



PROJECT PITCHFORK Pitchfork

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<u>0.8</u>	<u>Update Sections 4</u>	<u>1.03.10</u>	<u>SC</u>		
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Pitchfork - Executive Summary

Pitchfork is the working name for the project which commenced in January 2010 with the objective of setting out reasoned conclusions and recommendations on the future direction of the Edinburgh Tram Project. This document is the Pitchfork Report submitted to the Tram Project Board on 10th March 2010. The report is intended to be self-standing but is supported by a range of documents which provide the evidence base for the report's conclusions and recommendations. The report was prepared at the request of the TPB by tie Limited, under the direction of Richard Jeffrey, CEO of TEL and tie. The narrative assumes familiarity with the development of the project and the related nomenclature.

The report contains material of the strictest commercial confidentiality, bearing in mind the substantial sums of public money to which it relates and the nature of the dispute with the main contractor. The Report must not be copied or distributed beyond the named recipient.

Executive Summary to complete

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1. Introduction

The Infraco contract was signed on 14th May 2008 between **tie** Limited and the Bilfinger Berger – Siemens – CAF Consortium. Simultaneously, the design contract between **tie** and Parsons Brinckerhoff was novated from **tie** to the BSC Consortium. The Council is formal guarantor of **tie**'s financial obligations under the contract.

As described in more detail in Section 2, the execution of the project has been problematic and there is a range of disputes between **tie** and the Consortium over responsibility for the cost and programme implications of design changes, programme delays and other matters. The Consortium has failed to deliver according to the contract programme and progress continues to be very slow. It was decided by the TPB in January 2010 that **tie** should address in detail the range of options open to TEL and the Council and provide a report to the TPB on 10th March 2010.

Comment [MSOffice1]: support

The options for the future relationship with the Consortium have been identified as

- Option 1 – Termination of the Infraco contract (the “Vancouver” option)
- Option 2 – Exiting Bilfinger Berger from the Consortium wholly or partly (the “exit” option)
- Option 3 – Aggressive application of the Infraco contract in its present form with the present players (the “contractual” option).

Section 5 examines these three options in detail.

Two further options were identified, but not examined in detail :

- Option 4 – Adopting an accommodating approach to BSC on cost in return for more certainty on programme
- Option 5 – Continue in present mode, attempting to achieve a reasonable and partnerial relationship with BSC.

The assessment of Option 4 noted that BSC – and specifically BB - have adopted very aggressive positions on cost and have referred on many occasions to sums being due to them in the region of £100m above contracted cost. As is discussed elsewhere in this report, **tie** believes this is based on erroneous interpretation of the contract, unsupportable cost estimates and an embedded aggressive contract management style. The funding for the project is formally limited to £545m and any further funding would require specific approval by the Council and the primary funder the Scottish Government. It is not guaranteed that significant further funding will be forthcoming although **tie**, the Council and the Government will be bound to meet bona fide liabilities. The most up to date full project cost estimate is in the region of £530m plus the cost of resolving the dispute. Accordingly, with funding becoming the limiting factor, there is no question of accommodating BSC's demands simply to seek to achieve more programme certainty. In addition, BSC's behaviour to date would inspire little confidence that any agreement on cost struck on these terms would not be followed by further demands.

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Option 5 is essentially the strategy adopted in the period following contract close through to the summer of 2009. There had been no convincing sign over that period that BB were prepared to engage in a partnerial manner to progress the project and resolve disputes as they emerged. As is explained below, the approach adopted by tie from July 2009 reflected a conclusion that there was no reasonable likelihood that BB would behave properly. With sporadic exceptions, the signs since July 2009 have reinforced the view formed then and there is no basis for assuming things will change now. Accordingly, the option of continuing to seek a “play nicely” outcome is regarded as futile.

