

## Agenda

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### Joint Project Forum

Wednesday 25 January 2012 at 11.00am  
in the Chief Executive's Board Room, Waverley Court, Edinburgh

- 1 **Previous Minute 12 December 2011** – submitted for approval as a correct record (circulated)
- 2 **Consolidated Project Update Highlight Report – Key points of Progress**

Verbal reports from Colin Smith, Kevin Russell, Alfred Brandenburger and Richard Garner

  - 2.1 Depot Handover
  - 2.2 Commissioning and Integration of Trams
  - 2.3 Third Party Consents and Approvals
  - 2.4 Network Rail
  - 2.5 CEC Approvals
- 3 **Governance – Project Team Structure, Resourcing and Behaviours**
  - 3.1 Certification, Working Decisions and Agreements
  - 3.2 Decisions/Instructions Awaited
- 4 **Utilities**
  - 4.1 Recording and Measurement and Inspection Sign off
- 5 **Cost Engineering Report** (circulated)
  - 5.1 Client Instruction
  - 5.2 Comms Report

- 6 Programme
  - 7 Matters Requiring Escalation
  - 8 Pending Milestones / Project Concerns / Threats
  - 9 Communications Strategy for 2012
  - 10 AOB
- 

**Notes:** If you have any questions about the agenda or meeting arrangements, please contact Gavin King, Committee Services, City of Edinburgh Council, City Chambers, High Street, Edinburgh, EH1 1YJ; ☎ 0131 [REDACTED] e-mail [gavin.king@edinburgh.gov.uk](mailto:gavin.king@edinburgh.gov.uk)

**Note of Meeting**

**Joint Project Forum**

**Edinburgh, 12 December 2011**

**Present:-** Sue Bruce (in the Chair), Dave Anderson (CEC), Alfred Brandenburger (Siemens), Alan Coyle (CEC), Ian Craig (Lothian Buses), Vic Emery, Martin Foerder (Bilfinger Berger), Richard Garner (CAF), Ainslie McLaughlin (Transport Scotland), Kelly Murphy (CEC), Colin Smith (CEC) and Nick Smith (CEC)

**Also Present:-** Gavin King (CEC).

Item No	Subject	Action Owner
1	<p><b>Previous Minute – 17 November 2011</b></p> <p>Colin Smith highlighted that Lothian Buses were now attending control meetings.</p> <p><b>Decision</b></p> <p>To approve as a correct record.</p>	
2 2.1	<p><b>Consolidated Project Update Highlight Report – Key Points of Progress</b></p> <p><b>Verbal Reports from Colin Smith, Martin Foerder, Alfred Brandenburger and Richard Garner</b></p> <p>Colin Smith explained that co-operation between all parties had continued and issues that had arisen had been successfully resolved.</p> <p>Martin Foerder confirmed that recent progress had been good throughout the project. There had been a design problem at Haymarket Yards which was not on the critical path and should be completed in January 2012. Good progress had been made at Edinburgh Park, and there was some progress over the approval of documentation by</p>	

Item No	Subject	Action Owner
	<p>Network Rail. The mini test track and the depot had been completed.</p> <p>Alfred Brandenberger confirmed that the mini test track had been completed a week later than scheduled but two tracks rather than one had been delivered.</p> <p>Richard Garner indicated that progress was good with static testing which had been completed as far as possible and that the mini test track was the next challenge. The next tram delivery was expected to be on 21 February 2011.</p> <p>Ian Craig stated that there was a real sense of enthusiasm with the Lothian Buses staff involved in the Tram project and through the control meetings there was an increased involvement from Lothian Buses. The depot was set to be handed over for management by Lothian Buses on 25 January 2011.</p> <p>Richard Garner confirmed that it was CAF's intention to employ locally where there were the appropriate skills available.</p> <p><b>Decision</b></p> <ol style="list-style-type: none"> <li>1) To supply information on the number of local people employed by CAF on the Tram Project.</li> <li>2) To investigate whether a human element could be utilised in the communications regarding the depot event. In particular whether a story on a driver could be used.</li> </ol>	<p><b>Richard Garner</b></p> <p><b>Kelly Murphy</b></p>
<p><b>2.2</b></p>	<p><b>Commissioning And Integration Of Trams</b></p> <p><b>Decision</b></p> <p>To note that a plan for the commissioning and integration of trams in 2012/13 would be circulated early in 2012.</p>	<p><b>Colin Smith</b></p>
<p><b>2.3</b></p>	<p><b>Third Party Consents And Approvals</b></p> <p><b>2.3.1 Historic Scotland</b></p> <p>There were a series of design changes that required Historic Scotland to be consulted. The intention was to consult on the full suite of changes rather than on each separate issue.</p>	

Item No	Subject	Action Owner
	<p><b>Decision</b></p> <p>To agree that a meeting should be arranged with John Bury (Head of Planning CEC) prior to consultation with Historic Scotland.</p> <p><b>2.3.2 Adjoining Landowners</b></p> <p>Colin Smith highlighted a potential issue with basement clashes on York Place. Design solutions were required to resolve these issues.</p> <p><b>Decision</b></p> <p>To note the update.</p>	<p><b>Dave Anderson/Colin Smith</b></p>
<p><b>2.4</b></p>	<p><b>Network Rail</b></p> <p>Colin Smith stated that the intention was to clear all key documentation needing approval by Network Rail by 22 December 2011.</p> <p>Martin Foerder explained that there had been a 5 week delay due to Network Rail issues but progress had improved since the conveyor belt approach to approving documentation had been approved. This involved all parties working in the same room, completing their piece of work until final approval was given. However, there was only one person from Network Rail working on this and he was set to go on vacation for a month. Two Network Rail staff would be a more appropriate resource.</p> <p><b>Decision</b></p> <p>To ask Network Rail to provide a second member of staff as soon as possible to assist in clearing the documentation for the off-street works west of Haymarket.</p>	<p><b>Colin Smith</b></p>
<p><b>2.5</b></p>	<p><b>CEC Approvals</b></p> <p>Turner and Townsend had been asked to provide a list of outstanding items which were required to be approved by the Council. The aim was to report back that there were no Council outstanding issues.</p> <p>Ainslie McLaughlin stated that Transport Scotland was looking at all solutions to deliver the Edinburgh Gateway without damaging the overall Project programme.</p>	

Item No	Subject	Action Owner
	<p>Discussions were ongoing with Network Rail on whether work could be completed by their sub-contractor and taken out of the scope of the Tram Project or handed back to be completed later. Martin Foerder highlighted that he did not think it was technically feasible to remove the wall from the enabling works and that a decision was required before Christmas.</p> <p><b>Decision</b></p> <p>1) To agree that a catalogue of CEC outstanding issues including the Turner and Townsend list of outstanding remits be compiled and addressed.</p> <p>2) To hold a site meeting on the Edinburgh Gateway if a decision had not been made by the end of the week.</p>	<p><b>Colin Smith</b></p> <p><b>Colin Smith</b></p>
<p><b>3</b></p> <p><b>3.1</b></p>	<p><b>Governance – Project Team Structure, Resourcing and Behaviours</b></p> <p><b>Certification, Working Decisions and Agreements</b></p> <p>Colin Smith confirmed that the certification process was working well but a meeting including Turner and Townsend, CAF and BBS was necessary to refine the process.</p> <p>All actions under the certification, working decisions and agreements had been completed for December 2011.</p> <p><b>Decision</b></p> <p>To note the update</p>	
<p><b>3.2</b></p>	<p><b>Decisions/Instructions Awaited</b></p> <p>Decisions and instructions had continued to be captured at control meetings.</p> <p><b>Decision</b></p> <p>To note that a schedule of actions was still ongoing and progress would be explored at a control meeting.</p>	
<p><b>3.3</b></p>	<p><b>Use of Logos, Agent Letters</b></p> <p>Different styles and logos had been used in various letters and the use of particular logos should be appropriate and</p>	

Item No	Subject	Action Owner
	<p>consistent.</p> <p>Martin Foerder highlighted the use of the Turner and Townsend logo on Edinburgh Tram letters which was inappropriate as they were not a contracting party with the BBS.</p> <p><b>Decision</b></p> <ol style="list-style-type: none"> <li>1) To ensure that Turner and Townsend were aware of the appropriate logos to use.</li> <li>2) To note that the use of Turner and Townsend's logo on Edinburgh Tram letters would be raised with Turner and Townsend.</li> </ol>	<p><b>Colin Smith/Alan Coyle</b></p> <p><b>Sue Bruce/Colin Smith</b></p>
<p><b>4</b></p> <p><b>4.1</b></p>	<p><b>Utilities</b></p> <p><b>Utilities Protocol</b></p> <p><b>4.1.1 SGN – Payment</b></p> <p>Colin Smith confirmed that this issue had been resolved.</p> <p><b>Decision</b></p> <p>To note the update</p> <p><b>4.1.2 Scottish Water – Off Street, Lines of Communication</b></p> <p>Colin Smith explained that there needed to be open communication links between utility companies and the contractor. Martin Foerder highlighted that utility companies did not recognise BBS and would only work through first <i>tie</i> and now Turner and Townsend.</p> <p><b>Decision</b></p> <p>To note that it would be highlighted to Turner and Townsend the importance of communication between BBS and utility companies.</p> <p><b>4.1.3 Scottish Water/BT – Princes Street</b></p> <p>Colin Smith explained that the potential financial benefits of completing the work pre Christmas meant it was essential that the work was completed by 22 December 2011 and not</p>	<p><b>Colin Smith</b></p>

Item No	Subject	Action Owner
	<p>re-opened in the new year.</p> <p>Martin Foerder stated that he was certain that the work would be completed and the site cleared by 22 December 2011. If time was tight then temporary black top works could be utilised and then replaced permanently on 4 January 2012.</p> <p><b>Decision</b></p> <p>To continue with the works up to and including 22 December 2011.</p>	
4.2	<p><b>Recording and Measurement and Inspection Sign Off</b></p> <p>Colin Smith had requested that Turner and Townsend establish a joint inspection sign off sheet and it was expected that this would be completed later this week.</p> <p><b>Decision</b></p> <p>To note the update</p>	
5	<p><b>Cost Engineering De-Clutter</b></p> <p>A cost engineering meeting had been scheduled for 13 December 2011 whereupon a decision would be made on whether each individual proposal should be investigated. A list of options that would deliver real savings would then be ready for consideration in late January 2012.</p> <p><b>Decision</b></p> <p>To note the update.</p>	
6	<p><b>Programme</b></p> <p>Colin Smith highlighted that through investigating the client target programme and implementing mitigation measures, the tram project could be delivered by July 2014.</p> <p>Martin Foerder indicated that the Project was currently running on time. However, utility conflicts would introduce delays and the cost engineering proposals aimed to mitigate this.</p> <p>Dave Anderson highlighted that the impact of traffic management changes on residents and businesses should</p>	



Item No	Subject	Action Owner
	<p>be considered before being implemented.</p> <p><b>Decision</b></p> <p>To note the update.</p>	
<b>7</b>	<b>Matters Requiring Escalation</b>	
7.1	<p><b>Rev 3A to Rev 4 Programme</b></p> <p>The report by Turner and Townsend on the implications of the change to Rev 3A and Rev 4 due to the delay in decision by the Council was still awaited. It was essential that the contractor and Turner and Townsend declare their positions so that progress could be made.</p> <p><b>Decision</b></p> <p>To note the update.</p>	
7.2	<p><b>Resource Matching</b></p> <p>Turner and Townsend had been asked to complete a resource review which would then be compared to contractor numbers. It was expected to be completed in the week commencing 19 December 2011.</p> <p>Sue Bruce stated that she believed the client side resource was still top heavy and that it would be reviewed.</p> <p><b>Decision</b></p> <p>To note the update.</p>	
<b>8</b>	<p><b>Pending Milestones/Project Concerns/Threats</b></p> <p>Sue Bruce highlighted the prospect of a Big Jubilee Lunch in early June 2012 with the potential that Princes Street would be used. If work was not completed by June 2012 then Princes Street Gardens could be utilised.</p> <p>The next key milestone after the depot opening would be the completion of the track from the depot to the Airport. This was set to be completed by February 2013. Martin Foerder indicated that if the project encountered no difficulties in that area then it could be completed for Christmas 2012.</p>	

Item No	Subject	Action Owner
	<p><b>Decision</b></p> <p>To note the update</p>	
<p><b>9</b></p>	<p><b>Communications</b></p> <p>Kelly Murphy provided details on the following communications issues:</p> <ul style="list-style-type: none"><li>• Dynamic testing was taking place today and a press release would follow</li><li>• The VIP event was still scheduled for 15 December 2011</li><li>• An internal communications update would be provided to project staff in early 2012. This would highlight achievements and also have a social element included</li><li>• An update to stakeholders was progressing and the aim was to provide regular information</li></ul> <p><b>Decision</b></p> <p>To note the update.</p>	

**Project:** Edinburgh Trams Contract  
**Reference:** Baseline Project Instructions - 2012  
Confidential & Legally Privileged - FOI(S)A Exempt



## Edinburgh Trams Contract

## Baseline Project Instructions 2012

January 2012

Confidential & Legally Privileged  
FOI(S)A Exempt

Prepared by:

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on behalf of City of Edinburgh Council

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- 1.0 Purpose of Report**
- 2.0 Process Employed**
- 3.0 Preliminary and Feasibility Work instructions given to Project Team**
  - 3.1 Bilfinger Berger / Siemens**
  - 3.2 CAF**
  - 3.3 Jacobs**
  - 3.4 Plan Delivery**
  - 3.5 Turner & Townsend**
- 4.0 Summary Assessment of Anticipated Benefits**
- 5.0 Conclusions and Instructions to be considered by CEC Tram SMT and Joint Project Forum – 24<sup>th</sup> and 25<sup>th</sup> January 2012 respectively**

## APPENDICES – WORK IN PROGRESS RESPONSES AS AT 18<sup>TH</sup> JANUARY 2012

- I Submission from Infracore**
- II Submission from CAF**
- III Turner & Townsend Response to CEC Cost Engineering Tracker**
- IV Response from Jacobs re. Tram Re-deployment**
- V Planning and Betterments Report**
- VI Submission from Siemens re. Materials for Sale**

### Notes:

1. The responses enclosed are as received by City of Edinburgh Council. The team members will be given an opportunity to comment on the other contributor's responses as part of the Project Delivery Plan that will be initiated if instruction to proceed with this submission is granted.
2. The report should be read in conjunction with the attendant communications plan.

## **1.0 PURPOSE OF REPORT**

The purpose of this report is to make recommendation to the Tram senior management team on the baseline instructions for 2012 that are to be issued to the project team.

Instructions issued on 25th January 2012 will take effect from the point of instruction and have impact through to project completion.

The instructions being requested for issue are part of a controlled management function exercised in a collaborative way, with the project team led by City of Edinburgh Council.

