547	4,359		2,822			7,181		7,181	2,822	64.7%	3,020	1,339
01A	Drainage		444	444		444	444		353			797		797	353	79.5%	14	430
02	Legacy Works		500	500		500	500		754			1,254		1,254	754	150.8%	404	96
03	Standby Team		0	0		0	0		0			0		0	0		0	0
04	Management Team		549	549		549	549		898			1,447		1,447	898	163.6%	356	193
05	Design Team		692	692		692	692		872			1,564		1,564	872	126.0%	334	358
06	Accomodation	1	31	31		31	31		48			79		79	48	154.8%	19	12
	Statutory Utility Companies	0	1,198	1,198	0	1,198	1,198	0	2,392	0	C	3,590	0	3,590	2,392	199.7%	885	313
01	Scottish Power		126	126		126	126		273			399		399	273	216.7%	73	53
02	Scottish Gas Networks		55	55		55	55		189			244		244	189	343.6%	20	35
03	Scottish Water		505	505		505	505		1,011			1,516		1,516	1,011	200.2%	440	65
04	Virgin Media		104	104		104	104		208			312		312	208	200.0%	80	24
05	Verizon		20	20		20	20		0	The state of the s		20		20	0	0.0%	0	20
06	Cable & Wireless		49	49		49	49		143			192		192	143	291.8%	30	19
07	Fibrenet		250	250		250	250		-56			194		194	-56	-22.4%	194	56
08	BT		89	89		89	89		604			693		693	604	678.7%	45	44
09	Siemens		0	0		0	0		20			20		20	20		3	-3

#### Comments:

All values are in £k.

Conflict resolution forecast to complete based resourced schedule. Legacy works forecast based on current budget. Work is iongoing to establish the full scope.

#### Risk

Refer to Risk register for risks identified against McNicholas programme

All risk is held at programme level. This section of the cost report makes no allowance for risk.

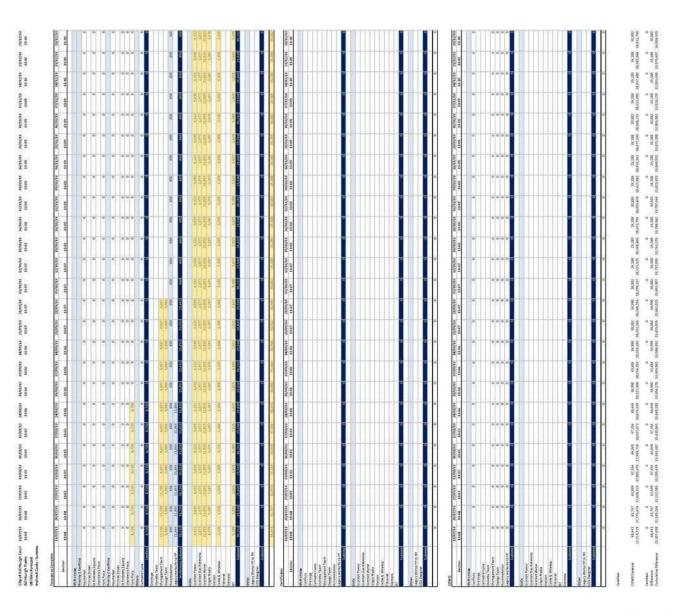
Refer to the outputs of the QCRA/QSRA for further information on

#### Actions

Full forecast of legacy scope of works to be carried out once scope is properly defined.

21/63/12	BATTEL STREET	25 H	1000 1000 1000 1000 1000 1000 1000 100	24,533	28(50)25				9	23/69/02				247,2117 A,524,678 6 8 847,237
अवस्ता अवस्ता अवस्ता अवस्ता वस्ता होते. तथा अवसा अवसा अवसा अस्ता अस्ता अस्ता अस्ता अवसा अवसा अस्ता अस्ता अस्ता सर्व सर्व तथा तथा तथा तथा तथा होते होते होते होते होते होते होते होते	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	200 100 100 100 100 100 100 100 100 100	8591 8 85	285,000	rout they sale		8			अस्त्रात अस्त्रात लोकोत प्रकात अस्त्रात अस्त्र अस्त्रात अस्त्रात अस्त्रात स्थात			0 4	18,771, 1278,602 1
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Appendix 4 – Change Log



