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**From:** Richard Jeffrey  
**Sent:** 02 March 2011 10:12  
**To:** Dennis Murray; Steven Bell; Nigel Robson; Colin Smith; VRE - MobileMe; 'Anthony Rush'; donald.mcgougan@edinburgh.gov.uk; Dave Anderson  
**Subject:** FW: Project Phoenix Proposal - Comments on Appendix 4 Scope & Appendix 5 Programme - FOISA Exempt and Prepared in Contemplation of Mediation  
**Attachments:** Pheonix\_hidden\_costs.xlsx

For info and discussion later today.

Thanks

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**From:** Alastair Richards  
**Sent:** 02 March 2011 09:23  
**To:** Richard Jeffrey  
**Subject:** RE: Project Phoenix Proposal - Comments on Appendix 4 Scope & Appendix 5 Programme - FOISA Exempt and Prepared in Contemplation of Mediation

Further to the email below, the attached is a high level guestimate of the risk costs identified below and are by their nature highly subjective.

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**From:** Alastair Richards  
**Sent:** 01 March 2011 17:03  
**To:** Richard Jeffrey  
**Subject:** Project Phoenix Proposal - Comments on Appendix 4 Scope & Appendix 5 Programme - FOISA Exempt and Prepared in Contemplation of Mediation

Richard,

Beyond the fundamental of the price which was to some extent expected, it was Appendix 4 Scope and Appendix 5 programme which gave rise to my main cause for my reaction to the Phoenix Proposal in that I think that it seems to contradict to me the intimation that BSC are to assume greater risk and provide greater certainty in the covering proposal.

As requested, I have detailed below the items that give rise to these concerns, a number of which may seem small but as you know unfortunately there has been a history of difficulties arising when these details come to be negotiated at a later date:

Page 141 Utilities – this is far too general as worded since this will capture connections etc to the depot, substations, tramstop and points cubicles which always have been a part of the Infraco Agreement Scope as included in the Employers Requirements.

Page 141 Airport Kiosk and Canopy - this seems ridiculous not to be included in the fixed price and programme, the design has been fixed now for a considerable period of time and it does not seem credible that a competent contractor is not able to price this piece of work. It may be that this is a provisional sum or such like under the Infraco Agreement but this would seem to be a sensible element to be included within the Guaranteed Maximum Price otherwise creates an interface exposure.

Page 143 onwards numbering as per the PPP submitted by BSC

3. Outstanding Approvals, etc. - This is written too broadly, my understanding is that Consents are sub-divided into those which the Contractor must obtain and those which are to be obtained by tie, as written this would appear to be trying to transfer all Consents risk to tie. This seems to be at odds with Clauses 19.3, 19.4 and 19.5.

‘Consents from Third Parties, in so far as it is required to obtain agreement of approval, have been identified where possible in the PPP Programme. In the event other Consents or Third Party Approvals/Licenses are required, they shall be procured by tie in accordance with the PPP Programme, and in the event of a delay or additional cost, Infraco shall be compensated through a tie Change Order.’

4. Water Connection at the Depot - This would be fine to be stated as a programme assumption, but what is not clear is whether the intended implication is that if this date is not achieved then the responsibility for the consequences are expected to fall to tie. I do not believe that this tie’s responsibility under the current Infraco Agreement.

‘The PPP Programme assumes resolution of all Depot Water Connection issues by 30 June 2011.’

8. Tramstop Design - I have reviewed a sample of the PPP Drawings as an example at Haymarket and they do appear to be the latest available, dated 11/01/2011 which were put through IDR review by BSC on the 27<sup>th</sup> January 2011. However, at the IDR there were a number of comments made by various parties that will lead to a subsequent revision of the drawing to close out the accepted comments, albeit that these are fairly minor.

**If the caveat was to refer to not only the PPP Drawings but also to the known comments at the associated IDR for that drawing then it would be an acceptable risk. Without such a reference, then this caveat already leads inevitably to a change.**

‘The PPP Price is based on the Drawings as included in the electronic record of PPP Drawings. Any changes or additional works required by tie/CEC or any other Third Parties in relation to any design and/or construction changes are not at the risk of Infraco. This includes, but is not limited to, System Branding, Ticket Vending Machines, Validators, Shelters, platform materials and PIDs. Infraco is not responsible for the cost of any abortive works, additional design, prototypes or any delays due to the items listed above.’