It is to be recognised that this closely controlled management approach is a dynamic process and one that will be maintained through the remainder of the project. Nevertheless, as time progresses opportunities will reduce and values will diminish as a consequence of the natural progression of the project.

In the period March to September 2011, City of Edinburgh Council put in place mechanisms to interrogate a number of issues: Risk, Programme, Design, Consents, Finance and Tram Integration. These issues are dealt with at fortnightly control meetings that are attended by representatives from Bilfinger Berger and Siemens (Infracore), CAF, City of Edinburgh Council, Transport Scotland and Turner & Townsend. The meetings are chaired by the Council.

Two major project threats were identified in the period as (a) adequate contingency against adverse weather; and (b) mitigation of the effect of utilities by providing maximum work fronts, working space and interface time between utilities removal and the Infracore works.

In following Audit Scotland best practice guidelines, opportunities to achieve maximum value for the public pound within the Edinburgh Tram project must also be continuously pursued as part of any management regime.

This report brings forward from a series of Cost Engineering workshops with the project team, chaired by City of Edinburgh Council proposals, which embrace the aforementioned management practices.

## 1.0 PURPOSE OF REPORT CONT'D

It is the writer's opinion that without the willingness and open cooperative approach exhibited by Bilfinger Berger and Siemens (Infracore), CAF, City of Edinburgh Council, Transport Scotland and Turner & Townsend, this tabled report and its recommendations would not be possible.

## 2.0 PROCESS EMPLOYED

Interrogation and understanding of the Infraco Revision 4 Programme was carried out in the period October to November 2011, i.e. from point of the Settlement Agreement being signed.

A Client Target Programme integrating CAF and Infraco activities was presented in high level terms to the all party oversight group in December 2011.

Measures introduced through beneficial client knowledge of the programme initiated instruction to the project team to provide greater work space and work fronts, together with resource matching between Infraco, the utility companies, Turner and Townsend and utilities contractors.

This focused approach was the basis of the cost engineering workshops that were held during November and December 2011.

A cost engineering tracker was established incorporating twenty items. This has been distilled to sixteen meaningful and worthwhile measures.

Turner & Townsend was asked to provide a commentary and to denote recommendation of the remaining items. This exercise has been carried out and is included in the appendices to this document (see Appendix III).

In parallel, liaison meetings were held with City of Edinburgh Planning and Roads, Lothian Buses, Lothian & Borders Police and Turner & Townsend. Particular issues were identified as being required to enact the traffic management proposal being discussed in the tracker. A pre-requisite was the need to open the Mound in March 2012. At the Joint Project Forum meeting on 25<sup>th</sup> January 2012 Infraco should be invited to affirm their willingness to bring forward this task.

As a consequence of proactive instruction given during 4<sup>th</sup> quarter 2011 it is presently anticipated that the Client Target Programme end dates are still intact, with some elements of work emerging slightly ahead of Rev 4 programme. For example, the Remedial works on Princes Street are presently assessed as ahead of programme completing in June 2012, instead of July 2012.

## 2.0 PROCESS EMPLOYED CONT'D

This will allow the other outstanding works in Princes Street, at Waverley Steps, Tramstop and OLE bases, together with the Turner and Townsend utilities clearance team, to maintain the present Rev 4 programme.

This statement and reported programme position is subject to the effects of adverse weather and any relocation of utilities if encountered up to the point of handover back to the City of Princes Street and indeed any section of the Works.

Further, Infracore have informally advised that they are re-sequencing their activities to open up access for bus, taxi, cyclists and emergency services through the Mound in March 2012.



### **3.0 PRELIMINARY AND FEASIBILITY WORK INSTRUCTIONS GIVEN TO PROJECT TEAM**

#### **3.1 Bilfinger Berger / Siemens**

- a) To participate in the cost engineering workshops with the other members of the project team
- b) To consider and report on the cost engineering tracker (see Appendix I) and provide guidance on:
  - cost benefit; and
  - programme implications

#### **3.2 CAF**

- a) To consider and report on the duration of the testing and commissioning programme
- b) To consider redeployment opportunities of surplus trams (see Appendix II)

#### **3.3 Jacobs**

- a) To consider redeployment opportunities of surplus trams and make recommendations for further investigation (see Appendix IV)

#### **3.4 Plan Delivery**

- a) To participate in the cost engineering workshops with the other members of the project team
- b) To consider and report on the cost engineering tracker (see Appendix V) and provide advice on programme implications

#### **3.5 Turner & Townsend**

- a) To participate in the cost engineering workshops with the other members of the project team
- b) To consider and report on the cost engineering tracker (see Appendix III) and provide advice on:
  - cost benefit;
  - programme implications; and
  - recommendation to implement individual proposals
- c) To consider and report on the duration of the testing of the commissioning programme

#### 4.0 SUMMARY OF ANTICIPATED BENEFITS

Item	Output from Cost Engineering Workshops	Anticipated Benefit	Promoted by Project Team Recommended Implementation by Project Manager Turner & Townsend (for instruction)
1.	Removal of embargoes and revised traffic management at Shandwick Place, Princes Street and York Place	£12,919,620 22 weeks saving on completion date	✓
2.	Interface scope Edinburgh Gateway to protect tram programme	Programme protected	✓
3.	Non use of Setts. Prismo at Tram Stops, tarmac elsewhere. Allowance for time, Prelims and labour. <i>This item requires variation to Planning. If setts are to be utilised, an order must be placed before 27<sup>th</sup> January 2012.</i>	£1,000,000	✓
4.	De-scope Public Realm at St Andrew Square, allow	£700,000	✓
5.	Financial Recovery from Third Party Agreements	£2,500,000	Recommended by CEC
5a.	De-scope work around Forth Ports. Making good works paid for from Forth Ports MoV	£2,445,000	✓
5b.	Delete Tram Kiosk at Airport <i>This item requires variation to Planning.</i>	£300,000	✓
6.	Temporary tram stop at York Place <i>Planning should be consulted</i>	£150,000	✓

Item	Output from Cost Engineering Workshops	Anticipated Benefit	Promoted by Project Team Recommended Implementation by Project Manager Turner & Townsend (for instruction)
7.	Re-deployment of Trams (see Jacobs report) Cost of 10 trams - £20m Discounted sale, say £5m	£5,000,000	Recommended by CEC
8.	Track materials – Cancel Order	£2,200,000	Recommended by CEC
9.	Omit Siemens works at Tower Place, Victoria Docks	£200,000	Recommended by CEC
10.	Turner & Townsend capped fee T&T / CEC Blended Resource	TBA	Recommended by CEC
11.	Shared Recovery Vehicle Cannot be reduced due to additional risk for traffic management	-	No
12.	Road Re-construction Depth – Estimated cost saving, therefore allow 50% of reported potential saving sum	£700,000	✓
13.	Design freeze on detailing and further consents discussion progression, York Place to Newhaven, say	£250,000	✓
14.	Reduce requirement for track material storage	£1,000,000	Recommended by CEC
15.	Lay off Traffic Management at Forth Ports @ £15K per month for say 12 months	£180,000	✓
16.	Roseburn Viaduct Cladding <i>This item requires variation to Planning</i>	£300,000	✓

Item	Output from Cost Engineering Workshops	Anticipated Benefit	Promoted by Project Team Recommended Implementation by Project Manager Turner & Townsend (for instruction)
	<b>Sub Total</b>	<b>£29,844,620</b>	
	<b>Less</b> 50/50 Savings per Contract Incentive Share on items 1, 5b, 8 and 9 NB. All other items 100% share is due to CEC		
	1. Programme Savings £6,459,810		
	5b. Airport Tram Kiosk £150,000		
	8. Track Materials £1,100,000		
	9. Omit Siemens works at Tower Place, Victoria Dock £100,000		
	<b>Sub Total</b> £7,809,810		
		£22,034,810	
	7. Assume no tram sale until 2014, omit meantime	(£5,000,000)	
		£17,034,810	
	5. Omit Third Party financial recovery on the assumption that this is already in Client Budget	(£2,500,000)	
		£14,534,810	
	<b>Net Assessment of Anticipated Benefits</b> <b>Say</b>	<b>£14,500,000</b>	

## 5.0 CONCLUSIONS AND INSTRUCTIONS TO BE CONSIDERED BY CEC TRAM SMT AND JOINT PROJECT FORUM – 24<sup>TH</sup> AND 25<sup>TH</sup> JANUARY 2012 RESPECTIVELY

1. Instruction to be given to the project team to pursue items 1 to 16 (with the exception of item 11) from the schedule of Outputs from the Cost Engineering Workshops to the maximum project benefit.
2. The project team should be requested to review detailed project programmes and the sequencing within to explore, if possible, the planning of the whole project requirements to bring forward:
  - a) Airport to Depot running
  - b) Airport to Shandwick Place (with non-paying passengers on board)
  - c) Revenue Service to York Place

This programme review is to be brought back to the client group with its conclusions by April 2012.

3. Further rounds of project team cost engineering should be embarked upon throughout the project duration.

**Project:**  
**Reference**

Edinburgh Trams Contract

Baseline Project Instructions - 2012

Confidential & Legally Privileged - FOI(S)A Exempt



## Appendices

**Project:**  
**Reference**

Edinburgh Trams Contract

Baseline Project Instructions - 2012

Confidential & Legally Privileged - FOI(S)A Exempt



## Appendix I Submission from Infracore

**From:** [David.Gough@civil.bilfinger.co.uk](mailto:David.Gough@civil.bilfinger.co.uk)  
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**Cc:** [Martin.Foerder@civil.bilfinger.co.uk](mailto:Martin.Foerder@civil.bilfinger.co.uk); [Alfred.Brandenburger@siemens.com](mailto:Alfred.Brandenburger@siemens.com);  
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**Subject:** Programme Savings  
**Date:** 13 January 2012 12:19:35  
**Attachments:** [20120113 Prolongation Saving Programme 4 to 4c.pdf](#)

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Colin / Alan

Further to our meeting please find attached an electronic copy of our submission in respect of the Programme Savings generated from the Cost Engineering solutions reflected in the discussion on Embargos, TM Phaing etc and incorporated in the draft Rev 4c programme.

(See attached file: 20120113 Prolongation Saving Programme 4 to 4c.pdf)

Regards,

David Gough  
Commercial Manager  
Edinburgh Tram Network

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Bilfinger Berger Civil UK Limited

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A Company of Bilfinger Berger Ingenieurbau GmbH.

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# **Edinburgh Tram Network**

## **Draft Claim for Payment relating to the revision of the Programme from revisions 4 to revision 4c**

**for  
Bilfinger Berger Civil UK Limited  
and  
Siemens plc**



Assessment of Saving in relation to Cost Engineering Item 1

Removal of Embargoes etc and revised TM Phases - Programme Revision 4 to Revision 4c

Summary

Item	Section of Works	%age	Total
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**BILFINGER BERGER CIVIL UK LIMITED**

1	On Street		(5,906,162.67)
2	Additional Supervision costs		155,277.00
3	Head Office Overheads and Profit	10%	(575,088.57)

**SIEMENS PLC**

4	Site Related Overheads and Other Preliminaries		(5,871,251.49)
5	Impact on Maintenance Staff		(79,629.76)
6	Additional Supervision		315,285.83
7	Head Office Overheads and Profit	17%	(958,051.22)

<b>TOTAL</b>	<b>(12,919,620.88)</b>
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**SUMMARY BY CONSORTIUM MEMBER**

BILFINGER BERGER CIVIL UK LIMITED

(6,325,974.24)

SIEMENS PLC

(6,593,646.64)

<b>TOTAL</b>	<b>(12,919,620.88)</b>
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**Add to Contract Price based on 50/50 Share Arrangement with CEC**

BILFINGER BERGER CIVIL UK LIMITED

3,162,987.12

SIEMENS PLC

3,296,823.32

<b>TOTAL</b>	<b>6,459,810.44</b>
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Assessment of Saving in relation to Cost Engineering Item 1 ( Removal of Embargoes etc and revised TM Phases) - Programme Revision 4 to Revision 4c

Item	Section of Works	Description of Works	Contractor	PROGRAMME INFORMATION						DELAY INFORMATION			Weekly Rate	Total
				Rev4 Programme Information			Rev4c Programme Information			To Start (Wks)	To Finish (Wks)	Overall		
				ProgID	StartDate <sup>3</sup>	FinishDate <sup>4</sup>	ProgItem	Start Date	Finish Date <sup>4</sup>					
<b>BILFINGER BERGER CIVIL UK LIMITED</b>														
	Edinburgh Park Office <sup>1</sup>	BB - Site Prelims for Prolongation before and after the OnStreet Works Trigger Date	Bilfinger Berger	1050/335	03 October 2011	08 July 2014	1050/335	03 October 2011	05 February 2014		(21.86)	(21.86)	117,586.00	(2,570,094.00)
	Edinburgh Park Office <sup>2</sup>	BB - Site Prelims after the OnStreet Works Trigger Date	Bilfinger Berger	1050/335	03 October 2011	13 February 2014	1050/335	03 October 2011	06 June 2013		36.00	36.00	5,219.00	
	Torphichen St Office	BB - Site Prelims cost	Bilfinger Berger	1C-16-TRCK-200	03 October 2011	13 February 2014	1D-14-SP7-775	03 October 2011	08 July 2013		(31.43)	(31.43)	16,428.00	(516,308.57)
	1C	Broughton St - Waverley Bridge	Bilfinger Berger	1C-17-YP3.3-288	07 February 2012	11 November 2013	1C-17-YP3.3-288	07 February 2012	02 April 2013		(31.86)	(31.86)	14,567.00	(464,063.00)
	1D	Lothian Road Jct - Haymarket	Bilfinger Berger	1D-14-SP7-775	03 October 2011	15 November 2013	1D-14-SP7-775	03 October 2011	08 July 2013		(18.57)	(18.57)	14,931.00	(277,290.00)

**SUBCONTRACTORS**

	1C	Broughton St - Waverley Bridge	Crummock (Scotland) Ltd	1C-17-YP3.3-288	07 February 2012	11 November 2013	1C-17-YP3.3-288	07 February 2012	02 April 2013		(31.86)	(31.86)	14,038.00	(447,210.57)
	1C/1D	Princes Street Outstanding Works	To Be Confirmed	1C-15/16-1240	19 September 2011	05 July 2012	1C-15/16-1240	19 September 2011	05 July 2012		0.00	0.00	11,000.00	0.00
	1DSP	Lothian Road Jct - West Maitland St	Lagan Construction Ltd	1D-14-SP7-775	07 March 2012	15 November 2013	1D-14-SP7-775	07 March 2012	08 July 2013		(18.57)	(18.57)	18,593.61	(345,309.81)
	1DH	West Maitland St - Haymarket	Lagan Construction Ltd	1D-15M-JNC5-60	03 October 2011	25 July 2013	1D-15M-JNC5-60	03 October 2011	26 April 2013		(12.86)	(12.86)	18,510.75	(237,995.29)
	1D	On Street	Traffic Management etc	1C-16-TRCK-200	10 October 2011	13 February 2014	1D-14-SP7-775	10 October 2011	08 July 2013		(31.43)	(31.43)	24,459.00	(768,711.43)
	11	On Street	Logistical Support	1C-16-TRCK-200	05 September 2011	13 February 2014	1D-14-SP7-775	05 September 2011	08 July 2013		(31.43)	(31.43)	8,883.00	(279,180.00)