The project work schedule required the civils contractor BB to perform the bulk of the early period work, in advance of systems implementation which is largely the responsibility of Siemens. The disputes addressed in this report and the recommendations are focussed on dealing with BB. The presumption (and the evidence to date) is that BB is at the heart of the problem, with Siemens playing a more constructive role. However, it is recognised that solutions will require the support of the full Consortium and the solutions pursued will also minimise scope for dispute with Siemens. CAF have to date executed their responsibilities in line with the contract.

This report outlines :

1. A description of the nature of the dispute
2. The detailed background to the options review
3. The process adopted to manage the review
4. The workstreams implemented to analyse the options
5. The analysis of the options
6. An assessment of BB’s position
7. Recommendations for the way forward

The governance and decision-making machinery for the project has evolved since inception to reflect the needs of the project. Under the current model, the Council has delegated responsibility for delivery of the project, including its cost, programme and scope, to TEL except where :

- Cost exceeds £545m; or
- Commencement of revenue service falls beyond October 2012; or
- Material changes in scope are planned.

In these circumstances, the Council reserves authority. TEL’s Board has delegated its authority to a special purpose committee of the TEL Board, the TPB. The TPB comprises members of the TEL Board including senior representatives of the project delivery team and senior Council Officers. Further sub-delegations of authority are documented and understood. In summary, the governance model is fit for the purpose of addressing the decisions arising from the dispute.

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2. Background to the dispute

2.1 Procurement Strategy

Taking on board lessons from the National Audit Report “ Improving public transport in England through light rail “ (Date: 23/04/04) and other relevant guidance, including guidance provided by Partnerships UK (PUK) the procurement strategy developed and endorsed for the tram project was to:

- undertake detailed design ahead of award of the main construction contract
- tender the utility diversion works as a separate package covering in one contract a collection of the main SUCs’ interests and divert these in advance of the main tramworks contract
- tender the construction contract and tram contracts separately
- tender the construction contract as one large package which included all design, civil engineering works, systems construction and integration of the whole system, including integration of the trams themselves
- novate the design contract to the Infraco contract to ensure design and integration risk was passed to the private sector

The Infraco contract was awarded to the consortium comprising Bilfinger Berger, Siemens and CAF on 14 May 2008 following a protracted procurement process. The timeline to this procurement process was as follows:

	Infraco	Trams
ITN	3 October 2006	31 November 2005
Tenders received	12 January 2007 / 7 August 2007	April 2007
Evaluation completed	14 September 2007	
Preferred bidder awarded	22 October 2007	
Contract awarded	May 2008	May 2008
SDS novated and CAF join Infraco consortium	May 2008	May 2008

Three reports were produced in support of the decision to conclude the contract. These were:

1. “Close Report” which outlines the commercial terms of the contract, risk profile, assessment of risk of procurement challenge and related matters
2. “Events leading up to contract award” outlining events arising in the run up to contract award, and
3. A report on the legal terms of the Infraco contract suite.

The behaviour of the Consortium in the period between Preferred Bidder award and contract close was unexpectedly and unnecessarily aggressive, incorporating a series of demands for

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material improvement to the commercial terms. The management of this behaviour was fully documented for discussion by the **tie** project management, the TPB and the Council’s representatives at the time and the ultimate extent of change to the project’s cost and programme was contained within acceptable boundaries. The extent of risk transfer under the contract was also approved.

It was recognised that there were two elements of the procurement strategy that had not developed as planned – the design process had not reached conclusion and the utility diversions were not complete. Specific mechanisms were established to manage the completion of the design in a manner which supported the risk transfer mechanisms in the contract, as explained in more detail below.

The behaviours noted prior to close were expected to ameliorate once construction commenced, a judgement which has proven to be wrong.

2.2 Performance of the Designer (“PB” or “SDS”)

Performance of PB and their key sub-contractor, Halcrow, has been poor during the entirety of the relationship between **tie** and SDS. This resulted in the design for the Tram network not being complete at the time of contract award as had originally been anticipated. A risk analysis of the remaining design was carried out at the time of contract award and a financial risk contingency put in place to cover this risk. However, it has been apparent that Infracore have not managed SDS effectively since May 2008 resulting in further design slippage.