Infraco Contract
Change Control Register - Period 1
Date Issued: 26/04/2012

INC. PI	PMC TCO No.	O No. Lucation	Description	Reason For Change C	On Street	On Street / Chure 88 / 181 Change		Change Category Bu	Budget Cost for 1	Date TMC	Letter Ref	Date Estimate fue	Date E	Estimate Change Estimate Change		Time Date I	Date Issued Approved BY	wed BY Date	e Agreed Cost for	50.0	Date (CQ) Comme	9
	i					nstruction				The state of				)				Reject				
105	001 20	502 Hawthornerske Cycle Link	Charge the design to widen the footway alongside the south side of Lndsay Road	Historic Post Mediation Change	pa Street	Cause 86	AS/BIAG	C/R N/A	a a	17,02/99/17	# CORR 7787 N	W.A.	05/08/2011	15'00'0'25	10.00	1/61	D 1102/01/61	CEC 29/00/2011		1,70,020,51 24/1	24/19/2011 Prevouly PWTRC001	
72	602 20	Ocean Drive Footway	James of the design of Ocean Drive to reinstate the footpath to the north of Ocean Drive		in Street		AS/ISM6	85		-	CORR 7786	NA.	15/08/2012	£10,238.82	60.00	NVA				200	Previou	
583	15 600	S15 Depot Access Bridge	Amend the design of the OLE at the Dapot Access Bridge to enable contraction of the Desot	Historic Post Mediation Change	Off Street	laure 60	AS/GMG	5		21/06/2011 IN	WF CORRETTES IN	N/A	04/08/2011	169,223.43	00:03	14/31	24/1/2611 0	OEC 38/11/2011		£67,645.03 30/A	30/11/2011 Previously PWTNC 063	90
200	504 50	SO6 Blentuem Place	Review of the banned right furninto Blenham Place as part of the desern for Section 1.2 mask		On Street.	Clause 80 A	AS/GIMG	5		NI 1192/99/12	NF CORR 7788 N	N/A	05/08/2011	646,247,09	00:03	19/10		OEC 20/10/2011		£45,247,09 24/1	24/19/2011 Previously PWTNC 094	
505	15 500	513 York Place Terminal Point	Production of a feasibility report, initial feasibility design for option it.)	Historic Fost Mediation Change	in Street	08 3378	AS/GMG	85		20/07/2011 IN	UF CORR TRIT	15/88/5011	19/10/1011	6228,652.80	60.00	34/13		GEC 24/11/2011	7011 (238,653.6	9.0	25/11/2011 Prevousy PWTNC0055	
N.	900	\$03 The Mound	Design for providing a new cycleway from the Mound to Princes Street	Historic Post Mediation Change	on Street	y galasma	AS/GMG	85		21/06/2011 IN	NF CORR 7789 N	WA.	05/08/2011	19,436.93	00:03	19/61	1197/97/61	GEC 29/10/2011		69,436,93 24/3	24/10/2011 Prenoutly PWTNC-086	
505.1	908	593.1 The Mound	Design for providing a new cycleway from the Mound to Princes Street		in Street	gg asre	More	5		21/06/2011 IVO	W CORR 7789 N	NA.	23/01/2012	17.899.11	00'03	30/01		CEC 08/05/2013		61,669.71 30.00	10/81/2012 Additional to tCO 503	
507	007 50	504 St. Andrew Square	Provide a delification report and completion of the St. Andrew Square Public beam design.	Hettonic Post Mediation Change	Juens uc	James 88 A	AS/314G	150	n All	21/06/2011 Ind	NF CORR 7750 N	1/4	23/08/2011	1133,075.48	00'02	17/61	1197/97/61	GEC 20/10/2011		£133,075.48 24/2	24/28/2011 Previously PWTR0.007-t00 504 Rev A (squed 15/12/1)	av A (squed 15/12/11.
507.1 6	100	St Andrew Square	Design completion information to reflect input from Informal	Design for future use by CEC	On Street	Qante 80	at	5	(80)	29/63/2012 INS	NF CORR 8719	26/64/2612				04/04/2012		CEC 04/04/2012	2012		MOTE RETURN DATE OF ESTIMATE OF 26TH APRIL	E OF 26TH APRIL
88	013 20	507 Eacthed Avenue	Obtain EAL approval for the highways design drawings at Eastfield	Historic Post Mediation Change	Off Street	Cause 89	AS/GMG	3/0		11/07/79/11	NF CORR 7804	04/08/2011	05/08/2011	110,025.09	00'03	19/61	13/18/2011	OEC 20/10/2011		£18,025.69 24/1	24/19/2011 Previously PWTNC-008	
695	15 800	519 Cathedral Lane Substation	parameter stam cropping. Design of Cathadr at Lane Substation	Historic Post Mediation Change 0	in Street	gg sine	AS/SMG			12/67/2611	0068 7799	02/08/2011	09/11/2011	1233.595.67	00:03	13/21	13/2/2011	OEC 15/12/2011	71017	100	15/12/2011 Previously PWTREC 089 - Instruct	Sto proceed in TNC letter
1	011	Muraytejd	Murraphed Accommodation Works	Change Withdrawn			+	200		ı							H	Н			Withdrawn	
119	010 21	511 Gogar Lane s	Water Connection from Gogar Lodge to the landowners new estilicters		Off Sheet	ause 86	AS/GN/G	80		13/67/2011 IN	CORR 7815 N	1/4	14/11/2011	15,856,29		W/A	11	187 21/11/201	6	65,750,46 ZL/E	1/2011 Previously PWTNC-011	
-		Ocean Terminal	Re-design of Opean Terminal Bypass Road		Din Straet	pause 88	AS/GMG				-	WA.	25/08/2011	(59,685.15	00:03	1761	19/10/2011	OEC 20/10/2011		123,685.15 74/1	14/18/1011 Previously PWTNC011 - t00 595 Rev A issued 24/82/12, agreed TOO neturned by 865 9/03/12	er A issued 24/h2/12, 12