Note 1 : This is the rate per week for valuing prolongation as set out in paragraph 1.7 of Appendix A of Schedule Part 45

Note 2 : This is the rate per week for valuing preliminaries as set out in paragraph 1.5 of Appendix A of Schedule Part 45

Note 3 : Start Date for Calculation purposes and not necessarily related to Prog ID

Note 4 : Derived from Prog ID

<b>Grand Total</b>	<b>(5,906,162.67)</b>
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**DRAFT**

non-binding and without prejudice

**\$CCC**

Programme Optimisation:

PMC-00xx

(overview of Rate: (split))

Movement from Revision 4 to Revision 4c

**Finding / Location:****Systems & Trackwork Programme Optimisation****Impact on:**

Siemens plc (and sub-contractors)

<b>SPM (STS UK Turnkey) Programme Optimisation</b>					
Reduction for Site related overheads and other preliminaries					
Movement of Section Completion D: 153 days					
Movement of last trackwork activity (1D-14X-TRCK-70(3)): 175 days (Rates as per Schedule Part 4 of the Infraco Contract applied)					
<b>Type: BBS-SPM</b>					
<b>Rate: SPM</b>					
Iter	Description	Quant	Rate	Unit	Total
1	Overall Project Management	-21.86	£64,072.21	per week	-£1,400,435.55
2	Track Work PM	-25.00	£15,141.27	per week	-£378,531.84
3	Track Work Site Running Costs	-25.00	£3,280.00	per week	-£82,000.00
4	Depot Workshop Equipment		£5,519.57	per week	n/a
5	Infrastructure, Insurance, Bonds, Guarantees	-21.86	£17,669.95	per week	-£386,214.54
6	Extendend defects liability	-21.86	£18,025.92	per week	-£393,995.14
Sub-total 1					<b>-2,641,177.06</b> GBP

<b>SPM-RA (Rail Automation UK) Programme Optimisation</b>					
Reduction for Site related overheads and other preliminaries					
Movement of last Rail Automation activity (1D-15/16-TELC-60): 130 days (18.6 weeks) (Rates as per Schedule Part 4 of the Infraco Contract applied)					
<b>Type: BBS-SPM-RA</b>					
<b>Rate: SPM-RA</b>					
Iter	Description	Quant	Rate	Unit	Total
1	Rail Auto specific extended PM	-18.57	£9,775.95	per week	-£181,553.41
Sub-total 2					<b>-181,553.41</b> GBP

<b>SPM-REL (Electrification UK) Programme Optimisation</b>					
Reduction for Site related overheads and other preliminaries					
Movement of last Electrification activity (5A-11/12/13-OHLE-70): 150 days (21.4 weeks) (Rates as per Schedule Part 4 of the Infraco Contract applied)					
<b>Type: BBS-SPM-REL</b>					
<b>Rate: SPM-REL</b>					
Iter	Description	Quant	Rate	Unit	Total
	Rail Electrification specific extended PM	-21.43	£8,848.17	per week	-£189,603.68
Sub-total 3					<b>-189,603.68</b> GBP

<b>SPM-TLC (Traffic Solutions UK) Programme Optimisation</b>					
Reduction for Site related overheads and other preliminaries					
Movement of last Traffic Solutions activity (1C-17K-JNCS-80): 253 days (36.1 weeks) (Rates as per Schedule Part 4 of the Infraco Contract applied)					
<b>Type: BBS-SPM-TLC</b>					
<b>Rate: SPM-TLC</b>					
Iter	Description	Quant	Rate	Unit	Total
	Traffic Solutions specific extended PM	-36.14	£8,848.17	per week	-£319,798.21
Sub-total 4					<b>-319,798.21</b> GBP

<b>SPM (Siemens AG Germany) Programme Optimisation</b>					
Reduction for Site related overheads and other preliminaries					
Movement of last Rail Automation activity (6A-01-SIGN-200): 89 days					
Movement of last Electrification activity (1D-13/17-ELEC-60): 165 days					
Movement of Section Completion D: 153 days (21.9 weeks)					
(Rates as per Schedule Part 4 of the Infraco Contract applied)					
<b>Type: BBS-SPM-TLC</b>					
<b>Rate: SPM-TLC</b>					
Iter	Description	Quant	Rate	Unit	Total
	RA (Rail Automation)	-12.71	£23,834.44	per week	-£303,037.87
	REL (Electrification)	-21.43	£9,535.85	per week	-£204,339.55
	DWE (Depot Workshop Equipment)		£5,519.57	per week	n/a
	SPM (Overall Project Management)	-21.86	£11,618.25	per week	-£253,941.71
Sub-total 5					<b>-761,319.13</b> GBP

Reduction for Site related overheads and other preliminaries					
Movement of last trackwork activity (1C-17-TRCK-70(3)): -25 weeks					
(Rates as per Schedule Part 4 of the Infraco Contract applied)					
<b>Type: BBS-SPM-TRW-BAM</b>					
<b>Rate: SPM-TRW-BAM</b>					
Iter	Description	Quant	Rate	Unit	Total
	BAM Programme Optimisation	-25.00	£71,112.00	per week	-£1,777,800.00
Sub-total 6					<b>-1,777,800.00</b> GBP

<b>I MO RSIS, Siemens plc (Maintenance)</b>					
Impact on maintenance staff					
Movement of Section Completion D: 153 days (21.9 weeks)					
(Rates as per Schedule Part 4 of the Infraco Contract applied)					
<b>Type: BBS-SPM-RSIS</b>					
<b>Rate: SPM-RSIS</b>					
Iter	Description	Quant	Rate	Unit	Total
	Project Manager (67%)	-72.86	£628.22	per day	-£45,770.31
	Financial & Commercial Manager (45%)	-49.18	£688.50	per day	-£33,859.45
Sub-total 7					<b>-79,629.76</b> GBP

<b>SPM-REL (Electrification UK) Programme Optimisation</b>					
Additional supervision for additional parallel work gangs (43.5 weeks) including mobilisation/de-mobilisation & training					
(Rates as per Schedule Part 4 of the Infraco Contract applied)					
<b>Type: BBS-SPM-REL</b>					
<b>Rate: SPM-REL</b>					
Iter	Description	Quant	Rate	Unit	Total
	Rail Electrification supervision	43.50	£2,712.65	per week	£118,000.28
Sub-total 8					<b>118,000.28</b> GBP

<b>SPM-TRW (Trackwork UK) Programme Optimisation</b>					
Additional supervision for additional parallel work gangs (43.5 weeks) including mobilisation/de-mobilisation & training					
(Rates as per Schedule Part 4 of the Infraco Contract applied)					
<b>Type: BBS-SPM-TRW</b>					
<b>Rate: SPM-TRW</b>					
Iter	Description	Quant	Rate	Unit	Total
	Rail Electrification supervision	43.50	£4,535.30	per week	£197,285.55
Sub-total 8					<b>197,285.55</b> GBP

- NO VAT has been included

- all calculation data as actual on

12-Jan-2012

<b>Total of Sub-totals 1 to 7</b>	<b>PMC-00xx</b>	<b>-5,635,595.42</b>	<b>GBP</b>
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Head Office Overheads and Profit	17.0%	-958,051.22	
Sub-total A			<b>-6,593,647</b> <b>GBP</b>
Consortium Overheads	n.a.	0.00	
Sub-total B			<b>-6,593,647</b> <b>GBP</b>

<b>Total price for</b>	<b>PMC-00xx</b>	<b>-6,593,647</b>	<b>GBP</b>
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tie scope- and price-check

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Siemens - signature

# **Edinburgh Tram Network**

## **Cost Engineering Solutions Summary**

**for  
Bilfinger Berger Civil UK Limited  
and  
Siemens Plc**



Summary

Item	Section of Works	Total
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**BILFINGER BERGER CIVIL UK LIMITED**

1	Programme Savings	(6,325,974.24)
2	Alternative to Setts based on Blacktop	(1,087,571.10)
3	St Andrew Square Descope	(1,578,643.29)
4	RBS Tramstop Recovery	(440,433.36)
5	Deletion of Kiosk at Edinburgh Airport	(300,000.00)
6	Deletion of Traspa Pannelling at Roseburn Viaduct	(308,004.00)

**SIEMENS PLC**

1	Programme Savings	(6,593,646.64)
2	Omission of Track Materials York Place to Newhaven	(2,200,000.00)
3	Omission of Trackwork on Tower Place & Victoria Bridges	(200,000.00)
4	RBS Tramstop Recovery	(119,801.00)

	<b>Total for Consortium</b>	(19,154,073.63)
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Note All Items are subject to agreed apportionments



**Project:**  
**Reference**

Edinburgh Trams Contract

Baseline Project Instructions - 2012

Confidential & Legally Privileged - FOI(S)A Exempt



## Appendix II Submission from CAF

**From:** [David](#)  
**To:** ["Colin Smith"](#)  
**Subject:** RE: ETN - Baseline Project Instruction Report  
**Date:** 13 January 2012 12:43:37  
**Attachments:** [ETN-BaselineProjectInstructionRpt-CAF Draft 1-12Jan12.docx](#)

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Colin

I have spoken to Richard and we have add a paragraph in the CAF section 3.2

If you require any more information phone or email

Saludos / Regards  
David Steele  
CAF Rail UK Ltd.

---

**From:** Suzanne Smith [<mailto:info@hg-group.co.uk>] **On Behalf Of** Colin Smith  
**Sent:** 12 January 2012 13:24  
**To:** David Steele (CAF); Richard Garner (CAF)  
**Cc:** [Alan.Coyle@edinburgh.gov.uk](mailto:Alan.Coyle@edinburgh.gov.uk); [Bob.McCafferty@edinburgh.gov.uk](mailto:Bob.McCafferty@edinburgh.gov.uk);  
[Dominic.Murphy@transportscotland.gsi.gov.uk](mailto:Dominic.Murphy@transportscotland.gsi.gov.uk); [Scott.Noble@transportscotland.gsi.gov.uk](mailto:Scott.Noble@transportscotland.gsi.gov.uk)  
**Subject:** ETN - Baseline Project Instruction Report

David / Richard

Please find attached the framework of the Baseline Project Instruction report, together with the CEC cost engineering tracker referred to therein.

Please can you provide me with the information noted under item 3.2 of the report for CAF by close of play tomorrow, with a view to a final consolidated report being ready for issue on the 19<sup>th</sup>.

I would ask that you send this information to me only, rather than circulating it to the wider tram team, I will then coordinate all the responses received for the report.

Thanking you in anticipation.

Regards

Colin

Colin Smith FRICS MAPM  
Hg Consulting  
Chartered Surveyors  
20 Lynedoch Crescent  
Glasgow  
G3 6EQ

Tel: 0141 35 [REDACTED]

### 3.0 PRELIMINARY AND FEASIBILITY WORK INSTRUCTIONS GIVEN TO PROJECT TEAM

#### 3.2 CAF

- a) To consider and report on the duration of the testing and commissioning programme

*CAF have provided a T&C programme to BBS which they have integrated into the overall programme*

*For CAF to fulfil their testing obligations CAF must be given a longer distance of test track about 1.5km (depot to Ingliston Park & ride) to carry out CAF tests that are required*

- b) To consider redeployment opportunities of surplus trams

*CAF continue to review the market place and will advise – work with CEC*

Appendix III  
CEC Tracker Summary Over-marked – Turner & Townsend  
Response Notes for instruction to Project Manager as at 13/01/12

**From:** [Julian Weatherley@turntown.co.uk](mailto:Julian.Weatherley@turntown.co.uk)  
**To:** [Colin Smith](mailto:Colin.Smith)  
**Cc:** [Alan.Coyle@edinburgh.gov.uk](mailto:Alan.Coyle@edinburgh.gov.uk); [Gary.Easton@turntown.co.uk](mailto:Gary.Easton@turntown.co.uk)  
**Subject:** Confidential & Legally Privileged FOI(S)A Exempt - Cost Engineering Deliverables  
**Date:** 13 January 2012 19:07:05  
**Attachments:** [ETN-BaselineProjectInstructionRpt-12Jan12 - T&C Strategy Text Added \(Draft For discussion\) - Rev1.docx](#)  
[Proposed T&C Process 12-01-12.pdf](#)  
[T&C Diagram \(Draft for Discussion\) - Rev2.pptx](#)  
[CEC Cost Engineering Tracker & PM Recommendations-12Jan12 - T&T draft 3 .docx](#)  
[Off Street Value Engineering Opportunities - rev2-13Jan12.docx](#)  
[120111 VE Options Rev2.xlsx](#)

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Colin,

You requested a snap shot of where we had got to with our cost engineering deliverables for COP tonight. In this regard I attach the following for your review / comment:

- Draft text on testing and commissioning challenge
- Testing and commissioning proposal - simplified diagram
- Programme showing testing and commissioning programme
- Draft partially completed cost engineering and PM recommendations tracker
- Draft schedule of Off Street VE opportunities
- Draft initial estimate of potential Off St VE opportunities

Perhaps we could have a catch up to agree way forward on Monday once you have had a chance to review?

I must stress that all of the above are work in progress and should be treated as Draft for Discussion

Regards,

Julian

Julian Weatherley  
Director

Turner & Townsend Project Management Limited  
10 Bedford Street  
London  
WC2E 9HE  
United Kingdom

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m: +44 (0) [REDACTED]  
e: [julian.weatherley@turntown.co.uk](mailto:julian.weatherley@turntown.co.uk)  
w: [turnerandtownsend.com](http://turnerandtownsend.com)

(See attached file: ETN-BaselineProjectInstructionRpt-12Jan12 - T&C Strategy Text Added (Draft For discussion) - Rev1.docx)(See attached file: Proposed T&C Process 12-01-12.pdf)(See attached file: T&C Diagram (Draft for Discussion) - Rev2.pptx)(See attached file: CEC Cost Engineering Tracker & PM Recommendations-12Jan12 - T&T draft 3.docx)(See attached file: Off Street Value Engineering Opportunities - rev2-13Jan12.docx)(See

CEC01890999\_0037

## REVISED TESTING & COMMISSIONING STRATEGY

### DRAFT FOR DISCUSSION

#### Current Situation

Section 23 of The Employer's Requirements provides for a comprehensive testing regime to be completed before tram service commencement.