The design programme in force at time of contract award was v26. At time of writing the programme is at v51 and this has shown significant slippage. The Comparison of last delivery dates for the various programme revisions is:

Programme	Activity	Section	Finish
V26	Issue For Construction Drawings Depot	6A	09-02-09
V31	Issue Construction Drawings - Roads, St Lighting, Landscaping, Drainage, OLE, Track 1A3 & Ocean Terminal TS	1A3	21-01-09
V51A	Issue for Construction Drawings - OLE Pole Location Plans Section 7A	7A	19-08-10

Comment [MSOffice2]: is this table meaningful, it seems to address concluding dates for 3 different sections and therefore doesn't show slippage ?

Whilst **tie** Changes have driven some of this delay in for example areas such as Gogar Interchange and Picardy Place, there has been no clear justification from BSC as to the reasons for delay. There are also indications that the scope of what SDS has been asked to deliver compared to the base scope has increased substantially. This is evidenced by the increased number of IFC’s now identified in the programme and it is believed that this is due to BSC design being incorporated into the overall design.

Comment [MSOffice3]: As above, what does this table do for us ?

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Phase 1a only	Number Required			Number	
	V26	v31	v51A	Submitted	Granted
Prior Approvals	44	49	58	53	52
Technical Approvals	53	71	98	87	79
IFC	71	81	235	93 delivered for 1a	

Several audits were carried out on the management of design during January 2010. This is reported in more detail in Section 4 of the report but the key themes are:

- There is little evidence that BSC have properly managed the design process.
- Lack of evidence to suggest that BSC have paid serious attention to best value design solutions
- Behaviours, lack of co-operation and discharge of duties as competent contractor
- Low volume of correspondence between BSC and SDS in the BSC document management system
- Delay and mitigation – no evidence of actions taken by either BSC or SDS

Comment [MSOffice4]: The report needs to address rigorously the tie responsibility for design management documented in the design agreement concluded at Close. This should include the means by which tie could be construed as failing.

The quality and timeliness of the design process is a critical dimension of the dispute and Section 4 of this report provides a detailed analysis. Although the original strategy of completing design prior to construction contract award was not achieved, the weight of evidence is that this is an area of significant BSC culpability in the period following Close.

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2.3 Performance of MUDFA

The MUDFA Rev 6 programme was incorporated into the BSC programme which became the contract programme within Schedule Part 15 of the Infraco contract. This was achieved by identifying 10 key milestone dates for MUDFA completion which were geographically split at an Intermediate section level of the programme.

In Spring 2008 **tie** expected that the MUDFA works would be complete within a matter of a few weeks/months dependent on location (latest section completing in December 2008) and a risk allowance was made in the overall budget to cater for any overrun of these works. The risk of overrunning utility works is one held by **tie** and the nature of the MUDFA contract means that any delays caused to the Infraco contractor could not be recovered from the MUDFA Contractor.

Comment [MSOffice5]: Could the table below be summarised, focussing on key slippage issues. This needs related directly to the section dealing with BB's claims for extension of time.

	MUDFA Rev 6	MUDFA Rev8	MUDFA Rev8	Current Utility forecast	Current Utility forecast
		Physical Works	Cabling Completion	Physical Works	Cabling Completion
1A	31 October 2008	15 December 2009	24 November 2009	1 Nov 2010	10 Dec 2010
1B	01 August 2008	7 June 2009	23 September 2009	Complete	1 July 2010
1C	31 October 2008	17 Dec 2009		5 May 2010	13 August 2010
1D	19 December 2008	24 September 2009		21 April 2010	16 June 2010
2	No constraint in Rev 0 programme	Complete	Complete	Complete	Complete
5A	No constraint in Rev 0 programme	Complete	Complete	Complete	Complete
5B	11 April 2008	Complete	Complete	Complete	Complete
5C	16 May 2008	Complete	Complete	Complete	Complete
6	SGN Diversion – 18 April 2008	Complete	Complete	Complete	Complete
	Water main Diversion – 30 May 2008	Complete	Complete	Complete	Complete
7	16 May 2008	Complete	Complete	Complete	Complete