EUS	529	S256 Various	Revened design to minmise utility diversions / zonflicts - used for tith transfering and this holies:	Historic Poot Mediation Change	On Street	lause 80	st.	3/0	£480,000.00 20 61 (A		INF CORR 7835	arious 0	19/11/21	(43,547.87		115/21	D 1100/21/51	CEC 21/12/2011 CEC 20/02/2012	1165,870 2165	6	96/01/2012 Presidualy PW7PoC013 - Estimate being reviewed for A&B and C&E for design works (covers A&C,D	<ul> <li>Extinuises Outstanding for 13 and all and C&amp;O, tCO 5264 issued 20/92/12 art A&amp;C, D)</li> </ul>
	915 52	526 Various	Revised design to mirenise drifty diversions / conflicts - used for sitt rendring and trial hides		On Street	chedule 45	až.	9/0	30/4	1102/60	25W.084	arious h		N/A		15/0	15/12/2011				N/A 13E is now a FW/ being actioned under Schedule Part 45 ROO3 36A issued 30/02/12 for deagn works	ander Schedule Part 45 gn works
516 6	016 55-	554 Various Edinburgh Gateway	Utility Mapping Edinburgh Gateway 33kV Cable Protection	Historic Post Mediation Change 0	On Street		AS/GIAG AS/GIAG			N 12/02/2022	CORR 7825 CORR 7828	17/08/7811	15/22/7011	692,756.07 n TNaC-531		27/02	73912	GEC 27/02/1012		192,755.07 29.fb	2/2012 AGREED Previously PWTNC 015 - Instruct	Sto proceed in This letter.
	017 56	S65 Depot & Mini Test Track	Additional Watermann equirement at Depot and Mins Text Track		Off Street	Clause 88 . A	AS/GMG			91 1197/69/88	UF CORR 7893.		13/12/2011	00.01	ES1,281,72 N/A	16/04	16/04/2012	OEC 24/04/2012		451,281.72	NOW SUPERSEDED BY INC 531. THC VALUE AGREED, TOO RAISED & APPROVED CEC.	& APRIOVED CEC
1	9110	-	Additional BT Clorks or Dance and Mini Task Track			+	ACASAAS			50,500,700.1	CO00 2644	-	12/03/2011	20.00	13 300 66		1	+	1	67 055 05 15 M	1 (565) Section of a State of Section 1	Alter managed in This last as
0.00	070	9 18	Application of contacts to copies and mental text of discount of the contact of t		On Street	and another	out o fee			00/00/00/00/0	TOUR TOUR	00) 11/1011	10777707	200	10,400.90	+				adge reade		restruction to proceed at the requirement of the recurrence of the restriction of the res
-		World place	Street buncher - SEE THE 306 (WITHORAMM)		in Gross	1	1			19/89/3051			İ	1		- 40	+	300	+		Provinced PW/TNC 019 - Withdra	n (Daniscates 505)
520	52 600	553 Depot	Ville chamber access and alteration works to 800mm water main at the Depot	Historic Post Mediation Change	Off Street	d. 08 assets	AS/GN/G			18/05/2011 IN	yF CORR 7729	13/96/2011	24/10/2011		4105,786.20	16/91	16/02/2012	CEC 20/02/2013		C105,326.16 28/h	2/2012 Previously tHC-137. Estimate reviewed and issued back to BBS with comments, signed TCD returned by BBS 3/03/12	wed and issued back to sturned by 865 5/03/12
		Haymarian	1 emporary Accommodation	To provide accommodation for Mcfelcholas	in Street	hodule 45	FR.	10	12,976.75	NI 1197/01/10	CORR 7926	1100/11/10	14/11/2011 N	4	£4,51,7.00	MA		187 07/20/	72011	N/A		
al I		Colors on agent are special and	road Necestruction	0	10022000	checuse 42	ISM/ NO.		_	_		02/41/2011				07/4 (0.20		\$c. 07/20/20	2011	Nich	RIJIW - REISSUE AS REVA ONCE ON STREET THE 584 FOR ALL ON STREET RAISED	ON STREET THE SMI FOR
100	030	Haymariet 1.	Additional CBR / Plane Techniq	0	2ri Strael	chedule 45	at		00:000'013	1102/01/40	NF CORR 7928	02/11/2011/0	osts induded in	n Ste investigation						MA	CONSTRUCTION	FEN TO 522 FOR ROAD RE-
525 6	019	Augort to Gyla	Mil. Dies gr. Finalisation (also includes Construction) site Access for Remedial Works	No.	Off Street	Cause 88 A	S/GMG		630,000,00	80/89/2011 INS	CORR 7905	26/20/2011 6	10	4		010	+				NOTE - 505 PLANNED SUBMISSION DATE 23.4.12 SUPERSEDED BY 5.25.4.	M DATE 23.4.12
	956	Argert to Gyle	Site Access for Remedial Works		If Sreet	Salasa 80	S/GMG		(50,000.00	22/31/2011 IN	CO88 7578	23/01/2012	14.000,000,000		10,000,00	6170		200 400	2307.0	2000	SEETING 576 FOR UPDATE	130 [1]
-		Ingliston	rean series is supposed years, and the diversion of approximately 120m of 10°s see I pgs main to accommodate the new	0	Off River	lause 80 A	AS/GMG	5			0167 0000	100000000000000000000000000000000000000			40.000	1		77/00	200	1000	GE - AGREE COSTS WITH 885, ISSUE INC/TCO	DETNIÇTCO
	_	- indaymartait 2	Calchurgh Tram at inglistion Sitt french excavation to validate utilities			Schedule 45	31	0//0	11,345.00	N1 1101/01/81	CORR 7923	11/11/0011			£50,000.00	N/A		1			19/10/2011	
675	822 824	Gogar Castle Access Road	a Access Road tran	8	Off Street,	_	A5/0/MG	5		26/10/2011	INF CORR 7944	21/11/2011	15/17/511	239,401.86	122,728.57	:VSI	15/17/2011	OEC 16/12/2011			1/2012 Previously issued as TNC 129	e /2
3K)		30	option 2.		Off Street		ASJOING	8/5		27/10/2011 IN		22/11/2011	18/10/2011	£30,458.40 PW		N/A	40			0 0	6	