Within the Rev4 Contract Programme, it is assumed that all construction activities must be completed prior to the commencement of Testing & Commissioning. The Rev4 programme shows this milestone to be reached on 9<sup>th</sup> January 2014 followed by testing & commissioning and shadow running on the full length of the completed scheme (Airport to York Place).

Service commencement is achieved on 8 July 2014 within the Rev 4 Contract Programme.

#### Proposal

It is proposed that the overall testing and commissioning programme be brought forward to take advantage of the earlier completion of the section of the route between the Airport and Shandwick Place stop (including crossover). The Rev4 Contract Programme provides for completion of this section by 2<sup>nd</sup> September 2013, approximately 4 months in advance of the completion of the On Street Works.

System integration and acceptance activities would commence once the Off Street Works were completed providing a number of advantages:

- Off Street testing and commissioning may be significantly progressed in advance of the completion of On Street construction
- Testing & Commissioning on off Street route informs on street. Risk brought forward into period where it can be better managed. Reduced risk at back end of programme.
- Potential to bring the Airport to Shandwick Place portion of the Edinburgh Trams system into operation ahead of the completed line, i.e. Airport to York Place.
- Potential opportunity to run revenue service on Off Street sections from January 2014
- Revenue service commencement for overall scheme brought forward to April 2014
- Potential of an improved community perception with trams in service ahead of the original programme, although limited to conveying passengers between the Airport and Shandwick Place.

### **Rationale**

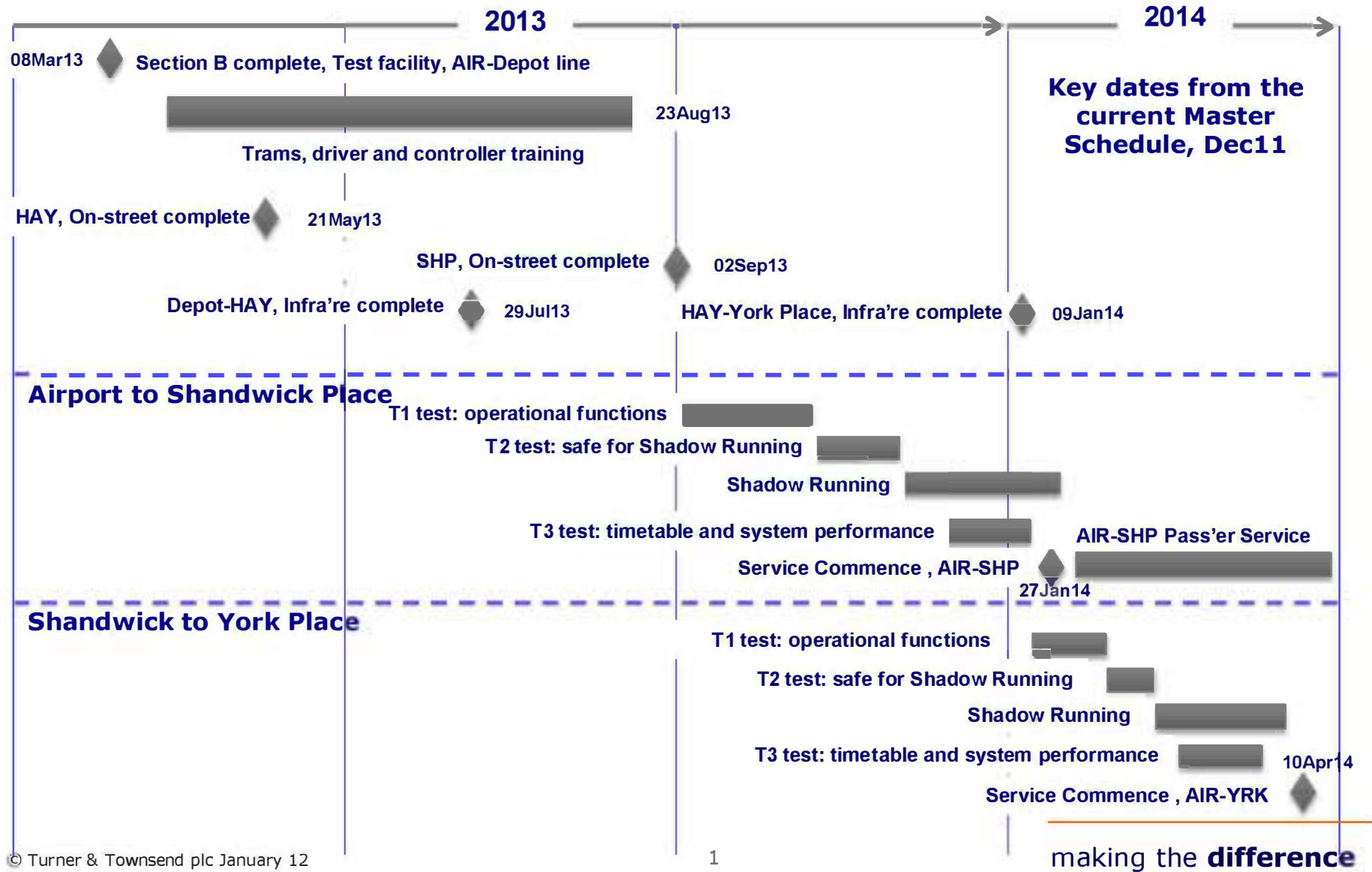
- The Depot and Test Facilities will be complete by 8th March 2013, and it is probable that the trams, driver, controllers will stand ready by the end of August 2013
- The Off-street section from the Depot to Haymarket has a lower overall risk profile and is therefore considered more likely to be completed to schedule than the On-street section, i.e. by the 29th July 2013.
- It is necessary to have the On-street sections complete as far as the Shandwick Stop, which includes the Crossover, to allow flexibility of tram movements. Work is underway in these sections and predicted to be complete by 2nd September 2013.
- With the Shandwick Place Stop available, and the crossover just west of the stop complete, it would be possible to run efficient operations with trams on both lines, in both directions between Airport to Shandwick Place.
- Running System Integration/Acceptance tests on the AIR to SHP section will build experience and knowledge, and should support the optimisation and shorter execution of the same tests on the SHP to YOR sections, and reduce the associated risks to the schedule.
- It will be proposed to make integral a passenger service from Airport to Shandwick Place, with System Integration/Acceptance tests on the Shandwick Place to York Place part of the line, and thereby achieve an earlier project completion date.

### **Programming Exercise**

- A 'What-if' scenario programme was created to model the time impact of these changes (see Appendix x).
- The result was a service commencement between Airport and Shandwick Place on 27th January 2014, and a service commencement on the remainder of the network on 10th April 2014.
- Therefore Airport to Shandwick Place would be brought into service five months earlier, and Shandwick Place to York Place brought into service approximately two months earlier, than the current forecast date of 9th July 2014.

# Effect on the schedule

## DRAFT FOR DISCUSSION







Activity ID	Activity Name	Start	End	Original Duration	Remaining Duration	Location % Complete	Gantt Chart (S Oct N D Jan F M A M J Jul A S Oct N D J F M A M J Jul A S Oct N D Jan F M A M J Jul A S Oct N D Jan F M A M J Jul A S)																											
T3 performance, reliability, and availability																																		
AS3670	T3 Test: AIR-SHP, Part 1, Operational timetable	19-Nov-13	25-Nov-13	6d	6d	0%																												
AS3700	T3 Test: AIR-SHP, Part 2, Enhanced timetable	10-Dec-13	16-Dec-13	5d	5d	0%																												
AS3710	T3 Test: AIR-SHP, Part 3, instrument and monitor, 1 tram	31-Dec-13	13-Jan-14	13d	13d	0%																												
AS3713	T3 Test: AIR-SHP, Part 4, measure accelerations, 1 tram	14-Jan-14	20-Jan-14	5d	5d	0%																												
<b>SHP - YRK</b>																																		
T1 operational functionality																																		
AS3675	T1 test: SHP-YRK, system safe and reliable	10-Jan-14	30-Jan-14	15d	15d	0%																												
T2 operational timetable																																		
AS3705	T2 test: SHP-YRK, reduce service	31-Jan-14	13-Feb-14	10d	10d	0%																												
Shadow Running																																		
AS3610	Shadow Running, SHP-YRK	14-Feb-14	10-Apr-14	40d	40d	0%																												
T3 performance, reliability, and availability																																		
AS4000	T3 Test: SHP-YRK, Part 1, Operational timetable	14-Feb-14	20-Feb-14	5d	5d	0%																												
AS4010	T3 Test: SHP-YRK, Part 2, Enhanced timetable	28-Feb-14	06-Mar-14	5d	5d	0%																												
AS4020	T3 Test: SHP-YRK, Part 3, instrument and monitor, 1 tram	14-Mar-14	20-Mar-14	5d	5d	0%																												
AS4030	T3 Test: SHP-YRK, Part 4, measure accelerations, 1 tram	21-Mar-14	27-Mar-14	5d	5d	0%																												
T4 punctuality of service																																		
AS3720	Tram System Acceptance T4 Test: Network Performance	11-Apr-14	03-Jul-14	60d	60d	0%																												
T5 reliability, availability, performance, safety																																		
AS3730	Tram System Acceptance T5 Test: Network Reliability	11-Apr-14	03-Jul-14	60d	60d	0%																												
<b>Passenger Service</b>																																		
AS3660	AIR-SHP, Service Commence	27-Jan-14	27-Jan-14	0d	0d	0%																												
AS3680	AIR-SHP, Tram System Passenger Service	28-Jan-14	10-Apr-14	53d	53d	0%																												
AS3660	SHP-YRK, Service Commence	10-Apr-14	10-Apr-14	0d	0d	0%																												
AS3670	AIR-YRK, Tram System Passenger Service	11-Apr-14	12-Mar-15	240d	240d	0%																												
AS3760	Service Commence, predicted in BBS Rev 4 schedule	06-Jul-14*	0d	0d	0%																													

**Legend:**

- T3 Test: AIR-SHP, Part 1, Operational timetable
- T3 Test: AIR-SHP, Part 2, Enhanced timetable
- T3 Test: AIR-SHP, Part 3, instrument and monitor, 1 tram
- T3 Test: AIR-SHP, Part 4, measure accelerations, 1 tram
- T1 test: SHP-YRK, system safe and reliable
- T2 test: SHP-YRK, reduce service
- Shadow Running, SHP-YRK
- T3 Test: SHP-YRK, Part 1, Operational timetable
- T3 Test: SHP-YRK, Part 2, Enhanced timetable
- T3 Test: SHP-YRK, Part 3, instrument and monitor, 1 tram
- T3 Test: SHP-YRK, Part 4, measure accelerations, 1 tram
- Tram System Acceptance T4 Test: Network Performance
- Tram System Acceptance T5 Test: Network Reliability
- AIR-SHP, Service Commence
- AIR-SHP, Tram System Passenger Service
- SHP-YRK, Service Commence
- Service Commence, predicted in BBS Rev 4 schedule

█ Remaining Level of Effort    █ Remaining Work  
█ Actual Level of Effort    █ Critical Remaining Work  
█ Actual Work    ◆ Milestone

TASK filter: All Activities

Date	Revision	Checked	Approved

**From:** [Gary.Easton@turntown.co.uk](mailto:Gary.Easton@turntown.co.uk)  
**To:** [Colin.Smith](mailto:Colin.Smith)  
**Cc:** [Alan.Coyle@edinburgh.gov.uk](mailto:Alan.Coyle@edinburgh.gov.uk); [Bob.McCafferty@edinburgh.gov.uk](mailto:Bob.McCafferty@edinburgh.gov.uk); [Julian.Weatherley@turntown.co.uk](mailto:Julian.Weatherley@turntown.co.uk)  
**Date:** 20 January 2012 13:48:41  
**Attachments:** [CEC Cost Engineering Tracker & PM Recommendations - \(JMW Mark Ups 20 Jan 12\).docx](#)

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Colin

We attach an update of our tracker report which includes comments from our initial review of the report.

From our meetings with BBS and Graham Robertson we understand the revised work section dates and we know that they have shortened some durations. We are aware that assumptions have been made regarding testing and commissioning to determine the final date of 5 Feb 2014 and a follow up meeting is needed to validate this.

We have made comments on the current delay at H1 and impact of the McNicholas diversion works to provide context. We have supporting programmes for this and these can be provided if required.

Please call if you have any queries or you need any amends.

Regards  
Gary

Gary Easton  
Director

Turner & Townsend Cost Management  
Osborne House, 1 Osborne Terrace  
Edinburgh, EH12 5HG

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(See attached file: CEC Cost Engineering Tracker & PM Recommendations - (JMW Mark Ups 20 Jan 12).docx)

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**CEC01890999\_0043**

## Edinburgh Tram Project – Cost Engineering: Recommendations for Instruction to PM

No.	Project Team Recommended Proposal as at 9 <sup>th</sup> January 2012	Proposer	Benefit / Value	Apportionment	Funding Contribution	Promoted by Project Team Recommended Implementation by Project Manager Turner & Townsend (for instruction)															
1	Relaxation of embargoes	BB	<p>Joint programming workshops have been held (T&amp;T/BBS/Plan Delivery) to determine the potential savings resulting from relaxation of: the Christmas and Summer embargoes, traffic management constraints and opening up working areas in Shandwick Place, Princes Street and York Place.</p> <p>BBS have confirmed a potential saving of 22 weeks which provides the following start and finish dates:</p> <table border="1" data-bbox="860 678 1415 1026"> <thead> <tr> <th>Section</th> <th>Start</th> <th>Finish</th> </tr> </thead> <tbody> <tr> <td>Project</td> <td>3 Oct 11</td> <td>5 Feb 14</td> </tr> <tr> <td>Broughton St – Waverley Bridge</td> <td>7 Feb 12</td> <td>2 Apr 13</td> </tr> <tr> <td>Lothian Rd Jct – West Maitland St</td> <td>7 Mar 12</td> <td>8 Jul 13</td> </tr> <tr> <td>West Maitland St - Haymarket</td> <td>3 Oct 11</td> <td>26 Apr 13</td> </tr> </tbody> </table> <p>The dates do not account for the delay at Haymarket 1 (currently estimated at eight weeks) or the impact of the McNicholas Utilities diversion works. Based on information currently available, this will reduce the overall time saving from 22 weeks to two weeks.</p> <p>BBS have modelled the cost saving based on a 22 week saving using the fixed prelim costs per week. This results in a saving of <b>£12.9M</b>, including</p>	Section	Start	Finish	Project	3 Oct 11	5 Feb 14	Broughton St – Waverley Bridge	7 Feb 12	2 Apr 13	Lothian Rd Jct – West Maitland St	7 Mar 12	8 Jul 13	West Maitland St - Haymarket	3 Oct 11	26 Apr 13			✓
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			<p>additional supervision. This value requires review and the overall amount is subject to the 50/50 share provisions.</p> <p>The contractual arrangements for administering the revised programme and cost milestones are yet to be determined. Acceleration costs have not been referred to in the submission. It would be expected that given the extent of lead in duration and the increase in work areas offered by this proposal, the requirement for acceleration would be limited to the provision of specialist contractors (e.g. track laying and OLE gangs).</p> <p>The revised traffic management may result in businesses seeking compensation. This has not been included in the costs.</p>			
2	Edinburgh Gateway Recommendation to provide minimum interface scope.	BB	The proposal mitigates significant cost and programme risk which the introduction of Gateway works would have introduced to Tram project, for example disruption of track work programme to incorporate retaining walls etc.			✓
3	Non use of Setts: <b>Blacktop or Imprinted</b> in lieu or Contribution from Public Realm Fund	BB	<p>Initial estimate of potential saving:</p> <ul style="list-style-type: none"> <li>• Blacktop: <b>£1.0M</b></li> <li>• Concrete imprint: <b>£0.7M</b></li> <li>• Prismo imprint: <b>£0.46M</b></li> </ul> <p>Outstanding issues to resolve:</p> <ul style="list-style-type: none"> <li>• Final figures to be confirmed.</li> <li>• Durability/life cycle questions on Prismo in heavily trafficked areas</li> <li>• Assumes consents will be secured with Historic Scotland</li> </ul>			✓