At the time of the Infraco contract award, **tie** enhanced the team who were managing the MUDFA contract to ensure that it was given the level of attention it required to ensure that these diversions were implemented as fast as reasonably practicable. This included additional assistance to project managers, resource dedicated to traffic management and a resource dedicated to managing the interface with BT (who had the lion's share of telecoms cabling works to undertake following physical completion of new ducting, outwith the MUDFA contract). However, the utility diversions were not completed as envisaged at time of contract award and physical utility diversions are still ongoing at

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Edinburgh Park, Haymarket, St Andrew Sq, York Place, Picardy Place, Leith Walk and Forth Ports with works still to commence at Baltic Street & South Gyle Access bridge following completion of design. The physical works are followed by a period of time for telecoms cabling completion.

A number of issues conspired to delay the programme for completion of the works which were not anticipated at the time of the Infraco contract award:

- Slow delivery of the design by SDS and failure to ensure that SUC's were bought into the design being produced
- Increase in scope of utilities to be diverted – mainly as a result of the poor quality of drawings provided by the utility companies upon which the design was based leading to re-design and additional diversions. Scope increased from circa 27,000 m at MUDFA contract award to an expected c48,000m by the time all utilities are complete
- Increase in scope of utilities diverted – as a result of encountering underground obstructions and congestion of existing utilities which had to be circumnavigated. At times this required a complete redesign. An example of this is the BT diversions on Constitution Street which required BT cables to be diverted outwith Constitution St and outwith the Limits of Deviation.
- Poor performance of Carillion(formerly Alfred McAlpine) which resulted in slower than expected progress and rework, some of which is still ongoing
- Attitude of the SUC's where commercial arguments were being used to prevent progress on the ground, particularly by SGN
- Complexity of traffic management required for the diversions
- Poor records held by SUC's in relation to location and depth of utilities
- Slow progress in obtaining Scottish Water consents in relation to drainage systems

A number of claims have been submitted by Carillion. A robust defence of these is underway at present and shortly after Carillion provided their MUDFA Rev 8 programme [date], tie decided that the works were at a stage where a Carillion exit could be managed efficiently and the residual works handed over to other contractors in an attempt to improve the productivity of the works. This was implemented in December 2009 with full TPB approval given on xxxxx. [Comment on resolution to the Carillion dispute]

BSC first submitted a Compensation Event in relation to MUDFA works not being complete on xxxx and it soon became apparent that if MUDFA works were not complete in an entire intermediate section then BSC would not commence Infraco works in that section claiming that Section 13 obliged them to have been given unrestricted access to the entire site before tram works could commence. tie does not believe that this is in accordance with their other obligations in the contract which oblige them to mitigate delays.

BSC submitted an Infraco notice of tie Change (INTC 429) in relation to the impact that MUDFA delays were having on the Infraco programme in August 2009. tie made its own assessment of the MUDFA delay impact on the Infraco programme and when BSC put this into formal dispute in September 2009 tie made an offer of 9 months Extension of Time (EOT) and 6 months relief from cost was made to BSC

Comment [MSOffice6]: Refer to the initial EOT1 extension awarded of c7 weeks and the rationale

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following a meeting between the parties. TPB endorsed this at the meeting on xxx. At time of writing BSC have not accepted this award and have put this into formal dispute with mediation scheduled for 16/17 March 2010.

Comment [MSOffice7]: Must be precise on the legal standing of the 9 / 6 offer.