0	014 53	532 Ednburgh Gateway	ddivice famporary Works design	Early implementation of the temporary works will of enable the RTW works to commence as soon as the	Off Street	parse 88	AS/GN6G	2/0		en 1192/01/92	10068 7951	1101/21/60	07/12/2011 14		£790,185.14	d es		11/12/2011		£9,349.00 21/1	11/11/1911 Works nequested and cost appro	ed by Transport Scotland
	140	Princes Steet	Temporary traffic management desen - WITHD RUMNI	O money 3 and are wrong control and a second and a second of the second	in Street	8	10000	9/0		21/10/2004		1000000000	2	# 46 S.44 NO	50	36.51	36.0.0.0000	701/18 33	1000	N/A	Withdrawn Annous 20 This amount 5 ments	and thu TBAT 6 95
534	941 52	556 SP Insurance Dutts	notal insurance ducts at locations and informations and sizes as specified		Off Street	Pause 80 . A	AS/SMG	201	610,685.00	31/10//01/18	INF CORR 7953	28/10/2011			35						W/GE - FURTHER CLARFICATION REQUIRED	REQUIRED
238	049 51	Princes Street 517 System Wide	Sübrem Water Main Devertion - rev 3 dwg. Tramstop Cabinets - reduction in 10 years maintenance liability	rg/heating repts, cabinets to be iP 55	Off Sheet	Clause 88	MO/RIL LM	SVB	45,181.42	09/11/2011 IV8 09/11/2011 IV8	CORR 7959	28/11/2011				17/88	T 1105/17/88	T&1 T&1 07/12/2011	73011	10.00 09/L	(A Replaces tNC 533 89/12/2011	
-		Haymarlet 3	Additional visit of Ter plane to Facilitate slewing of 81 ducts- WITHDBAWN.	On a Constitution of the C								28/11/2011				88/11/28	75617				Withdrawn	
	948 \$25	328 Depot	Tramwach Continuous Mode - Requirement for additional hand lances washers	The tram wash continuous mode may leave a small of residual area to be dismed	Off Street	Sause 80	GMG	5	00:03					00'63		N/A	F	187 13/12/2011	72011	1,6100 13/1	13/12/2011 Previously issued as TNC 118 and TNC 118A. Cost neutral si ary savings / costs are included in the Settlement Agreeme	TNC 118A, Cost neutral as the Settlement Agreement
1881	648 520	520,1 Depot	Transvert Continuous Mode - Requirement for additional hand lances washers	The tram wash confinuous mode may leave a small or residual area to be deamed.	Off Street	Dause 80	GMG	95	00:03					10.00		N/A	1	12/01/2013	2102	12/0	12/01/2012 Previously issued as TNC 118 and TNC 118A. Cost neutral any savings / costs are included in the Sattlement Agreem	THE 118A. Cost neutral as the Sattlement Agreement.
525	020 52	529 System Wide Co. Socion 7- Plot 384	Delay in sgring - impact on commenment and completion Omit andicionary works	Change in Beguitements for landscape works	ff Street	Serve 80	GE AS/GMG		-1162,953.61	21/12/2011 IN 14/11/2011 IN	CORR 8051 A	VA 08/12/2011	28/10/2011	£4,759,000.00	61.99,457.70	28/76	/2012 0	CS 21/12/	2011	21/267 14/21/	2/2011 Cost still to be determined by Co 1/2011 ICO issued under Clause 80.15 av	n Seuth Landstad with ECOSORA
							2	5 1				0.000								100		
	1770		City Chamber - Annandae Street Communication Linis, Unige of CC available BT4 ines to avail provision of direct FO link from Princes Street to City Chambers.	0	no street	de de de	d	5		12/01/2012   1/0	6000 8000 A	06/02/2012					-	-		t d	Confirmation received from CEC Employers Requirements are act AGREE & RAVE TCO	of from CECTING changes to the ents are acceptable IN-RE-VISIT,
543	025 74/0	WA Haymarker HI	Design or new Upper Path - WI Hoppways Utilities affecting the construction of OHLE foundations	0.0	on Street	(A	000	PAV	£46,000.00				14/11/2011 70	4				-		N/A	Pricing Assumption Variation, Se	See TNC 680 for Standwick:
	15 110	512 (dinburgh Park	Extension to Edinburgh Park Office to accommodate CEC/Transport Scoland		Off Sheet	Sause 80	30	8/N	d		INF CORR 7384	15/15/2011				31/16	31/10/2011 O	GEC 31/10/2011		6159,300,00 21/h	21/31/2011 Cost determined by Colin Smith	
9 35	032 No	MA STEWARD SET STEWARD	United affecting the astray to remove the clearance chees including initial arten	In accordance the Settlement Agreement, Schedule Of Part E.E. aughtors to Settlement. On Street Systems and Track of the American Color and Track of the Ameri	on Street	tredule 45	al at	A 5	120,40200 14 121,40200 14	18/61/2012 III4	CORR 8387 n.	4	06/01/2012	123,482.00		e/ha	P	187 18/01/2012		#21,482.00 18/8	18 (81/2012) Although On Street, works the int dauce 80 change at the request	e instruction was issued as a set of 985
547	035 NA	4/A Haymarlet HI	Third Party affecting ability to progress the works.	and traceworks only stem 6	in Street	4.4	Į.	PAV	£30,000:00	774	2	100					H	+		N/A N/A	Prioring Assumption Variation Prioring Assumption Variation	2
1	0.00	WANTED THE STATE OF THE STATE O	83 FROM CARLO SETTION FORMAT OF UNITED IN		The secretary	-		Table 1	T STORY OF THE STO									100			Principle Control of the Control of	