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			<ul style="list-style-type: none"> <li>BBS (SDS) design costs to be included</li> </ul>			
4	De-scope Public Realm works at SAS	BB	Initial estimate of potential saving: a) Potential Cost Saving of <b>£0.7M</b> by omitting road repairs to <u>west</u> side of SAS. b) Potential Cost Saving of <b>£0.8M</b> by omitting road reconstruction of part of <u>north and south</u> sides of SAS. Omission of Detail 9 is <b>£0.2M</b> . c) Cost addition of c. <b>£0.1M</b> for design and construction of a 'tie in' to north and south side's junction with east side. 'Tie in' details still to be finalised.			✓
5	Financial Recovery from 3 <sup>rd</sup> Party Agreements <ul style="list-style-type: none"> <li>New Ingliston</li> <li>RBS</li> <li>Henderson Global</li> <li>CEC</li> <li>TS</li> <li>Others</li> </ul>	CEC	Summary included in Cost Report <ul style="list-style-type: none"> <li>New Ingliston: £0.6M</li> <li>RBS: £0.5M</li> <li>Henderson Global: £0.3M</li> <li>CEC: £0.1M (SAS public realm design)</li> <li>TS: £0.9M Edinburgh Gateway</li> <li>Others: £0.3M (BBS George St, confirmed by CEC finance)</li> <li>Total: <b>£2.7M</b></li> </ul> This contribution is included in the cost report and reduces the required opportunity balancing budget from <b>£11.0M</b> to <b>£8.3M</b> .			✓ (CEC Recommend)
5a	De-scope Forth Ports	CEC	Potential cost saving of <b>£2.4m</b> for omitting Road works, Retaining Wall at Lindsay Road etc from Tram Infrastructure Contract.  Note: this saving was included in the base budget therefore it reduces the required opportunities balancing budget from <b>£8.3M</b> to <b>£5.9M</b>			✓

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			This saving needs to be offset by any residual requirement for “making good.” These works would be completed by a different contractor.			
5b	Delete Tram Kiosk at Airport	BB	Potential Cost saving of <b>£0.4M</b> by complete omission of kiosk & canopy. Implementation of this proposal is subject to 3 <sup>rd</sup> party approvals, including planning and BAA. Requirements for barriers to be confirmed.			✓
6	Temporary Tram Stop at York Place presently excluded from Project, £50K to be allowed in client budget	BB	This proposal mitigates cost risk by implementation of a ‘do-minimum’ design solution.  BBS have not confirmed the additional costs for the Tram Stop and termination requirements at York Place therefore the final scope and costs are yet to be determined.  A standard stop solution, including permanent finishes consistent with other On Street areas a cost allowance of circa <b>£0.2M</b> would be appropriate.  By setting a budget of <b>£50K</b> potentially <b>£0.15M</b> could be saved from a simpler stop design and alternative finishes.			✓
7	Re-deployment of Trams	CEC	CEC/C Smith to advise			✓ (CEC Recommend)
8	Track Materials	Siemens	T&T estimate for grooved rail, switches & crossings and embedded track materials c. <b>£4.5M</b> Siemens estimate has been issued directly to C Smith.			✓ (CEC Recommend)

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			Possible opportunity for further savings by selling copper wire, CCTV cameras etc which have been purchased and are being stored at Broxburn. Further discussions are required on this item with Siemens.			
9	Omit works at Tower Place and Victoria Docks	Siemens	These costs are being provided directly to C Smith from Siemens.			✓
10	T&T and CEC to confirm “capped resource” as a blended team. This item to be reported directly to CEC finance teams	CEC	This proposal makes use of available CEC resources within the overall project delivery team. Delivers overall project requirements (Infraco and non-Infraco) using the optimum team at any given point in time and throughout the project duration.			✓
11	Promote shared facility of recovery vehicle, localised at St Andrew Square, or contribution from Lothian Buses	CEC	Through discussion with Lothian Buses, CEC have confirmed that current provisions are to be kept in place at present.			Not to be implemented at present. Regular review of ongoing requirements
12	Road Reconstruction Depth	T&T	Maximum theoretical cost saving of <b>£1.2M</b> although this cannot be assured as ongoing inspections/tests of existing road build-up are required to determine precise scope during the works in each section.  Also costs of voids/trenches following resolution of utility conflicts to be accounted for.  Assume <b>£0.7M</b> saving at this stage.			✓



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13	Concept design York Place to Newhaven complete – Design detailing postponed	TS	<p>No saving against current budget since design work is either complete or nearing completion.</p> <p>This proposal minimises the cost of design to completion and reduces risk of future design scope creep.</p>			✓
14	Reduce requirement storage for materials	CEC	<p>A review of the requirements following cancellation of Track Materials – see no. 8 above - to be reviewed.</p> <p>Contingency storage opportunities include old bus depot at Leith Walk.</p> <p>CEC are providing an estimate of the savings in storage costs.</p>			✓ (CEC Recommend)
15	Removal of traffic management hire charges at Leith	CEC/BB	<p>It should be noted that traffic management costs are not included in BBS's contract price or the Cost Report beyond January 2012.</p> <p>This proposal mitigates additional and ongoing traffic management costs. More efficient procurement of residual traffic management outside of Infraco contract should be implemented.</p>			✓
16	Further <u>Off-Street</u> VE Opportunities	T&T	<p>Potential cost saving of &gt;£2m and programme saving (or cost/programme risk mitigation) in further <u>OFF-STREET</u> opportunities – required to be interrogated fully in liaison between T&amp;T, CEC &amp; BBS prior to confirmation of potential savings. Currently these may include:</p> <ul style="list-style-type: none"> <li>a) Roseburn Viaduct Cladding: £0.3M</li> <li>b) Soft Landscaping</li> <li>c) Drainage at Bankhead Drive</li> </ul>			✓

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			d) NWR Access Road & Bridgework at Balgreen Road e) Green Track Slab at Edinburgh Park f) Retaining Wall at Haymarket lower level g) Access past Verity House h) Roseburn Junction structure (future-proofing) and footpath i) Roseburn Street (plot 96) accommodation works j) OLE Foundations for off-street k) Cable Duct spare capacity			

**OFF-STREET VE OPPORTUNITIES**
**SCHEDULE REV02 – 13 JAN 12**
**DRAFT FOR DISCUSSION**

Ref	Opportunity Name	Opportunity Description	Benefit	Risk	Potential Opportunity Monetary Value	Impact on programme	Comment	Steps Required to Take Opportunity Forward
1	Roseburn Viaduct Cladding	Reduce spec of costly cladding solution for aesthetics, safety etc	Cost & Programme	- H&S Objections - Planning	??	??		1. BBS already asked for an estimate.
2	Soft landscaping	Remove the planting of trees and shrubs from the Off Street Route	Cost and programme reduction	- Objections from third parties. - Breach of agreements	Total (nett?) £600k in the estimate for landscaping? Potential to save half?	??	Tram legislation requires 2 trees planted for every 1 removed? But this need not be adjacent to tram line, where planting may be over-congested. CEC could save a minimum of BBE 38% mark-up if do themselves (possibly also save costs on other schemes), and more if trees are not already being grown in nurseries.	1. Check with CEC including Planning 2. Check what agreements are affected and agree with party the removal of landscaping 3. Ask BBS for an estimate
3	Drainage at Bankhead Drive	Reduce the quantity and depth of drainage at Bankhead Drive. Over-design of large pipes (up to 1200dia!! Which went up from already large 600dia	Reduction in cost and programme both due to reduction of materials used and the volume of material requiring to	- No agreement from SDS to the change in design proposals. - No	??	??	Understood that not a SW requirement for a pipe that large, however they may require pipe as attenuation –	1. Establish from SDS the rationale /justification for size/depth of the drainage.

Ref	Opportunity Name	Opportunity Description	Benefit	Risk	Potential Opportunity Monetary Value	Impact on programme	Comment	Steps Required to Take Opportunity Forward
		with no explanation), and at depths which could be reduced if drop at manholes.	be excavated.	agreement from Scottish Water to the reduction.			onerous requirement as remainder of Edinburgh Park does not have this? Drainage may be eased if change from Green Track Slab to Ballast (see 5).	2. Establish whether Scottish Water would be willing to accept a reduced drainage scheme.
4	Network Rail access road & access bridge at Balgreen Rd	a) Replace the tarmac surfacing of the Network Rail access road at Baird Drive with a more cost efficient solution b) Reutilise/refurbish existing access bridge instead of demolish and replace with a new bridge	Reduction in cost and programme	- Agreement with Network Rail	??	??	Note removal of bridge due for Apr/May 12? Is there a head-height issue with existing access bridge?	1. Establish with CEC the details of the NWR agreement. 2. Establish whether Network Rail would accept a change to the current agreement, with possibly some cost compensation in lieu of a replacement bridge. 3. Ask BBS for an estimate
5	Green track slab at	Replace the green track slab at Edinburgh	- Potential cost saving on	- No agreement	>£1m??	??	Sub base already laid between	1. Establish with CEC the

Ref	Opportunity Name	Opportunity Description	Benefit	Risk	Potential Opportunity Monetary Value	Impact on programme	Comment	Steps Required to Take Opportunity Forward
	Edinburgh Park	park with a ballasted track.	<ul style="list-style-type: none"> <li>formation of ducts</li> <li>- Potential cost saving on the sub base (for approx 600m that is not formed to date)</li> <li>- Potential cost/time saving on track materials/construction including concrete slab below grass.</li> <li>- Cost saving on future maintenance</li> </ul>	<ul style="list-style-type: none"> <li>with Edinburgh Park.</li> <li>- Costs for delay and design outweigh benefit.</li> </ul>			<p>Lochside Avenue and Edinburgh Park Central Stop.</p> <p>Sub base about to commence on Edinburgh Park Central stop and Edinburgh park bridge.</p>	<ul style="list-style-type: none"> <li>details of the Edinburgh Park agreement.</li> <li>2. Establish the time and cost for delaying the current works against the cost of new design and installation of a ballasted track.</li> <li>3. Negotiate the change in the type of track with Edinburgh Park (could offer hedges for aesthetics if required).</li> </ul>
6	Invasive Species de-risk (mainly operation phase benefit)	Serve notice on neighbouring land at Gogar asking them to treat the giant hogweed next to the tram infrastructure.	Prevention of giant hogweed regrowing on the infrastructure – mainly an operational cost saving.	Relationship with landowner.	No VE saving, but risk prevention (future maintenance costs).	-	May be claim that hogweed came from CEC land initially and had 'travelled' downstream.	1. Council to serve notice on neighbouring land asking to eradicate invasive species.
7	Retaining Wall	Wall is for substation,	Cost and time.	- NWR/	£??	??	Cladding may be	1. Establish with

Ref	Opportunity Name	Opportunity Description	Benefit	Risk	Potential Opportunity Monetary Value	Impact on programme	Comment	Steps Required to Take Opportunity Forward
	at Haymarket Station lower level	but wall including cladding would immediately become obsolete in NWR Station development.		Scotrail agreement?			procured already so some costs may apply.	CEC the details of the NWR /Scotrail agreement. 2. Establish costs /savings with BBS
8	Access past Verity House at Haymarket Station	Existing access road into Station car park operates satisfactorily, thus do not rebuild in slightly altered position.	Cost and time	- Verity House or NWR/ Scotrail agreement	??	??	Verity House may want road say 2m away from building eg. to help window cleaning, however seems to have operated satisfactorily thus far.	1. Establish with CEC the details of the Verity Ho & NWR /Scotrail agreement. 2. Establish costs /savings with BBS
9	Balgreen Turnback	Remove turnback					Earthworks appear to have been done already	1. None – now confirmed that turnback costs (except earthworks) were already taken out costs.
10	Roseburn Delta Junction: Structure Future-Proofing and Footpaths	Minimise future-proofing to structure. Utilise existing footpath where possible instead on new DDA compliant footpath construction.	Cost and time	Costs of termination retaining walls etc may exceed costs of existing planned	??	??	Including basic wing walls in structure may still facilitate future development. DDA compliant footpath	1. Establish status of structure currently in construction 2. Agree with CEC that can

Ref	Opportunity Name	Opportunity Description	Benefit	Risk	Potential Opportunity Monetary Value	Impact on programme	Comment	Steps Required to Take Opportunity Forward
				earthworks.			<p>construction initial cost £1.5m (not included in budget). Terminating structure allows re-use of existing footpaths with minor reinstatements.</p>	<p>terminate earthworks towards future line at earliest point.</p> <p>3. Agree with CEC that existing footpath route is acceptable.</p> <p>4. Agree cost savings with BBS</p>
11	Roseburn Street Accommodation Works	No further work at Plot 96 to rebuild industrial unit gable in former position	Cost and Programme	Possible compensation to owner, however could argue we are minimising further disruption.	??	??	<p>Gable was taken in to allow working space for tram retaining wall, but intention was to reinstate in former position later. Why bother if owner's business is operating satisfactorily currently?</p>	<p>1. Establish with CEC the details of the 3<sup>rd</sup> party agreement.</p> <p>2. Agree with owner.</p> <p>3. Establish cost savings with BBS</p>
12	OLE Foundations for Off-Street	Large pad foundations and piled foundations reduced in size	Cost and Programme	CEC may lose design warranty if force BBC to change design.	??	??	<p>Appear over-designed for off-street sections with their inherent low risk</p>	<p>1. Establish with BBS the design criteria, and whether a</p>

Ref	Opportunity Name	Opportunity Description	Benefit	Risk	Potential Opportunity Monetary Value	Impact on programme	Comment	Steps Required to Take Opportunity Forward
							of collisions into OLE poles. May need CEC to have independent engineer verify a lesser size is adequate.	lesser size is viable. 2. If BBS do not agree, may require CEC to insist on lesser size, with possible loss of warranty. 3. Agree cost savings with BBS.
13	Cable Duct Spare Capacity	Reduce number of spare cable ducts provided for future flexibility.	Cost and programme	Possible future disruption in future if inadequate duct capacity.	??	??	Review of ERs required	1. T&T to review ERs. 2. Agree any reduction with CEC. 3. Agree cost savings with BBS.
14	Tram Livery (not infrastructure)	Minimise changes to existing predominantly white external livery on Trams. Possible internal livery minimisation too.	Tram Costs	Agreements with Operator.	??	-		1. Establish viability with CEC, also operator agreements. 2. Agree cost savings.
15	Advertising Revenue opportunities (operational phase)	Potential income from advertising on viaduct sides and other CEC structures.	Future operational income.		Nil for infrastructure.	-	May have already been considered in operational business case.	