**Edinburgh Tram Network  
Project Phoenix Proposal  
PPP Drawing Register Civil Works (Bilfinger Berger)**

Drawing Number	Drawing Title
ULE90130-02-STP-00028	Newhaven Road to Haymarket Section 2A Crew Relief Facilities Details
ULE90130-02-STP-00029	Newhaven Road to Haymarket Section 2A Crew Relief Facilities at Haymarket Sub-Station Lighting
ULE90130-02-STP-00030	Newhaven Road to Haymarket Section 2A Crew Relief Facilities at Haymarket Sub-Station Sma
ULE90130-02-STP-00031	Newhaven Road to Haymarket Section 2A Haymarket Tram Stop General Arrangement Plan
ULE90130-02-STP-00032	Haymarket to Roseburn Junction Section 2 Haymarket Tram Stop Elevation & Section
ULE90130-02-STP-00033	Haymarket to Roseburn Junction Section 2 Haymarket Tram Stop Details Elec Ducts, Drainage and Setting out
ULE90130-02-SUB-00004	Haymarket sub Station Location Plan and Layout

10. Landscaping – We have made a quick check and none of the planting appears to be a prerequisite to passenger opening or safe operation so this is probably reasonable.

‘In respect of landscaping works, Infraco shall be deemed to have met all requirements relevant to landscaping which are necessary to enable the issue of a Certificate of Sectional Completion provided that the only outstanding works relate to planting. Infraco shall then carry out the planting works at the beginning of the next planting season.’

13. Gogar Castle Access Road – This is an existing issue due to the SDS design which widens the existing road which consequently takes a small section of it outside of the LOD.

‘The PPP Price is based on the Drawings as included in the electronic record of PPP Drawings. The PPP Programme assumes all relevant and necessary land is available to Infraco on 31 March 2011 to carry out these works.’

18. Interfaces with Energy Suppliers at Depot – This is an existing issue between Siemens and Scottish Power which is BSC’s risk under the existing contract, and they are technically in the best position to resolve. This is a blatant shifting of the contractual goal-posts for a known difficulty which Siemens are struggling to resolve.

‘There are unresolved issues with Scottish Power in respect of earthing arrangements to the Depot. The delay in the resolution of these matters shall be to the full responsibility of tie and subject to an extension of time.’

20. Cable ducts – This is likely to be a significant piece of work, for which BSC are currently contractually committed to provide such a link under the Infraco Agreement, if BSC had thought genuinely about this then it would realise that since the Phoenix scope will no longer continue the tram ducting as far as Princes Street but the way it is worded it seems to have been flagged not for this reason but because it is simply too difficult.

‘Cable duct connections between ETN and the Urban Traffic Control (UTC) and the City in View CCTV Control in a size of 150 mm diameter are not allowed in the PPP Price due to an outstanding clarification on the right of way and the related design. For the design and execution of this work, a tie Notice of Change and an appropriate tie Change Order shall be issued.’

30. Warranty – this provides for no ‘in-service’ warranty cover for these items and is not in line with the Infraco Agreement which includes for 10 years maintenance inclusive of repair and renewal during this period. It also does not match the 15 years latent defect period which exists under the Infraco Agreement.

‘The PPP Price includes for warranty for all the above materials and equipment, for a warranty period expiring on 10 March 2013, i.e. two years after the Section C Sectional Completion Date identified on the Programme, Revision 1.’

35. Maintenance – There is no detail, that I have seen in the proposal, which explains how the pricing has been arrived at, however it feels wrong as for considerably less tram route and associated assets it would appear to cost more than that which was originally priced for, notwithstanding that the on-street section was to be the heaviest trafficked section of the line (by a factor of 2). It would appear to be based upon the earlier Carlisle work which sought to adjust for currency fluctuation with the Euro.