COSTS NOW COLLATED AGAINST TCO S21 B		COSTS NOW COLLATED AGAINST T CO S21.0	tion	don		440	instruction given by Colin Smith and Issued	e CTBA		CO 521 Rev A Issued to increase Not To Exceed £406, Issued approved CC 27/2/11, returned signed by Bib 5 9/63/12	CO 521 Rev B ISSUED TO INCREASE NOT TO EXCEED TO	100K, AGREETHIN COST, TNCS-19, 550, 562 AND 563 AGAINST TCO 521, TO CROSS MATCH WITH BBS PINC-45	88.15 and updated with tCO522A.		TCO ISSUED 3 2.12 AS N/PXCEED 1 56,438.11	OMIT WILL COME THROUGH SCHEDULE 45 PERIOD END PROCESS, MONITOR	\$ - N	Instructed by Colin Smith COSTS NOW COLLATED AGAINST TCO 521 B	COSTS NOW COLLATED AGAINST T CO 521 B	tion	Yorks requested and cost approved by Transport Scotland		sold 12/01/12 increasing value from £2,650 to	he requirement			RAYSED TO INCREASE NOTTO EXCEED VALUE TO E 10.50 - ON HOLD		TOO RASED TO INCREASE NOT TO EXCEED VALUE TO E		W - H MUNIO TASKED WITH GETTING AGREDAENT FOR DOSWE	SEWRED		(D) CHOC TOWN MARCH 2012 CO	BYESTIGATE, AGREE & RAISE TO THE NOW WITHDRAWN NETWORK BAR WITH UNDERTAKE	WORKS TCO NOW RAISED FOR AGREED VALUE & APPROVED CEC	RS ATH MARCH 2012, SR TO GET	AGREMENT & RAISETCO (UNKED SEETNC 575)				3/03/2012, G. McGnlay of 16.1			885 9/63/12	ORIGINAL AND REVISED TWO.	5 issued to 885.13/63/12, IW to ork: with FL on agreement of design	med by 885 (email) 700 551 R445ED D PURPOSES, AS ON STREET TOO	OD REQUIRED. CO 500 RETURNED SKINED BY BBS 161H MARCH 2012	TCO ISSUED, NEGOTIATE WITH NETWORK RAIL ON REFUND,	EMOVE
S NOW COLLATED		S NOW COLLATED.	ng Assumption Van	ig Assumption Varia		Wording Amended	meation of instruct	by letter to BBS 100 521 issued with value £ TBA		221 Rev Alssued to proved OEC 27/2/23	521 Rev B ISSUED T	K, AGREE FINAL CO.	sound under Clause d 2nd Feb 2012	The second second second	ISSUED 3 2.12 AS N	YALL COMETHRO	EE ABOVE	s NOW COLLATED.	S NOW COLLATED.	Assumption Varia	s requested and co		A1550pd 12/01/12 in	(Strang amending)			RASED TO INCREAS IB. 80 - ON HOLD		RASED TO INCREAS 0.90	oved by Colin Smith	H MUNRO TASKED	MENDED THE BEING PREPARE		SED THE NOW ISSU	STHCATE, AGREE &	KS NOW RAISED FOR A	AATE BECOME DOM	EMENT & RASETO	OR ISSUED		drawn	938 issued to 8851 aring Estimate.			Signed TCO naturned by 885 9/83/12 TCO ISSUED AS # TB.A	L. ONG EFFECT OF BUSHED, GET AGRE	Revised TNC and TCO 555 siss check on TNC return, work n	value change confin	REQUIRED SAS RETURNED SKI	ISUED, NEGOTIATE	WARQUESTED CAB
		13/11/2011 0081	Priori	A Prior	1102/11/0	A TRIC	Opni	13/12/2011 100:	_	29/61/2012 tcc 8 ap	05/64/2012 100	~ ~	2011 0		83/62/2812 TCO	A OWN	7.05	21/12/2011 Instr 05/01/2012 COST	19/01/2012 0081	NAVANI PRO	21/12/2011 Worl		12/01/2012 Rev.	19/01/2012 Rev E	11/01/2012	1/01/2012	700 50,00		12	11/01/2011 Appr	Wso Osw	18/01/2012		SEVI			illas	2/02/2022	TUT	9/02/2012	9/82/2812 With	A. SNCS	N.		18/01/2012 Signs 71/03/2012 TCD	R/W/ ESTA	3/03/2012 Reve check	0/62/2012 Zero 8.RE	9/62/2612 TCO	2/62/2012 100	NS N
Contract			280	No.	169,130,85 3	5/04		SEE521.7 1		SEE 521.2 2	TBA		-		456,428.11 0	NN.	Obs	£28,000,00 0		610,069.00	12,650.00 2		£3,350.00 1	想	00	110,003.00		£10,000,00		179,200.00		65,000.00			N/A	£36,787,81		457,984.00		105,008.00 8	100,002,00	N/N	NA NA	NA.	431,565,00 2	TBA	7/	10.00	1150,000,00	£21,788.76 B	Į.
Rejected of		23/11/2011	=		02/2012 12/2011 N/A	12/2011 N/A		35/2/2011		27/02/2012	04/04/2012		13/2/2011		03/02/2012	02/2013	54/04/2012	23,7,2,720.11	09/01/2012	11/02/20/10	12/01/2012		12/01/2012	N/a	11/01/3013	01/2012	16,04/2012	11/01/10/11	16,04/2012	1102/01/18		18/01/2012		26/03/2012	N/A	012	6170019	02/2012		4		12/03/2012	19/03/2013	24/04/2012	02/2012	14/2012	12/03/2012	27,3013	02/2012	84/2012	i e
		787 23/	=		GEC 03/	OEC 08/	380	T8T 13/		080 22/	04/		T&T 13/		CEC 03/	OEC 10)	OEC 04/	N/A 19/4 OEC 22/	+	T8T 21/	111		127		T&T 137	187 11/				(S 31/	181	787 18/		OEC 26/			787 97	OEC 03/	530	ORC	000	721 230	OEC 19/	CEC 24	OEC 20/	/hd 330	03.0	080	GEC 277	(\$0 030	
and and					2/02/2012		14/12/2011	a		27/02/2012	04/04/2012		2	4	02/03/2012	9/02/2013	04/04/2012	20/12/2011				ī			4	d		4	16,04/2012	d		19/01/2012	9/61/2012	35,03/2012	19/91/2012	26/01/2012.	001	26/01/2012		9/02/2012	09/02/2012	12/03/2013	19/03/2012	24/04/2012	16/03/2012	04/04/2012	12/02/2012	6/82/2012	27/02/2012	4/04/2012	
Impacations		N/N			8			ON		2	-		r/N	NA	a	8		27	AVA	NA.	-				the	1/N		TN.	2	NV.	n/n	1	- 6		N/A		OT C	100	100	0	000	0.00	22	S-0	3 6	6	1		0 2	_	avoid Future Disruption
(Construction)	0		1								1					90,000.00 TBA	SEE ABOVE TBA										8 1						t		02131491	155,238.44	13 160 51	\$7,984.30		00,000,00	001,004,00			8 - 8	21.565.00			10.00	58,000.00 Mon	£21,788.76 Ung	
(Const					130.85		-	4/81	-	W/A	4/2			61,692.00	(56,438.11	3			+	+		_			A/N	4/6		N/A	_	-				$\parallel$	+	+	+			Territoria (					<b>*</b>			-	Ţ.		
Value Oreign			_		(69)			SEE 521.7		SEC 523.2	TBA			10	136,	N/A	14/4								14/4	NVA		N/A		N/A				$\parallel$	12 N/A														NA	12 N/A	8
Received 011		011	- 0		nj/A	N/A	HIGH.	01.2 NUA	- 3	81.2 N/A.	N/A		012	23/01/20	01.2	16/A 15	N/A St	01.2	01.2	111	012				NA	ruta		NA		N/A		012	210	012	102/03/2013		20,000,000			512	812	12	52	55	012	01.2	2112	approprie	512 Pu/A.	22/69/22	100000
15/12/2011	-	5 19/12/201	N/A		9 26/12/7 8 N/A	6 ny/a	W. W. W.	192/19/90 9		6 06/81/2812	N/A		2 06/01/201	5 06/81/2	10/01/2013	7. n/la - Schedule i	1 n/A. Schedule	2 31/61/2012	-	S 16/81/28	16/01/2013		_		2 N/A	1 N/A		3 N/A		a N/A	10	13/02/2012		2 18/64/2612			0.0000			1. 06/03/2	2 06/83/2	8 n/A- Schedule 45	1. n/A Schadule 45	0 ryla. Schedule 45	12/88/80 8	0 26/84/2013	2 06/04/2	7 N/A Sched	6 20/03/2) 9 N/A School	45 20/83/2	
INF CORR		INF CORR 802	14/04		INF CORR 738	INF CORR 856	TAL CONG COT	INF CORR BELL		INF CORR 8016	NA		INF CORR \$915	INF CORR 881	INF CORR 8033	INF CORR \$13	INF CORR 8721	INF CORR 8650 INF CORR 8652		INF CORR SOA	INF CORR \$548				INF CORR 8862	INF CORR 836		INF CORR 806		INF CORR 8864	INF CORR 806	INF CORR 8389		INF CORR 8262		2	INS CORPERS			INF CORR 813	INF CORR 813 INF CORR 812	INF CORR S18	INF CORR \$191	INF CORR \$25	INF CORR 813	INF CORR 8220	INF CORR \$18	INF CORR 514	INF CORR 8166	INF CORR 816	
21/11/2011		23/11/2011	N/A		12/12/2011	12/01/2012	10/10/01	13/12/2011		13/12/2611	N/A-T00	_	13/12/2011	13/12/2011	18/13/2011	13/02/2013	30/03/2012	21/32/2011	21/12/2011	21/12/2011	21/12/2011				1107/10/21	1137/10/21		12/01/2011		11/07/10/11	12/01/2012	19/01/2012	_	23/03/2012	19/01/2012		26/61/2012			09/02/2012	09/62/2612	13/03/2012	15/03/2012	18/64/2013	13/02/2012	38/69/2012	13/63/2612	20/02/2013	29/82/2012	29/02/2012	