**Project:**  
**Reference**

Edinburgh Trams Contract

Baseline Project Instructions - 2012

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## Appendix IV Response from Jacobs re. Tram Re-deployment

**From:** [Fraser, Willie](#)  
**To:** [Colin Smith](#)  
**Subject:** RE: ETN - Baseline Project Instruction Report  
**Date:** 13 January 2012 14:23:15  
**Attachments:** [ET Briefing Paper Version 5.doc](#)

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Colin,

As per your request, I have attached the BPI report on the redeployment opportunities for the spare trams.

This being the first report submitted to you, please accept my apologies if the formatting is not exactly to your needs. We have struggled to condense the content to the target 2-pages, but my team and I will be on-hand next week to refine the report following your initial review.

And finally, thanks for the opportunity to be of support. We have been involved heavily in the successful extensions to the Manchester Metro link system over the last 3.5 years, and we have a vested interest (as service providers in the light rail market), in seeing a positive outcome in Edinburgh.

Have a great weekend.

Kindest regards,

Willie Fraser  
Executive Director  
Jacobs

---

**From:** Suzanne Smith [mailto:info@hg-group.co.uk] **On Behalf Of** Colin Smith  
**Sent:** 12 January 2012 13:33  
**To:** Fraser, Willie  
**Cc:** Alan.Coyle@edinburgh.gov.uk; Bob.McCafferty@edinburgh.gov.uk;  
Dominic.Murphy@transportscotland.gsi.gov.uk; Scott.Noble@transportscotland.gsi.gov.uk  
**Subject:** ETN - Baseline Project Instruction Report  
**Importance:** High

Willie

Please find attached the framework of the Baseline Project Instruction report, together with the CEC cost engineering tracker referred to therein.

Please can you provide me with the information noted under item 3.3 of the report for Jacobs by close of play tomorrow, with a view to a final consolidated report being ready for issue on the 19<sup>th</sup>.

I would ask that you send this information to me only, rather than circulating it to the wider tram team, I will then coordinate all the responses received for the report.

Thanking you in anticipation.

Regards

Colin

The City of Edinburgh Council (CEC) has asked Jacobs UK to prepare a briefing paper to consider redeployment opportunities of surplus (10 in number) trams and make recommendations for further investigation. This is a first stage summary report, based on our knowledge of light rail systems and the specification of the Edinburgh Tram vehicles.

As these vehicles are transportation assets of considerable value, it is important to have a clear understanding of their associated market and its current status in order to correctly evaluate the potential for lease or sale. This small specific niche market is not dissimilar from that of expensively customised used vehicles, where each vehicle is “unique” and consequently its desirability is limited to a few collectors. In the case of LRT Vehicles an “Iconic” front end can make it harder to sell to another city as it may conflict with the existing city brand image.

With each of the following choices there are obvious (but also hidden) losses, gains, and transactional costs, so a holistic view is presented such that CEC can determine its best course of action.

The principal choices are:

1. Retain the vehicles at the Gogar Depot
2. Lease the vehicles to a new or existing operator
3. Sell the vehicles to a new or existing operator
4. Freight Tram

Potential Operators for options 2 & 3 are based on current market knowledge of their declared positions however in order to properly evaluate the potential for a sale or lease, it will be necessary to make direct approaches to determine their immediate needs and financial status (and this would be the subject of the next stage report, if approved).

### Vehicle Retention

The retention of the vehicles has some key disadvantages namely:

- Debt levels and consequential financing remain higher than necessary, as there will be a re-sale value for the vehicles.
- Annual Vehicle depreciation is high compared to fare box revenue earned by the excess vehicles.
- Insurance Payments and preventive maintenance costs are higher than necessary
- The excess vehicles must be moved regularly to avoid longevity issues so either they are incorporated into the main fleet, consequently reducing the possibility of a future sale and diminishing their resale value per vehicle or a specific maintenance regime is developed to avoid premature ageing

There are a few limited advantages:

- If all fleet vehicles are used then the systems yearly mileage is spread across a larger number of vehicles leading to a slightly longer longevity per vehicle.
- The spare vehicles could be “cannibalised” for spare parts
- The system’s performance would not be compromised should a spate of road traffic accidents occur as extra vehicles would be available.

Retention becomes more attractive if the tramline is to be extended. However, if there was a low probability of this happening within a reasonable timeframe, annual depreciation of the vehicle, coupled with the ongoing maintenance costs, would represent a missed opportunity to maximise your financial position. Selling or leasing the vehicles does not prohibit network expansion.

When all the above points are considered, the disadvantages outweigh the advantages and therefore consideration should be given to the lease or sale option.

### Vehicle Lease

Successful Light Rail systems often lease additional vehicles to reduce route overcrowding or to enable network expansion. These networks sometimes find procurement from a manufacturer unattractive due to the current long lead times or the high cost due to the low number of vehicles required. As indicated above, Light Rail Vehicles are often customised and as a consequence their associated infrastructure, both depot and route, can also be bespoke. This means that unlike the heavy rail or road haulage market, light rail vehicles will often have to be modified prior to being leased to another operator. This modification cost is often significant as alterations are usually carried out by specialised contractors and there may be an additional safety approvals process to be carried out for these modifications to demonstrate compatibility / interoperability with the new infrastructure. Additional costs that must be considered by the prospective lessee in this situation is the need to purchase and store a new set of spare parts, special tools, as well as training (driving and maintenance) associated with the new fleet.

These additional costs have tended to drive the short term leasing market towards the lease of additional rolling stock that is identical to his current fleet or from the same manufacturer. Vehicles that are substantially different from the current fleet would only be viable in a long term lease which would enable the additional costs to be amortized

When all the above points are taken into consideration, the long term leasing market is the most likely option to produce a request for the excess vehicles.

### Vehicle Sale

#### Existing Network

The market for the sale of the excess vehicles to an existing light rail network is almost identical to the lease option (above) as, in all likelihood, the excess vehicles will need modifications. The operator will review the purchase of these vehicles in terms of their total lifecycle costs (vehicles + 2<sup>nd</sup> set of spares and special tools+ 2<sup>nd</sup> additional storage space+ addition driver and maintainer training etc...), hence the attractiveness of these vehicles will be principally determined by the financial terms i.e. the price demanded for the assets.

#### New Network

With the sale of excess vehicles to a new system it may be possible to avoid or minimise conversion costs from the outset and could be the most attractive market in terms of potential yield for CEC. This naturally is a smaller subset of the total LRT market but there are still a significant number of new start-ups in Europe and the Far East.

A sale would still be very sensitive to the price point but it may be possible to build an attractive package to this market by “bundling” along with the sale a number of associated “products” such as:

- Infrastructure design documentation in particular the stops and depot.  
This product would be an attractive selling point to the promoter of a new tram system as it usually more cost effective to produce / adapt an existing depot or stop designs as much of the hard work has already been done by CEC.
- Offer training programmes for the new systems driver trainers and maintainers.  
Again an additional product that increases the overall value of the CEC assets.

### Freight Tram

Since the early 1980's there has been a resurgence in the use of tram networks to supplement the local transport needs of cities around the world, however, the use of trams as a means of transporting freight has only been explored to a very limited extent and with very mixed results.

In Zurich trams are used as a means of collecting and transporting recyclable waste to recycling centres on the outskirts of the city, whilst in Dresden, a “CarGoTram” is used to transfer palletised auto components from the city's “heavy rail” sidings to the VW assembly plant in the heart of the city. The use of tramways for the movement of freight is (or has) been considered elsewhere (e.g. Vienna) but the examples in Switzerland and Germany appear to be the only instances where tramways are being used for the movement of “freight” on a regular basis. Importantly, unlike Amsterdam's City Cargo initiative, both operations have been developed to serve the needs of one specific customer rather than a range of customers.

The idea of moving light goods into the city centre by means of tram is, on the face of it, an attractive proposition. Certainly, the use of trams would deliver significant environmental benefits but the economic case for making the modal shift from road to tramways is difficult to make. Key reasons why any undertaking seeking to replicate the “City Cargo model” would have some difficulty in delivering a commercially viable solution include the following considerations:

- The distribution models and modes of transport used by logistics organisations are well established and usually highly efficient. The capital cost of changing to an alternative model (cost of trams and transshipment facilities) would be significant. Those additional costs (as well as any increase in ongoing operating costs) would need to be passed on to customers or subsidised by the government or local authority.
- HGV's and LGV's provide a flexible, door to door service, routing and tasking can be changed on an almost instantaneous basis, whilst trams are only able to operate, to a given timetable, along a defined line of route requiring (in the City Cargo model) yet another transshipment of product to

small electric vehicles. Double and triple handling of product is highly inefficient and could also have an adverse effect on door to door timings.

In summary, whilst some initiatives such as City Cargo have failed to achieve their undoubted potential, the use of trams for bespoke operations such as those in operation in Dresden and Zurich are worthy of further consideration.

In so far as Edinburgh is concerned this option is quiet novel and would require an investigation at the next stage to determine if a business case could be made which sees Edinburgh's trams used, as in Zurich, to recover recyclable waste from local recycling points or traders along the tramways' line of route.

We are unable at present to provide the conversion costs to a freight tram but the waste option should be cheaper than a city cargo option. This initiative, if found to be viable, would not only release conventional resources for use elsewhere but make good use of assets that would be otherwise underemployed and provide a sustainable means of transporting recyclable refuse from the heart of Edinburgh. Although we have not yet considered the operational timetable etc, we consider it unlikely that this option would justify the retention of more than a few trams, so the re-sale / lease options are still valid too.

### Recommendation

In summary, we suggest that the least favourable option would be to retain the vehicles, and so, recommend that you authorise further investigation in to the sale / lease of the excess tram vehicles. This investigation would also consider the freight option. The scope of the investigation would be a matter for discussion but we would propose, at this stage, that it may comprise two stages:

- Targeted discrete approaches to known potential markets. This might include Sheffield, Hertfordshire, Cardiff or re-opening discussion with the Croydon network.  
In Europe the proposed Maastricht system may be interested in these vehicles, another group of systems would be those supplied by CAF in Spain.  
Outside the EU, Turkey has plans for new systems. In China, Shanghai has commenced some advanced works and indicated that funding has already been secured. The promoter of this new network (currently ending preliminary design and yet to issue a procurement notice for vehicles) might be highly interested in this opportunity. Jacobs has already sent a delegation to Shanghai, at the client's request, to provide advice to them on the development of a light rail network.
- Advertising the trams availability to the light rail market by inviting offers.

END

**Project:**  
**Reference**

Edinburgh Trams Contract

Baseline Project Instructions - 2012

Confidential & Legally Privileged - FOI(S)A Exempt



## Appendix V Planning and Betterments Report

**From:** [Graham Robertson](#)  
**To:** [csmith@hq-group.co.uk](mailto:csmith@hq-group.co.uk)  
**Subject:** Betterments Report Version 2  
**Date:** 18 January 2012 11:04:57  
**Attachments:** [111218 ET Programme Betterment.pdf](#)  
[120118 Edinburgh Tram - Programme Betterment.pdf](#)  
[120118 Report on Planning Betterments.doc](#)  
**Importance:** High

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Colin

Following our meeting yesterday I have reworked the report and programme to give you the up to date info.

Please give me a call when you receive so we can go through key changes

Regards

Graham Robertson

Plan Delivery Ltd

Tel 015

Mob

Website [www.plandelivery.co.uk](http://www.plandelivery.co.uk)

**PLAN  
DELIVERY**



## Edinburgh Tram

# Planning & Programming Betterments Report

### General Introduction

It is important to understand that these programme betterments are not to generate time savings across the project but to ensure delivery of the current scheme. Fundamental to this is to understand that the programme and associated traffic management schemes have been developed by Infraco to suit their construction sequence. Unfortunately this does not take into account the traffic management required to clear the statutory utilities prior to the construction of the tram track and associated infrastructure.

The utilities do not conveniently stop at the location of the traffic cones or simply run along the road line. They criss cross the road and each other making their removal from the tram construction zone right across the carriageway key to ensuring the programme. I have highlighted this issue on the attached sketch.

The variations that we are proposing to the traffic management in certain key areas open up the work areas to allow the utility diversions to take place throughout the carriageway. By keeping the more onerous traffic management in place it provides an opportunity for Infraco to construct the tram works more quickly. Thus the time for the initial utility diversions is generated from the time saving that Infraco can give.

We include in this report a programme for each scenario which highlights the impact under what we have called the current situation. It is important to understand that the periods we have identified in the current situation are a calculated guess but may not actually be deliverable as it would require utility diversions to take place under live traffic lanes.