There is also no justification offered as to why the following caveats numbered 1 to 5 inclusive have been introduced. They are not linked in any regard to the change of scope of Phoenix, rather they appear to be opportunistic and targeted renegotiation of basic principles of the current contract.

‘The PPP Maintenance Price is based on the current design as detailed in the PPP

Drawings. If this is later subject to a tie Change Order, including any change to the agreed split of responsibilities within Schedule Part 2, then this shall be valued in accordance with clause 80.6.

The PPP Maintenance Price is based on the assumption that the total maintenance period does not exceed 10 years starting with the service commencement date for Section D (as described in Appendix 5.2).

In view of the Proposal and its "Project Carlisle" predecessors, dated 29 July 2010 and 11 September 2010, we do not believe that certain conditions remain appropriate and we therefore we would like to review and to discuss the incorporation of the following points with respect to the Maintenance Services:

1. Removal of the voluntary termination by tie clause (89), which leads to a 10 year maintenance contract period.
2. Removal of the cap applicable to indexation on Spare Parts and infrastructure mobilization amounts, currently capped at a maximum aggregate amount of 50,000GBP.
3. Indexation: shall be for the full scope of maintenance, including mobilisation and initial spares.
4. Introduction of a Benchmarking point (at 5 years) regardless of whether there is any change in applicable law.
5. Renegotiation of Liability caps, as defined in Schedule Part 1, in the Maintenance Cap.'

### 36. PPP Maintenance Pricing

To reflect the Maintenance programming modifications required by the Project Phoenix Proposal the PPP Maintenance Pricing requires adjustment. The following Table identifies the PPP Maintenance Price categories and Revised Amounts. Tram Maintenance and Mobilisation is included in the PPP Price provided by CAF, see APPENDIX 1.3 -CAF - PPP Price Breakdown.

Infraco Maintenance limited to scope as defined in Infraco "Project Phoenix" Proposal £25,133,013.00  
Infraco Maintenance Mobilisation £1,782,292.00

Infraco Spare Parts £1,013,090.00

Total Infraco £27,928,395.00

CAF Value

Tram Maintenance TBA\*

Maintenance Mobilisation £2,275,806.00

Total CAF TBA\*

\*TBA = To Be Adjusted by CAF/tie when Km/year of operation is decided (it is presumed that the total amount will be below the minimum foreseen in Tram Maintenance Agreement table for price adjustment according to distance and will therefore require an agreement of the price per kilometre. If that is not the case, TMA prices will be applied).

Appendix 5 – Programme – The following 3 extracts from the programme illustrate the following areas of concern:

This does not currently reflect any attempt to deliver a mini test track between the Depot and Gogarburn Tram stop, there are opportunities in the programme to bring this forward to being ready by Autumn 2011 if there was a commitment to do so.

Design (Days) (2000) (2000) (2000)		2000	2000	2000
<b>Design</b>		0	31-Mar-11	31-Mar-11
ED-02-TRKS-10	Issue Construction Drawings Gogeburn Train Stop	0		31-Mar-11
<b>Trackwork (2000)</b>		107	20-Apr-11	03-Feb-12
ED-02-TRCK-50	Drainage	24	25-Apr-11	05-Jun-11
ED-02-TRCK-55	Depot Stop in On 280 Track Preparation	55	25-Apr-11	15-Jun-11
ED-02-TRCK-60	Ducts	8	05-Jun-11	15-Jun-11
ED-02-TRCK-65	Reinstatements	5	15-Jun-11	23-Jun-11
ED-02-TRCK-81	Track Foundations	18	23-Jun-11	15-Jul-11
ED-02-TRCK-82	Gogeburn Castle & Gogeburn Cabnet Road Works	25	12-Jul-11	17-Aug-11
ED-02-TRCK-70	Track Laying (552m)	33	20-Oct-11	07-Dec-11
ED-02-SIGN-70	point machine mechanical set up	15	20-Oct-11	10-Nov-11
ED-02-SIGN-80	wayside preparation for doors(4) and boxes(1)	5	25-Nov-11	07-Dec-11
ED-02-TRCK-80	Track Finishes	18	07-Dec-11	15-Jan-12
ED-02-TRCK-81	Fencing and Reinstatements	25	15-Jan-12	20-Feb-12

The installation of the Overhead Line in the Depot is shown as one continuous activity taking 4 months to achieve, there is an opportunity for this to be undertaken in sections to allow the delivery of trams sooner and an ability for certain testing to commence.