Potential Changes		610,000,00	£300,000.00	£40,000.00	(75,500.00	1380,600.00		£20,000.00		620,000.00	00:000:003		12,400.00	12,600.00		-£700,800.00	SEE ABOVE	£2,443,000.00 £20,900.00	45,600.00	610,860.00	12,650.00		13,350.00	/a	10,000,00	10,600.00	£40,000.00	610,500,00	620,000.00	£79,300.00	£9,100.76	£5,660.00	ā	2000000	NA	660,400,40	41.0 000 014	457,394.00		41,100,000.00	-6308,664.00				61,565.00	48		10.03	4150,000.00	F.887,103	
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To avoid conflict with		A number of utility to by utilising a pilled sol	To allow Prices Street		To assist in the Utilitie To facilitate early acco	To facilitate early aco		Utility Clathes		Utility Clathes	Utility Clarkes		To progress VE propo construction	To progress VE propo construction	Terminal point excluded from the Settler Agreement	Value engineering ind	Statue engineering initiative				Works requested by T	protect the current p both the Edinburgh Ti Gateway onocoals.	Extension of above to	Rewording of too 53 in a second ratios.	To prevent delay by p utilities conflicts in ad	To prevent delay by p	To prevent delay by publishes conflicts in ad	To prevent delay by p utilities conflicts in ad	F-2	-	It is considered more that is currently work similar works to unde	Legacy works following MUDFA Site Investigation shows an unverforce	wall adjacent to the s CEC requirement to e	Proposed Solution	9 9		world undertaken by Transportation with the	Hayesarket Station. To remove unexpend	contract value	Value engineering intrative Value engineering intrative	Value engineering int	Value engineering industry	Value engineering initiative	Value enginearing ind	Value engineering intrative Value engineering intriative	Value engineering ind	Value engineering initiative	To bring parking spap	Value engineering mit Works to enable Mou	Works for Network Rail Sta	
Ourch OLE bises		gn Rewision	nary Surfacing of Track Infills	Tidiversion @ junction of Princes street, and South St. David Street	It Fift until end March 2012		OLL. 1768 DELIGNING PROPERTY GRAND MAIN SERVER Track Work Materials York Place to Newhaven - Price Flang for Phads			Oto increase N/E Value)	OLE Base Reboaltons (Revised TOO to increase N/K Value, and collate.	MAC 45)			nus.	ace finishing	it £0.7m of repairs to road surface finishing (Revison for Street and fire Lighting)	Omit all works at the Forth Ports area OLE Design Changes for On Street. Section (PMC 045) - SEMENS DESIGN.		531) WITHDRAWN12,1.12	nanced design works for Edinburgh Gateway Minimum. Option		ingh Gateway Minimum Option	ngh Gateway Minimum Option	intras Conflicts	tisties Conflicts	Italities Conflicts	coefficts		ed with the entension to the Edinburgh	odeski Place		SEBURN DELTA)	SEBURN DELTA)	adact Staticase and Baranet TrackOW	SYNNG OUT WORKS an Remedial Works	Call and Plinth		raffic management	as York Place to Newhavan and Victoria Dock bridge:	furn Via duct Structures		100	ication (Revision following consultation	ing Design Changes	ring Design Changes (Revision for	130	2	and canopy	at Haymarket Waduct	
Amend the design of the St. Johns	The state of the s	Shandwick OLE & Landscope Design Revi	2011 Christinas Embargo - Temporary Surfacing of Track Infilis	BT diversion @ junction of Prince	SDS to provide the services of Ma Traffic Management Requirement	Traffic Management Reguremen	Track Work Materials York Place t	OLE Base Refocations		OLE Baze Refocations (Revised TCO to increase N/R Value)	OLE Base Relocations (Revised TO	other TNC's to Gross Match with I	Provision of a Cab Tachnisan	Provision of a CAD Technician	Detailed Design of York Place Tern	Omit £0.7m of repairs to road sort	Omit £0.7m of repairs to road sur Traffic Lighting)	Omit all works at the Forth-Ports OLE Design Changes for On Stread	WORKS Grouter Pile Caps	Workste Modeling - TRC8, TC0 (531) WITHDRAWN 12.1.12	Advanced design works for Edirib.		Advanced design works for Edirburgh Gateway Minkmum Option	Advanced design works for Edinburgh Gateway Minimum Option	Ducting Design Changes Due to Utilities Conflicts	Drainage Design Changes Due to Utilities Conflicts	Orainage Design Changes Due to Utilities Corflicts	Design changes due to Trackform	Design changes due to Trackform	Additional Running Costs associated with the enter Park, offices	Omit the Ramoval of Traes in Sha	Hope Street Junction Design Retaining Wall Design	Non DDA Compliant Footpath (RO	Non DDA Consplant Footpath (ROSEBURN DELTA)	Take Down Harmarket Station Via	WITHDRAWNINETWORK BALL CAR Rendatement to 250mm Watern	Distance of Sub-Oration Relatation Wall and Plants	St Provisional Sum Allowance	Removal of embargo and revised t	Cancellation of trackwork materials fork Place to Newhaven Omit Stenens work to Tower Place and Mctoria Dock bridge	Delete proposed daddingto Roseburn Maduct Shuptures Ordering sets for on street works	Ordering setts for on street, works	Road Reconstruction specification	Road Reconstruction specification process with CEC and 885)	Descope of Service Vehicle St. Andrew Square - Value Enginee	St. Andrew Square - Value Engineering Design Street, and Traffic Lighting)	Edinburgh Tram Grante Setts De	Stafford St Return of Parking Spaces	Decoping sipport transitop slosk and caropy New cycleway from The Mountinto Princes	Diversion of Scottish Power Cable	
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Description	Cessition of Design Work North of York Pisce	dinburgh Gateway slope option - DESGN	Edinburgh Gateway stop option (revision to Add for complete Design for Duture Project) - DE 900 N	daty	Utifities dis dene with manhole 1D/NO4/83		Ilton Terrace Void	leating Track Stab -constititue Thoru	utilities affecting the construction of OHLE foundations (PiLING SEARCHWICE)	Change of Length of Shelter	Omit PID Poles for Transitops North of York Place	Bux Tradior Interface Specification	Utilities affecting the construction of OHLE foundations (PUNG.)	Adostration Switching (#16K TO 15TH APRIL 2012; WILL GO BEYOND.) F	Works Delayed and disrupted as reault as result of works cannot out by U	tockets on Train Rops	Delate 110v sockets on Tram Rops	raffic Management For Section 1A.	o emers Long Lead Rems	ocavation for Track Slab now by Utalibes Contractor	fram Stops, Branding Changes - ON STREET	emporary Bus Station at St Andrew Square/Witterboo Place - DESIGN R	dcheay Place Traffic Management Jenundment.	Design wall for blocking off, of the wall under the Haymarket vaduct as. Request by AW to block off void onside of the may related builts before constant	r the Haymarket wadoot	
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Appendix 5 – Risk Register