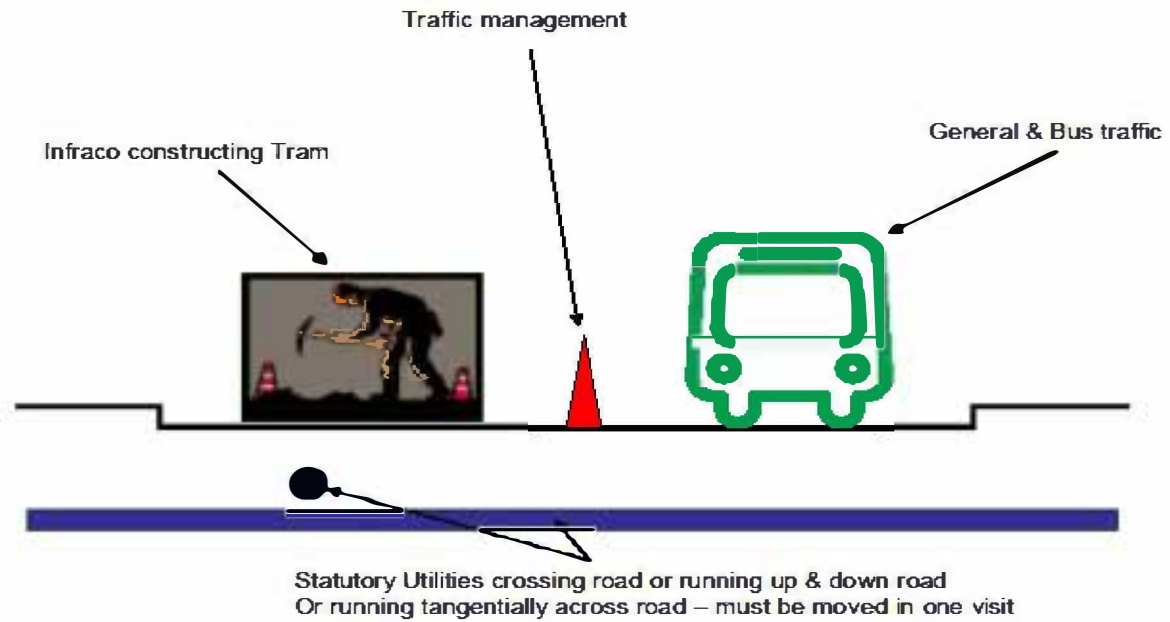
For these proposals to generate the timings highlighted in this report it requires a decision by the Council on 27 January 2012 to allow the traffic management and construction planning to take place to capture the opportunities highlighted.

**Plan Delivery Limited**

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Registered in Scotland No. 315197

## Typical Construction Cross-Section

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**Impossible to remove or divert utility, without closing General Traffic & Bus Lane**

### **1. Summer & Winter Embargos**

Currently under the Contract the contractor has to abide by the summer and winter embargos which restrict working during August and December each year. The proposal is to work during the summer embargo which generates an additional four week working period each year and to work in December up to a week prior to the Christmas break.

Rather than show the benefit that this would provide to the project as an individual saving we have incorporated these into each of the other location betterment suggestions.

### **2. St Andrew Square / Waverley Junction**

The proposal at the junction with St Andrew Square / Princes Street / Waverley Junction is to completely close the road to both general and bus traffic from 26 March 2012 until 9 November 2012 when the tram civil works will be completed. If we do not take this approach the tram civil works in this area will not be completed until 13 February 2013 at the earliest, some 96 calendar days later. This would be a critical delay to the project as Princes Street has to be open to allow York Place to complete, which will dictate the final completion of the project.

For the analysis we have assumed that there is no overlap of the utility diversions with the Infraco works as this is a small work area and any overlap would be detrimental to both the utility team and Infraco.

We have investigated the option with Infraco to switch construction from the outbound track first followed by the inbound which would generate the possibility of reinstating the bus lane in this area by early August 2012.

We have also looked at the timing to open a north-south route from The Mound across Princes Street to see if this could be provided prior to the full closure at St Andrew Square / Waverley Junction and we can confirm that this route can open mid March prior to closing the east-west route.

The programme attached in Appendix A highlights the Infraco Rev 4 Programme, the current situation (which is Rev4 plus the utility diversions) and the Proposal.

### **3. Shandwick Place / Haymarket**

The traffic management at Shandwick Place is already agreed for road closure so the proposal in this location is to work the embargo periods and for Infraco to work more quickly through this area. The traffic management would be in place from now until 8 July 2013 when the tram works would be complete. If we do not take this approach the tram civil works would not complete until 15 November 2013, some 130 calendar days later. This is not a critical path delay.

At Haymarket the proposal is to continue with the ongoing Phase H1 and to extend the traffic management to close off phases H2 to H6. As with the previous proposal this actually allows the utilities to be diverted and the tram works to be constructed.

We would propose that the traffic management be put in place on 3 March 2012 and this would allow the Infraco civil works to be completed on 29 April 2013. It is important to understand there would be no access to the front of Haymarket Station.

We are still fully assessing this area for statutory utilities and therefore the period included for the diversion works may increase or decrease.

If we do not adopt this proposal the current view is that at best we would complete the Haymarket area by 21 February 2014 at the earliest, some 298 calendar days later. This is not a critical path delay.

The programme attached in Appendix A highlights the Infraco Rev 4 Programme, the current situation (which is Rev4 plus the utility diversions) and the Proposal.

#### 4. York Place

At York Place the proposal is still being fully developed but it is one of the key areas of the project as it lies on the critical path for completion of the project. Therefore any time we can save here will have a direct affect on the overall remaining duration for the project.

The proposal is to close York Place to general and bus traffic for 47 weeks commencing once Princes Street is open to traffic. With working through the embargo periods and Infraco being able to work more quickly through this area we would be able to carry out the utility diversions initially in this period.

We are still fully assessing this area for statutory utilities and therefore the period included for the diversion works may increase or decrease. But if the Princes Street proposal is accepted then the traffic management would be installed at York Place on 9 November 2012 and the tram civil works would be completed by 8 October 2013.

It is important to take cognisance that if we do not adopt this proposal the current view is that at best we would complete the civils work in this area by 23 July 2014, some 288 calendar days later and this will be a critical path delay to the entire project.

There would be a further time saving if we could commence the works in York Place once the works on Princes Street are complete except for 2/3rds of the carriageway at the Waverley Junction. This would allow us to commence York Place in August 2012 rather than November 2012, thus saving a further 3 months.

The programme attached in Appendix A highlights the Infraco Rev 4 Programme, the current situation (which is Rev4 plus the utility diversions) and the Proposal.

#### Plan Delivery Limited

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Registered in Scotland No. 315197

Date: 18 January 2012
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# Edinburgh Tram - Programme Betterment Appendix A Programme

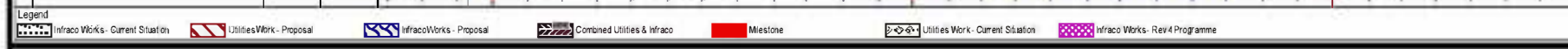
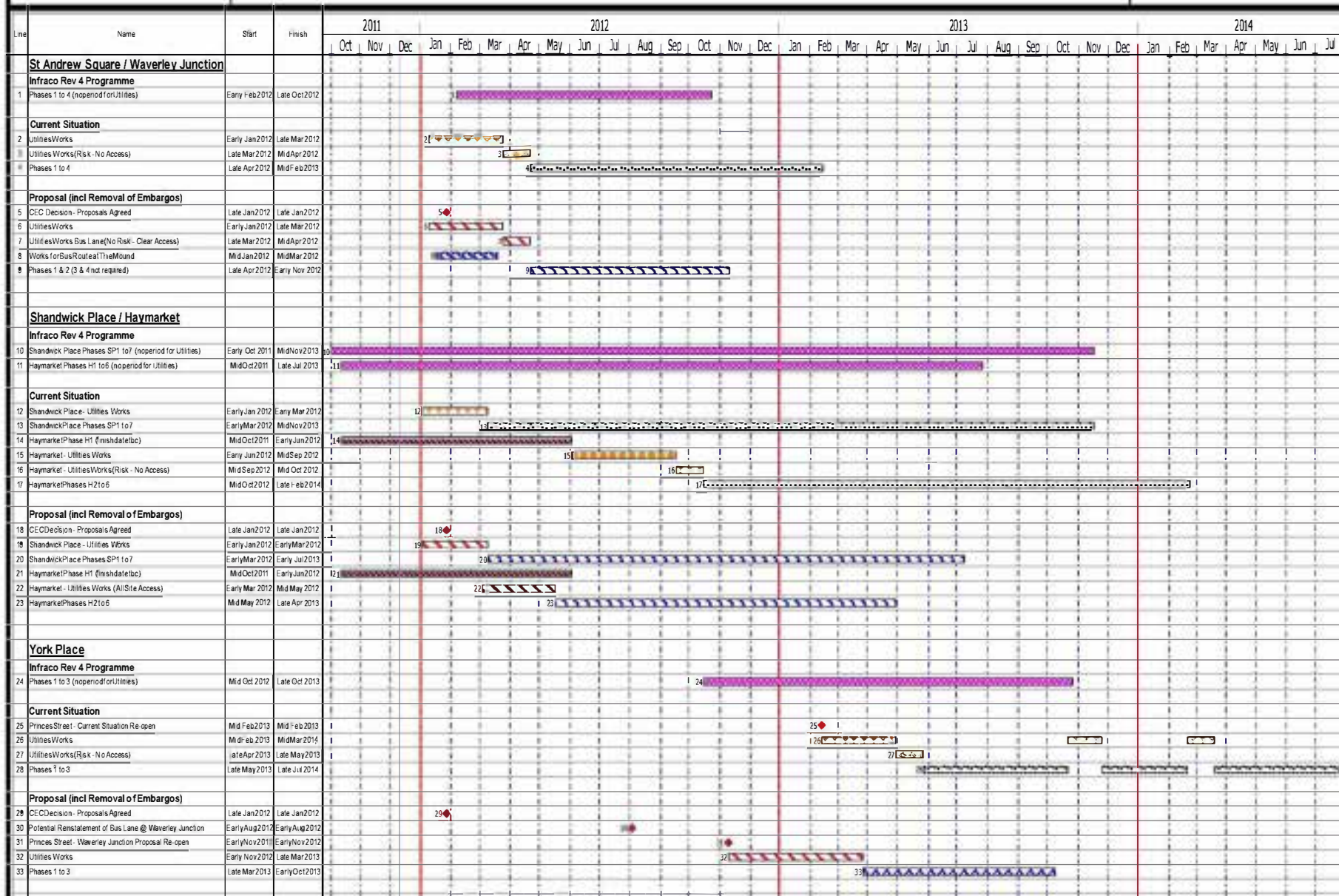


Chart Comment : Work in progress on Utility Periods

Chart Issue Date : 18/01/2012

**Project:**  
**Reference**

Edinburgh Trams Contract

Baseline Project Instructions - 2012

Confidential & Legally Privileged - FOI(S)A Exempt



## Appendix VI

### Submission from Siemens re. Materials for Sale

**From:** [Eickhorn, Axel](#)  
**To:** [Colin Smith \(csmith@hq-group.co.uk\)](mailto:colin.smith@hq-group.co.uk)  
**Cc:** [David.Gough@civil.bilfinger.co.uk](mailto:David.Gough@civil.bilfinger.co.uk); [Martin.Foerder@civil.bilfinger.co.uk](mailto:Martin.Foerder@civil.bilfinger.co.uk); [Brandenburger, Alfred](#)  
**Subject:** AW: Cost Engineering  
**Date:** 17 January 2012 13:12:07  
**Attachments:** [120112\\_BAM Calculation\\_Cancelled Materials YP to NWH.pdf](#)

---

Dear Colin,

I understand you requested the details of the track work savings as discussed last Friday. I attach the information which we discussed last Friday.

David will update and distribute the summary page in due course.

With best regards,

Axel Eickhorn  
Commercial Project Manager

Siemens plc  
Infrastructure & Cities Sector  
Rail Systems - Customer Service and Transportation Solutions  
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-----Ursprüngliche Nachricht-----

Von: [Martin.Foerder@civil.bilfinger.co.uk](mailto:Martin.Foerder@civil.bilfinger.co.uk) [<mailto:Martin.Foerder@civil.bilfinger.co.uk>]  
Gesendet: 16 January 2012 10:18  
An: [Brandenburger, Alfred](#)  
Cc: [David.Gough@civil.bilfinger.co.uk](mailto:David.Gough@civil.bilfinger.co.uk); [Eickhorn, Axel](#)  
Betreff: Cost Engineering

Alfred,

would you please forward the saving for the track material & Tower Place Bridge, Victoria Dock to finalise the summary sheet prepared by David..

Regards,

Martin Foerder  
Project Director  
Edinburgh Tram Network

CEC01890999\_0071





**Proposed Cancellation of trackworks on Dock Bridges**

**11/01/2012**

			-10.31%			
Shallow Trackform	£	120,000	-£	12,372	£	107,628
Rail Expansion Joints	£	100,000	-£	10,310	£	89,690
					£	<b>197,318</b>
						<hr/>
				<b>Savings Offered</b>	£	<b>200,000</b>

### **Manor Place to Haymarket and Princes Street bus lane diversion March 2012 – Draft Communications Plan, January 2012**

As of 14 January 2012 all traffic has been diverted from Shandwick Place to allow tram infrastructure works to commence on the street. Traffic has also been diverted off South St. Andrew Street extending down onto Princes St. to the right as far as Waverley Bridge. These diversions were brought forward as a result of a combination of lessons learned on previous sites and to help mitigate against any delays that may be encountered due to bad weather or utilities issues.

Further to this, other work sequencing has also been reviewed and as a result work due to commence between Manor Place and Haymarket is also being brought forward and extended for similar reasons as above. In addition, the traffic that has been diverted off South St. Andrew Street extending down onto Princes St. to the right as far as Waverley Bridge will be extended to include the area where a single bus lane has been in operation on Princes Street. This increased construction site will allow the utilities clearance team to work alongside the contractor to maintain the Client Target Programme. In addition to these two significant changes which will be focused on here, further information regarding the relaxation of embargoes will also be made public, namely, the contractor will no longer be required to stop working on city centre sites during the festival period and in the run up to Christmas.

Further, the contractors are re-sequencing their activities to open up access for bus, taxi, cyclists and emergency services through The Mound and Hanover Street from March 3, 2012. In addition, it is anticipated that Princes Street remedial works will be completed in June 2012 in advance of the current completion date of July 2012.

The major rationale for producing this plan is to provide audiences with a clear understanding of what's happening and how they will be affected. The primary audiences are identified as local stakeholders (particularly businesses and retailers), residents, people working in the affected area, commuters, visitors and shoppers. Communications with Local Politicians and MSPs will also be considered as part of this plan.

Other, significant announcements surrounding the programme are likely to follow in the coming months, it is therefore important to emphasise we will be constantly reviewing the programme for the betterment of the project.

The announcements around these works are significant taking into consideration the recent announcements of other diversions which are now being altered somewhat as a result of this further review. The timing of implementing this plan is critical, and needs to coincide with the project governance meeting structure already in place. Following this it is proposed this information be shared with the Cross Party Briefing group before any public announcement. It is recommended that political, stakeholder and media briefings take place on the same day. Further engagement will take place after this time.

The communications plan will be implemented by a team lead by Tram Council Communications staff in conjunction with support from Transport Scotland, the Big Partnership, Bilfinger Berger/Siemens (BBS), CAF and Lothian Buses on behalf of bus operators.

#### **High-level breakdown of changes;**

- Closure of bus lane at the East End.
- Extension of worksites to include the space between Haymarket and Shandwick Place (Manor Place to Haymarket).
- Re-opening of The Mound for North/South for bus, taxi, cyclists and emergency services.
- No embargoes planned for 2012/13.
- Princes Street remedial works due to complete in June rather than July

#### **Aim**

To communicate the steps required at this point to deliver the project on time and on budget.