There is no dispute that utility diversion delays have caused construction delay, but there is substantial difference of view as to the extent of this impact and the extent of concurrency in relation to other aspects of BSC's performance, notably sub-contractor mobilisation.

2.4 Performance of Infraco

The behaviour being demonstrated by BSC (mainly but not exclusively through BB) in the run up to contract award was characterised by a consistent effort to improve the commercial terms of the contract in their favour relative to the basis on which preferred bidder status was awarded. Following contract award a number of features have demonstrated that BSC, particularly BB, are continuing to seek improved commercial outcomes. Section 6 documents this in more detail as a basis for analysing BSC / BB's current position on the dispute.

2.5 Princes Street agreement

In early February 2009 BSC abruptly refused to commence work on Princes Street as programmed. The TPB / tie board on 11th February 2009 tie was instructed to set out the options to deliver the project going forward. Work commenced on Princes St on 23rd March 2009 following Mediation between the parties which resulted in:

Comment [MSOffice8]: Ensure the description is accurate

- the production of a Supplemental Agreement; and
- agreement between both parties to set up a Project Management Panel to engage on the disputed issues including programme, BDDI – IFC and costs for EOT1.

[This needs expanded to describe the nature of the agreement, its justification and the outcome]

2.6 Formal dispute resolution process

Although work was proceeding reasonably well on Princes Street under the supplemental agreement, the attempts to resolve other matters in dispute were largely proving fruitless. In May 2009, DRP 1 (EOT1 costs) was agreed via mediation, and tie had identified a number of other areas for referral to the DRP process. By June 2009 the PMP had met 6 times, but it was becoming clear that BB's approach would not be amended by normal negotiation nor by mediation. At the TPB in June 2009, tie's Chief Executive, Richard Jeffrey was instructed by the TPB to work on building up the relationships/trust with BSC for future negotiations (whilst recognising that the more formal approach may be necessary) and a meeting had been set up with this in mind for end June with David Darcy of BB. David Darcy had been appointed as BB' xxxx in xxxx. This meeting resulted in both parties agreeing to an intensive

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week of informal mediation which was held in the week commencing 30th June 2009. The areas covered at this mediation were:

- the interpretation of key clauses in the pricing schedule
- BDDI – IFC
- Risk allocation and substantiation of changes
- Programme – EOT2

On 8th July 2009, **tie** reported back to the TPB that the mediation had not been successful and Richard Jeffrey outlined 4 options for consideration by the TPB as follows:

- 1) Negotiated settlement
- 2) Formal contractual approach – DRP and other contractual mechanisms
- 3) Reduce/re-phase BSC scope
- 4) Terminate the BSC contract

TPB endorsed option 2) and following further approval of the detailed approach at the TPB on 29th July 2009 .

The objective of this strategy was to:

- test a number of contractual principles which lay at the heart of the changes;
- drive down the value of Estimates being submitted by BSC;
- get work started at a number of locations; and
- drive change in behaviours by the contractor;

Comment [MSOffice9]: Through the application of which contractual mechanism ?

The following DRP's have been launched to date:

[What were DRPs 1 and 2 ? Above it says EOT 1 was DRP 1]

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DRP No	Subject	Nature	Decision/Status
3	Hilton Car Park	Contract definition	Awarded in tie 's favour
4	EOT1	Costs	Agreement reached through mediation
5a	Gogarburn	BDDI - IFC	Decision made, see below
5b	Carrick Knowe Bridge	BDDI – IFC	Decision made, see below
5c	Russell Road Bridge	BDDI - IFC	Decision made, see below
5f	Haymarket	BDDI – IFC/Costs	Agreement reached prior to reaching formal stages – costs reduced substantially
5i	Baird Drive	BDDI - IFC	Awaiting adjudication
5j	Balgreen Road	BDDI – IFC/costs	Agreement reached prior to reaching formal stages – costs reduced substantially
5o	Depot Access Bridge	BDDI – IFC/costs	Recently launched
A	MUDFA Rev 8	Time	Awaiting mediation

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The green shaded DRPs in the table above were launched by tie, the others by BSC.