Activity ID	Activity Name	Original Start	Original End	Total Price	2011					
					Jan	Feb	Mar	Apr	May	
EA-01-BLEC-31	Access to cable pits for cable laying (Depot)	0	25-Jun-11	483						
EA-01-BLEC-70	Instal Electrical Cables Depot	25	25-Jun-11	508						
EA-01-SIGN-40	Installation of 2 SIG-interlocking subcables depot entries	25	12-Jul-11	483						
ED-02-SIGN-80	Installation of SIG equipment on depot entry west	10	25-Jul-11	483						
EA-01-OHLE-60(3)	Overhead Catenary Line (Depot)	75	10-Aug-11	128						
ED-02-SIGN-50	Installation of SIG equipment on depot entry east	10	17-Aug-11	483						
EA-01-SIGN-80	Commissioning of 2 SIG-interlocking subcables depot entries	10	28-Aug-11	483						
EA-01-OHLE-60(3)10	OCS Testing & Commissioning	15	28-Nov-11	412						

The programme shows on the face of it all of the Training and Familiarisation pushed to the end of the programme, rather than a T1 test taking place as soon as Section B to the Airport is completed as envisaged by Section 23 of the Employers Requirements to allow this to be used for testing and commissioning. This significantly increases the risk on Operational Readiness and our ability to 'shakedown the trams and systems for long enough to derisk the final period of Trial Running.

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2013				
						Jan	Feb	Mar	Apr	May
<b>Project Phoenix Proposal rev 2</b>		<b>613</b>	<b>31-Mar-11</b>	<b>22-Sep-13</b>	<b>0</b>					
<b>KEY DATES</b>		<b>612</b>	<b>31-Mar-11</b>	<b>22-Sep-13</b>	<b>0</b>					
1000	PROJECT PHOENIX - Signed Agreement	0	31-Mar-11*		0					
1050	Re - mobilisation	20	31-Mar-11	20-Apr-11	14					
1100	Delivery/handover of all Siemens material to site	0		12-Sep-11*	0					
313	Section Completion A	0		18-Dec-11	312					
314	Section Completion B	0		24-Sep-12	225					
231	Construction Completion Phase 1a Edinburgh Airport to Haymarket	0		11-Mar-13	10					
315	Section Completion C	0		29-Jun-13	0					
316	Commencement of Revenue Service Phase 1a Edinburgh Airport to Haymarket	0		22-Sep-13	0					
325	Section Completion D	0		22-Sep-13	0					
<b>COMMISSIONING PHASE EDINBURGH AIRPORT TO HAYMARKE</b>		<b>125</b>	<b>25-Mar-13</b>	<b>22-Sep-13</b>	<b>0</b>					
300	System Integration Test; Phase 1a Edinburgh Airport to Haymarket	30	25-Mar-13	24-Apr-13	0					
301	Test Running and Driver Familiarisation; Phase 1a Edinburgh Airport to Haymarket	30	24-Apr-13	24-May-13	0					
302	T1 Post Commissioning Test completed; Phase 1a Edinburgh Airport to Haymarket	0		24-May-13	0					
302.1	Test Running and Driver familiarisation performance ramp up to Airport to Haymarket	30	24-May-13	23-Jun-13	0					
302.2	T2 Performance Test completed; Phase 1a Edinburgh Airport to Haymarket	0		23-Jun-13	0					
302.3	Approval of HWI; Phase 1a Edinburgh Airport to Haymarket	0		23-Jun-13	0					
302.4	Shadow running; Phase 1a Edinburgh Airport to Haymarket	30	24-Jun-13	22-Sep-13	0					
302.5	T3 Pre-Operations Test Completed; Phase 1a Edinburgh Airport to Haymarket	0		22-Sep-13	0					

I will attempt to identify the likely financial risks associated with each of the above mentioned points and send this later this evening.

Regards,

Alastair