#### **Key messages**

- We are on schedule to deliver a tram service from the airport to York Place in July 2014. The latest diversions do not alter the overall timescale of the programme as outlined in December 2011 (with completion still due by Q3 2014).
- CEC, BBS, CAF and TS are constantly reviewing the programme to ensure works are carried out in the most efficient manner – a process that will continue in the months ahead.
- On-street sites in the West End and City Centre are being opened up to allow the utilities clearance team to work alongside the contractor, reducing the likelihood of delays and limiting the risk of increased cost.

- Centrally coordinated traffic management controls put in place in January 2012 have worked well thanks to the support of the public and these latest diversions should be no different.
- The council continues to work closely with businesses to minimise the impact on trade during the course of the tram works, we will be reviewing the OFB budget provided to support businesses in light of changes to the new work schedule.

## **Tactics**

Changes are scheduled to come into effect from 3 March 2012, this will mean there is approximately four weeks between announcing these changes and delivering them. All residents and businesses in the vicinities should receive notification as soon as is possible once the start date has been confirmed.

It is envisaged an announcement will be made publicly to coincide with direct mailings being delivered to local businesses. All communications will carry key messages and detail the logistical issues regarding navigating the city during the timeframe of the works.

There are two elements to these communications, firstly the important issue of notifying the relevant audiences of the works, particularly the traffic diversions and work sites that may affect them. Much of this will take place as part of a major drive in advance of work starting and will continue as required whilst work is ongoing.

The second element is to communicate the important message on an ongoing basis that businesses surrounding worksites are operating as usual. This will be carried out in a number of ways with the support of the Town Centre Coordinators and budget support from the general tram communications budget as well as the Open for Business allocation.

Going forward it is key we involve stakeholders as much as possible in our progress. A commitment has been made to provide regular updates on construction works to stakeholders every 8 weeks following the publishing of the Overall Client Target Programme in December. The first edition of this is currently being compiled.

Alterations to programme and the extension of worksites will have a significant impact on stakeholders and traders in the city. A list of some of the potential communications opportunities and risks in relation to this are listed below;

## Opportunities

- The project will be seen as moving ahead and making progress.
- Announcing the handover of the Depot to CEC and the completion of the Mini Test Track to allow dynamic testing of Trams on programme exemplifies good work achieved since work restarted on the project in September 2011.
- An increased work force during peak periods will emphasise the employment being created and the drive to complete on behalf of the contractor.
- Announcing the completion of Princes Street remedial works ahead of the programmed completion date of July 2012.
- Opening up of the Mound – bus companies, taxis, cycles and emergency services will see this as beneficial.

## Risks

- A backlash from traders in the affected areas, complaints could make reference to;
  - short notice at which the plans are being implemented,
  - a lack of consultation on such plans,
  - the impact the closures will have on their trade and
  - a lack of monetary compensation for any losses they incur.

**Action;** follow plan as below, make sure extra resource deployed to meet with affected business and consider implications for OFB budget going forward.

- A negative response from stakeholders in general, complaints in addition to the above could include;
  - the negative image we are portraying of Edinburgh as one big worksite, essentially closed and
  - a lack of embargoes having a further negative impact on the affected areas.

**Action;** devise separate communications plan in conjunction with TAG and Dave Anderson to help mitigate impact on stakeholders.

- Demand outweighs resource, as per the below plan; not having enough resource to deliver on all items fully.

**Action;** Review staffing levels to reflect need in conjunction with Joint Comms Group

- OFB budget isn't increased to reflect further worksites and number of businesses affected.

**Action;** Consider communications needs going forward, how this will impact budget and work with DA to inform any revenue bids going forward.

### Initial announcement activities

Activity	Actions	Owner
Notification	<ul style="list-style-type: none"> <li>• Written notification to be sent to all local residents and businesses at the</li> </ul>	Kelly Murphy/Alf Orriell/Andy

	<p>very least 28 days before work starts, longer where possible</p> <ul style="list-style-type: none"> <li>• This will outline when work will start, how long we expect it to take to complete, what the work will involve, traffic diversions, changes to parking and loading provisions and bus changes</li> <li>• Maps displaying the traffic diversion, new bus stops and parking availability will be included with notifications</li> <li>• Taxi working group to be notified as well as cycle lobby</li> <li>• Local Councillors, Community Councils and residents groups also to be notified</li> <li>• Bus companies &amp; emergency services will also be notified.</li> </ul>	Conway
Logistics plan	<ul style="list-style-type: none"> <li>• Logistics team to visit all businesses to be affected by 17 Feb 2012</li> <li>• Plan of days and times deliveries currently made put together to see what adaptations may need to be made</li> <li>• Special waste uplift arrangements to be put in place</li> <li>• Diversion arrangements to be shared with all delivery/haulage companies</li> </ul>	Alf Orriell/Logistics team BBS
Face-to-face with Traders	<ul style="list-style-type: none"> <li>• Team member to attend traders meetings to update and report back any issues or unanswered questions to KM</li> <li>• Coordinate with work of TCCs to support affected businesses and to feed in to city promotional activity while tram works ongoing in the local area</li> </ul>	Alf Orriell/Caroline Trainer tbc
Branding	<ul style="list-style-type: none"> <li>• Use of West End Village brand to promote the area and drive footfall; this will happen in conjunction with the West End Village Association</li> <li>• Work with Multrees Walk and St.James' Centre in a similar fashion</li> <li>• West End street market, lighting proposal or gateway event – to be discussed with association</li> </ul>	Stewart Hardy/Graham Russell/Kelly Murphy
Advertising	<ul style="list-style-type: none"> <li>• Undertake advertising for the West End Village/Shandwick Place/Manor</li> </ul>	Kelly Murphy

	Place/Haymarket area	
Media plan/social media – see separate announcement action plan doc	<ul style="list-style-type: none"> <li>• Press release/briefing to be prepared to go out in conjunction with stakeholder comms</li> <li>• Edinburgh Trams website updated</li> <li>• Traffic diversion routes on local radio</li> <li>• Web updates on local pages</li> <li>• Regular twitter and facebook updates</li> </ul>	Michael Pinkerton/ Campbell Hart/Phil Addicott and Stewart Hardy
Political briefings	<ul style="list-style-type: none"> <li>• Council Leader/Cllr Mackenzie briefing well in advance of public announcement</li> <li>• All party briefing group held in advance</li> <li>• Briefing for city centre Councillors (TBC)</li> <li>• Members brief to be sent out to all members advising of planned closure and details – to coincide with letter mail out.</li> </ul>	Kelly Murphy
Stakeholder briefings	<ul style="list-style-type: none"> <li>• Drop in sessions to be organised for local businesses and residents for additional information – local community councils and residents groups also to be notified</li> <li>• Personal visits offered to discuss individual needs with a team member</li> <li>• Invitation, venue, time and presentation format to be considered</li> <li>• Regular stakeholder information to contain info on diversion</li> <li>• Ongoing discussions with local traders as to how best to help drive footfall to the area</li> <li>• Notify Essential Edinburgh as early as possible</li> <li>• Provide regular updates on works to the Tram Business Forum and the Tram Animation Group</li> <li>• Emergency services, bus companies, taxi groups, cycle lobby and hauliers</li> </ul>	Caroline Trainer / Alf Orriell



	associations to be notified.	
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### Communications activities per stakeholder group post-announcement

Audience	Activities	Status	Responsible Person	Key Dates	Funding source (if required)
<b>Key business stakeholders across the city</b>	Team members to attend regular meetings with stakeholders on any issues and mitigation measures required	TAG & Tram Business Forum are established meetings which will continue. West End Traders association to be approached and offered presentation on new changes	DA/KM/AO/CT	Ongoing	CEC
	Stakeholder update to be issued regularly – will include info on diversions		CT	Ongoing	
	Implement a signage system and carry out advertising to promote the business in affected areas		KM/CT/SH		
	Create and distribute maps showing the diversion routes,		SH/CT	At start of diversion and as	

	new bus stops and the pay and display parking in the vicinity of the diversion			agreed intermittently thereafter(budget dependent)	
<b>Businesses around worksite areas and diversion route</b>	Letter drops with information on various work programmes	Will commence asap after announcement	AO	ASAP	CEC
	Business Support surveys – one-to-one with responsible person in each business including retail, office based, food outlets, hotels, venues (inc church) to determine requirements (delivery frequency/volume, required vehicle access, rubbish collections, etc)	Supplementary to these surveys are a series of meetings with service organisations to facilitate the business requirements. Road Haulage Associations/Royal Mail/Emergency Services	AO	ASAP	
	Appoint logistics contractor and develop logistics approach for going forward		BBS	Underway	BBS
	Meetings with trade and hotelier associations, traders associations e.g West End Association and Community Councils: Newtown, Broughton and West End	Requirement to focus heavily on areas such as the WE which will be further impacted by these changes – increase contact with local key stakeholders	DA/AO/KM	In advance of diversion and ongoing over the period	CEC



<p><b>Edinburgh Residents</b></p>	<p>Media/Social Media</p> <p>Council website, Edinburgh trams and Lothian Buses websites to be regularly updated and include information from leaflet</p> <p>Edinburgh Outlook (Council newspaper) information</p> <p>General information for Neighbourhood Partnerships/libraries</p>	<p>Press releases containing information, twitter and fb to coincide and continue with regular updates</p> <p>Info re diversion</p> <p>Distribution to every Edinburgh Household</p> <p>Marketing materials due to be reviewed and take into account new diversions – to be made available asap</p>	<p>MP/SH</p> <p>MP/SH/CT</p> <p>MP</p> <p>AO/CT</p>	<p>Copy for March edition and to be provided regularly</p> <p>ASAP</p>	<p>CEC</p>
<p><b>Commuters/public travelling into Edinburgh</b></p>	<p><b>Road:</b> Use of Traffic Link bulletins to radio traffic updates, Twitter roads feed and Variable Messaging Signs</p> <p><b>Rail:</b> Directional signage at Haymarket station</p>	<p>Information only (Marshall Poulton’s team to liaise with TS over variable messaging signs)</p> <p>New map system in place – this will take into account</p>	<p>MP</p> <p>SH</p>	<p>Start of Diversions and ongoing</p> <p>ASAP</p>	<p>CEC</p> <p>CEC</p>

	<p><b>Bus:</b> Information on-board buses, at shelters, travel shops and at bus stops</p> <p><b>Pedestrian:</b> Directional signage for routes through worksite, signage around worksite (with contact information) and side streets as required, map distribution at key locations</p> <p><b>All:</b> Radio/newspaper/online advertising campaign</p>	<p>new diversions and signage will be erected with fencing on sites</p> <p>Leaflet with bus stop locations</p> <p>New signage system to be adapted to include new worksites. A booklet of maps to be agree once clear vision of future worksites is agreed. Continued messaging around encouraging footfall in affected areas</p> <p>Drop-in sessions or events to be advertised well in advance</p>	<p>Lothian Buses</p> <p>SH/KM</p> <p>CT</p>	<p>In advance of diversions</p> <p>Ongoing</p>	<p>LB</p> <p>CEC</p> <p>CEC</p>
<b>Shoppers and visitors</b>	<p>Pedestrian signage system in place – booklet with maps to be agreed (for distribution in shops, on-street, at tills, at stations etc) and other key areas including libraries and neighbourhood offices</p>	<p>Booklet agreement tbc distribution list to be compiled in advance</p>	<p>KM/SH</p>	<p>Ongoing</p>	<p>CEC</p>

	Vinyls in shop windows and agreed sites through Authorised Advertising Project	Promotional opportunity – if a suitable site came up could be utilised	CT/SH	Underway	CEC
	Directional signage for affected businesses	Ongoing discussions with individual retailers	AO/SH		CEC
	Use of QR codes to provide updates – targeting luxury brand shops particularly	This is a longer term ambition to provide a signage system which would be acceptable in this market	KM/SH	TBC	TBC
	Work of Marketing Edinburgh	Tram team continues to work with ME to help promote the city and drive footfall	DA/KM liaison	Ongoing	OFB
<b>Taxi-drivers</b>	Briefings to Cab operators/Cycling lobby	Taxi reps to be notified. Cycling groups being informed through CEC Cycling Officer	AO/SW	ASAP	CEC
	Leaflet distribution		AO	ASAP	CEC
<b>Bus companies</b>	Direct contact made with relevant information	CEC Engineering team	BMcC	Directly following the announcement	
<b>Emergency</b>	Consultation already underway	CEC Engineering team	BMcC	Ongoing	

<b>Services</b>	- ongoing				
<b>Internal audiences: Council staff</b>	Internal Tram Staff Newsletter – Tramlines	1 <sup>st</sup> edition currently being compiled will include updates on key milestones and upcoming challenges as well as staff news	BMcC/KM	Underway – 1 <sup>st</sup> edition published date tbc	CEC
	CE update & Leaders Report Intranet updates Materials in public areas	Regularly to include high level info on diversions	MP/KM to liaise where necessary	Ongoing	
<b>Tourists generally</b>	Briefing for tour groups (email) and Visit Scotland	Receive stakeholder update but regular meetings will be offered to keep them up to speed	AO/SW	Ongoing	CEC
	Stakeholder update to Edinburgh Tourism Action Group		CT	Ongoing	
<b>Media</b>	Press briefings on the changes to be provided to individual journalists in addition to the general press release  Ongoing engagement, feeding of positive news stories and reactive handling of media	Key transport writers to be invited in to view SCOOT room and understand the workings of putting on diversions	MP/DA	26 January TBC	CEC

	enquiries				
<b>All</b>	Q&A to be developed in relation to new changes	Will provide useful background for spokespeople and those in face-to-face roles could also be posted to the website	MP		
<b>Other category – street clean up</b>	Prior to the last diversion Services for Community undertook an intensive clean-up programme in the city centre	The benefit of this would be ensuring the city is starting works from the best possible position	AO	In advance of diversions	CEC
<b>Contact Information</b>	All communication materials and logistics will include contact information	The Customer contact number has been vital throughout the various work programmes to date – the number has been transferred over to CEC with an automated option for construction going to the contractor	CEC/contractor		CEC/BBS

KM – Kelly Murphy, Stakeholder Communications Manager

MP – Mike Pinkerton, Press Officer

SH – Stewart Hardy, Designer and Brand Manager

AO – Alf Orriell, Logistics and Relationship Manager

CT – Caroline Trainer, Communications Officer

SW – Shaun Wallace, Engineering Team



BMcC – Bob McCafferty, Programme Manager  
DA – Dave Anderson, Head of City Development  
MP – Marshall Poulton, Head of Transport  
LA – Lucy Adamson, Head of Communications, Transport Scotland  
CEC – City of Edinburgh Council  
BBS – Bilfinger Berger Siemens