Each DRP was subject to detailed preparation, including legal and commercial support from parties external to the main tie project team where appropriate. The topics to be referred to DRP were carefully selected on the basis of the case being strong and going through a robust challenge process which also involved the Finance, Legal and Commercial sub-committee of the TPB.

The effectiveness of the strategy was addressed in detail in December 2009. It was concluded that the strategy was not delivering the desired outcomes. Whilst tie has achieved the objectives of getting work started at locations put into dispute and significantly driving down the final value of Estimates being submitted by BSC (see below), success has not been as visible on the legal interpretation and especially on the principles of the Pricing Assumptions contained in Schedule Part 4 of the Infraco Contract. Whilst successive adjudicators have moved closer to tie's interpretation of these clauses this remains an area of difference between the parties. This is a critical and complex area of contractual interpretation which is addressed in detail in section 4.

Comment [MSOffice10]: Need to confirm through the minutes how the FCL Committee was kept in touch

The following section has been contributed by DLA [needs to be edited and integrated]

HIGH LEVEL COMMENTARY ON VARIOUS MATTERS REFERRED TO DISPUTE RESOLUTION PROCEDURE UNDER THE INFRACO CONTRACT

1. Background

This note sets out a high level commentary on several issues which have been referred to the Dispute Resolution Procedure under the Infraco Contract.

2. Hilton Hotel Car Park

Infraco had refused to accept that it was obliged under the Infraco Contract to proceed with the carrying out and completion of the construction/re-configuration of the car parking spaces at the Hilton Hotel ("Hilton Hotel Car Park") unless and until it received an instruction from tie. tie then referred that matter to the Dispute Resolution Procedure.

The Adjudicator (Mr Robert Howie QC) wholly agreed with tie's position, in that Infraco was obliged to carry out and complete the Hilton Hotel Car Park without instruction from tie.

3. Gogarburn Bridge and Carrick Knowe Bridge

Infraco and tie did not agree as to the extent to which the matters depicted on the Issued for Construction Drawings in respect of the structures known as Gogarburn Bridge and Carrick Knowe Bridge constituted a Notified Departure in terms of Pricing Assumption 3.4.1.1 of Schedule Part 4 (Pricing) (referred to generally as the "BDDI to IFC issue"). tie then referred both matters to the Dispute Resolution Procedure.

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On matters of interpretation of Schedule Part 4 (Pricing) generally, tie's position was that Schedule Part 4 (Pricing) says the Infraco's price for the specified works (the "Construction Works Price") is a lump sum, fixed and firm price for all elements of work required as specified in the Employer's Requirements and the Infraco Proposals. A Notified Departure occurs if the Base Date Design Information is amended, which gives rise to an examination of the price if that is justified. Infraco's position was that the Construction Works Price is to be based upon the Base Date Design Information only and matters that will become Notified Departures are matters that fall outwith normal design development that could be construed from the information available to Infraco contained within the Base Date Design Information - on Infraco's view Pricing Assumption 3.4.1.1 applies to all changes except those which could be considered as the "normal development and completion of design" from the information available at Base Date Design Information and "normal development and completion of design" has to be understood in the particular way provided in the Infraco Contract in that it excludes changes in shape, form or outline specification.

The Adjudicator (Mr Hunter) reasoned (on which point neither party invited him to do so) that the Employer's Requirements have, in terms of the price for works been clarified in paragraph 3.1 of Schedule Part 4, and thus limited by the Base Date Design Information and the Schedule Part 4 (Pricing) agreement in respect of the agreed fixed price. Adopting that reasoning, the Adjudicator proceeded to find that a number of the matters depicted on the Issued for Construction Drawings in respect of the structures known as Gogarburn Bridge and Carrick Knowe Bridge constituted a Notified Departure in terms of Pricing Assumption 3.4.1.1. DLA, McGrigors, Richard Keen QC and Mr Wilson (a subsequent adjudicator) agree with tie's position.