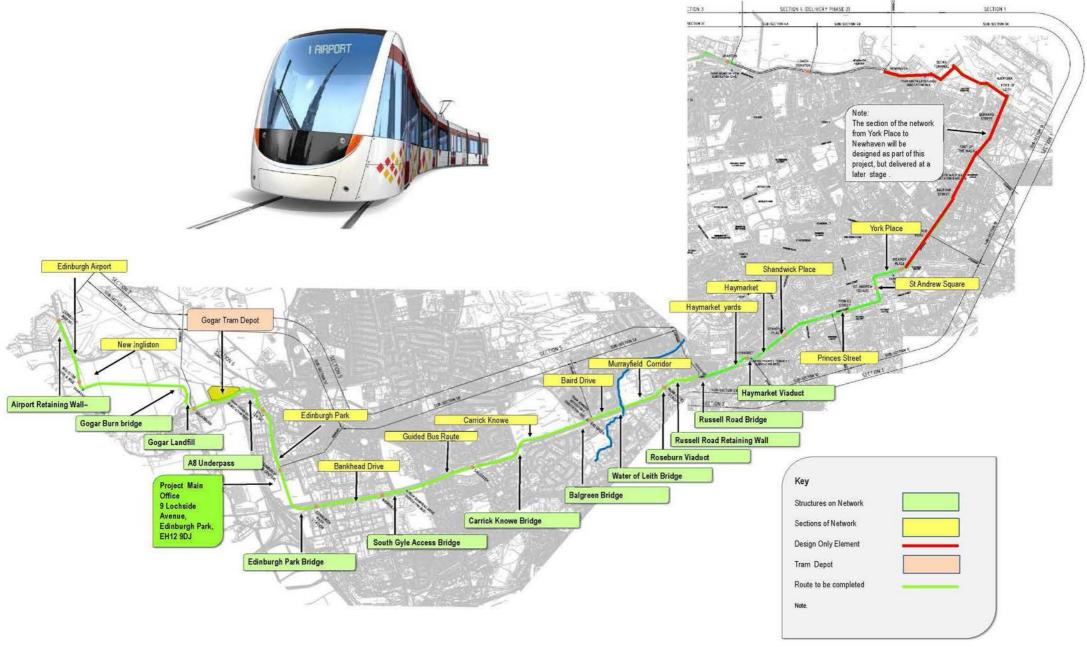
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Appendix 6 – Route Map