Whilst the Adjudicator was not asked to decide upon matters of valuation, it is the case that tie is of the opinion that the Estimates submitted by Infraco in respect of each of the Gogarburn Bridge and Carrick Knowe Bridge structures are grossly overstated - such that (1) Infraco's Estimate in respect of Gogarburn Bridge was in the amount of £313,080.31 (now revised to £239,353.26), whereas tie's assessment is in the amount of £72,551.35; and (2) Infraco's Estimate in respect of Carrick Knowe Bridge was in the amount of £339,028.00 (now revised to £165,507.76), whereas tie's assessment is in the amount of £99,403.92.

4. Russell Road Retaining Wall

Infraco and tie did not agree as to the contents of Infraco's estimate in respect of the structure known as Russell Road Retaining Wall. Infraco then referred that matter to the Dispute Resolution Procedure. The Estimate was in the amount of £4,597,847.07 and concerned 3 elements (LOD, Contamination and Foundations).

As part of that dispute the arguments previously advanced by both Infraco and tie in the Gogarburn Bridge and Carrick Knowe Bridge disputes were rehearsed before a different adjudicator (both tie and Infraco accepting that the decisions of Mr Hunter were not binding on the adjudicator).

On matters of interpretation, the Adjudicator (Mr Wilson) roundly rejected Infraco's position that the Construction Works Price could be construed as being solely for the Works shown on the Base Date Design Information. Similarly, the Adjudicator largely agreed with tie's interpretation of Pricing Assumption 3.4.1.1, in that "normal" development of design is progression towards the Employer's Requirements as would be expected by an experienced contractor and his designer; and the word "amendment", which qualifies the application of Pricing Assumption 3.4.1.1, means that Pricing

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Assumption 3.4.1.1 can only apply to something showing on the Base Date Design Information, not an addition to achieve compliance with the Employer's Requirements.

Notwithstanding the issues of principle rehearsed before the Adjudicator, the substantive dispute concerned the contents of Infraco's Estimate. It was acknowledged that certain of the defences proposed by tie to the monetary claims made by Infraco (as set out in the Estimate) may not succeed. Albeit that those defences did not, by and large, succeed it was the case that Infraco's Estimate was initially in the amount of £4,597,847.07, tie having assessed an amount of £701,467.95 in respect of Foundations (LOD having been withdrawn by Infraco as part of the dispute resolution process and both Infraco and tie agreeing that Contamination was to be dealt with separately) and the Adjudicator decided that the amount of the Foundations to be £1,461,857.21.

Comment [MSOffice11]: Explain how much of the £4.6m was attributed to the LoD and contamination claims, so that the residual number compares to the outcome of £1.5m.

5. Future matters

A number of other Estimates submitted by Infraco have been identified as being potential candidates for referral to the Dispute Resolution Procedure, principally on the basis of those Estimates being overstated, but also to drive home tie's interpretation that the Construction Works Price is not circumscribed by what is depicted on the Base Date Design Information. By way of example, those Estimates include:

- Section 7A Track Drainage - Infraco Estimate is - £1,024,443.45 and tie assessment is £24,073.60;
- Tower Place Bridge - Infraco Estimate is - £455,881.56 and tie assessment is (negative) (£305,026.66);
- Baird Drive Retaining Wall - Infraco Estimate is £1,920,578.81 and tie assessment is £578,529.76; and
- Depot Access Bridge - Infraco Estimate is £2,478,205.05 and tie assessment is (negative) (£4,927,732.90).

DLA Piper Scotland LLP

25 February 2010

[Describe the financial outcomes, based on the spreadsheet provided by DLA / JN] Other disputed areas have concluded informally with financial outcomes much closer to tie's position that that adopted by BSC.