Appendix 7 – Acronyms



### ACRONYMS

	Tr	
ACCB	Accommodation and Boundary Works	
AiP	Approval in Principle	
ANC	Advice of Non Compliance	
APPP	Prior Approvals – Detail Design	
APPR	Approvals	
APPT	Technical Approvals – Detail Design	
ARCH	Architecture	
AUXI	Auxilliary Power	
BAA	British Airports Authority	
BBS	Bilfinger Berger Siemens	
BLDS	Buildings	
BRDG	Bridges	
BSC	Bilfinger Berger / Siemens / CAF - previous consortium	
CAF	Tram Provider - (Construcciones y Auxiliar de Ferrocarriles)	
CAR	Corrective Action Request	
CAR	Water Environment (Controlled Activities) Regulations 2011	
CDM	Construction (Design and Management) Regulations 2007	
CEC	City of Edinburgh Council	
CECS	CEC Services	
CfS	Case for Safety	
CHAR	Charette Changes	
COCP	Code of Construction Practice	
COMM	Commissioning Confirmation of Verbal Instruction	
DAS	Design Assurance Statement	
DASB	Design – As Builts	
DaST	Deliver a Safe Tram	
DDAP	Detailed Design Assurance Plan	
DEMO	Demolition	
DEPO	Depot	
DKE	Dynamic Kinetic Envelope	
DoC	Declaration of Conformity	
DRAN	Drainage	
DtTS	Deliver the Tram Safely	
E&M	Electrical & Mechanical	
EAL	Edinburgh Airport Limited	
EART	Earthworks / Embankments	
ELEC	Electricity	
EMC	Electromagnetic Compatability	
ENVI	Environmental	
ER's	Employers Requirements	
ESM	Engineering Safety Management	
FAT	Factory Acceptance Test	
FATs	Factory Acceptance Tests	
GASS	Gas	
GEOT	Geotechnical	
HAZID	Hazard Identification Study	
HAZOP	Hazard and Operability Study	
HIGH	Highways	
HIRA	Hazard Identification and Risk Assessment	
HMRI	Railway Inspectorate	
HS	Historic Scotland	
HSE	Health and Safety Executive	
HV	High Voltage	
ICCO	Independent Certifiers Change Order	
ICP	Independent Competent Person	

IDC	Inter Disciplinary Check
IDR	Inter Disciplinary Review
	TWO DATASET COMMANDED TO A STATE OF A STATE
Infraco	Infrastructure contract
ISA	Independent Safety Assessor
ISRP	Infrastructure Safety Review Panel
ITP	Inspection and Test Plan
JNCS	Junctions
KPI	Key Performance Indicator
LAND	Landscaping
LIGH	Lighting
LOLER	Lifting Operations and Lifting Equipment Regulations 1998
10.11.29.43.240.V.079.11072	The Art II of the Control of the Con
MANA	Management
MECH	Mechanical
MILE	Milestones
MISC	Miscellaneous
MODL	Modelling
MUDFA	Multi-Utility Diversions Framework Agreement
MUDFA	Multi Utility Diversions Framework Agreement
MULT	Multi-Discipline
NCR	Non Conformance Report
NR NA CR	Network Rail
NWR	Network Rail
0&M	Operation and Maintenance
OCC OCIP	Operational Control Centre
and the second	Owner Controlled Insurance Policy
OCL	Overhead Catenary Line
OLE	Overhead Line Equipment
ORA	Operational Risk Assessment
ORR	Office of Rail Regulation
ORS OTHW	Operational Radio System Other Works
PHA PLAT	Preliminary Hazard Analysis Platforms
PM	Planned Maintenance
POWR	Power (Traction)
PSCC	Project Safety Certification Committee
QCRA	Quantified Cost Risk Analysis
QRA	Quantified Risk Analysis
QSRA -	Quantative Schedule Risk Analysis
RAIB	Rail Accident Investigation Branch
RAM	Reliability Availability Maintainability
REL	Railway Electrification
RFI	Request for Information
RFO	Request for Opinion
RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurences Regulations 1995
ROGS	The Railway and other Guided Transport System (Safety) Regulations 2006
RSA	Road Safety Audit
RSAR	Road Safety Audit Road Safety Audit Report
S&T	Signalling and Telecoms
SAC	Safety Application Condition
SAT	System Acceptance Test
SATs	Site Acceptance tests
SCADA	Supervisory Control and Data Acquisition
SDS	System Design Services
SEPA	Scottish Environmental Protection Agency
SEWR	Sewerage
SFAIRP	So Far As Is Reasonably Practicable
SGN	Scotland Gas Networks
SI	Site Instruction
SIGN	Signalling
SIT	System Integration Test
SMS	Safety Management System
SNH	Scottish Natural Heritage
SP	Scottish Power
STAK	Stakeholder
STRL	Street Lighting
STRU	Structures / Retaining Structures
SUBM	Submissions
SUBS	Sub-Stations
SURV	Surveys
	Language and Land

SW	Scottish Water	
TPS	Traction Power Supply	
T&T TCO	Turner & Townsend	
TCO	Tie Change Order	
TM	Traffic Management	
TNC	Tie Notice of Change	
TS TSS	Transport Scotland	
TSS	Technical Support Services	
UCO	Utilities Change Order	
UNC	Utilities Notice of Change	