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The DRP strategy was intensive of management time and expensive in advisor costs. The benefit of the strategy in beating down BSC claims and in achieving some physical progress was valuable, but there was no improvement in the behaviour of BB. Little progress had been made in resolving key disputed matters outwith the DRP process, especially the attribution of responsibility for programme delay and agreement of a revised and deliverable programme. The DRP process had also highlighted a central uncertainty in the interpretation of the contract, namely the application of Pricing Assumption 1.

Following recommendations made to the December 2009 and January 2010 TPB's, Project Pitchfork was launched.

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3.0 Project Pitchfork

As described in section 1, a range of fundamental options were addressed by the TPB in December 2009 and January 2010. It was agreed that an intensive series of eight inter-related workstreams would be instigated to provide a robust basis for decisions at the TPB meeting on 10th March 2010.

3.1 Project Team

The workstreams were and team responsibilities were :

Workstream	Leader
1. Audit and design	Steven Bell
2. Programme	Susan Clark
3. On Street Supplemental Agreement	Alastair Richards
4. Use of Contractual Mechanisms	Tony Rush
5. Assessing the options	Richard Jeffrey
6. Maintaining construction progress	Frank McFadden
7. Financial Analysis	Stewart McGarrity
8. Communications	Mandy Haeburn-Little



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The workstreams could be categorised as either providing evidence/analysis to substantiate Options 1,2 and 3 (workstreams 1,2,3,4,7) or keeping the project running (6,8). These all feed into workstream 5 – the options. Specific workstreams are explained in detail below.

3.2 Governance

A 5 layer governance process was put in place as follows:

Level	What	Who
Level 1	Progress update held on Monday, Wednesday, Friday	Project Team + DLA
Level 2	Challenge Session	Project Team + invited others as relevant
Level 3	Update CEC weekly + FCL	Richard Jeffrey, Dave Anderson, Marshall Poulton, Donald McGougan
Level 4	Challenge by non-execs every 2 weeks	Non-Execs and selected members of Project Team
Level 5	TPB – every 4 weeks	TPB members

3.3 Security

A dedicated room was set up for the duration of the project and access controlled by limiting key holders to the room. A dedicated area on the **tie** extranet was set up to hold all the information associated with this project. This was to ensure that sensitive information was kept confidential and access to this site was limited to the project team only. Additionally, it allowed sensitive information to be posted here to avoid it having to be emailed around. Hard copy only of this report will only be circulated as required and then each copy will be numbered and identified to individuals.

Input piece from Seamus on extranet and security.

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4.0 Workstreams

4.1.1 Audit & Design

In this workstream, there are the following strands:

- Design and design audit
- Programme audit
- Sub contractor arrangements Audit

4.1.2.1 Design and design audit

The completion of the design for the Edinburgh Tram Network has been challenging since the System Design Provider (SDS) commenced work in 2005. As part of the Infraco Contract Agreement in May 2008, SDS were novated to Infraco to enable Infraco to complete the detailed design, including incorporation of Infraco proposals, to achieve the necessary system outputs as specified in the Employer's Requirements.

There are a number of key concerns:

- Time taken to complete the design (latest forecast August 2010, 16 months after V31, the programme agreed at Close)
- Lack of best value solutions in design
- Lack of effective management of the design to completion
- Reasons and justification for changes from the original design at Base Date developing to completion
- Lack of effective management of change and its effects
- Programme management of the design in line with Construction requirements and priority (by both Infraco and SDS)
- Mitigation of the effects of delays (however caused)

In order to address this objectively, and given very sparse information available from Infraco and/or from SDS, **tie** undertook a targeted set of formal Audits on design issues in January and February 2010 and a rapid review report of SDS delivery programmes by Blair Anderson in February 2010.

Comment [MSOffice12]: Describe BA's credentials

4.1.2.2 Audit Themes emerging from the January / February Clause 104 Audits

In January 2010 several design audits were instigated under the auspices of Clause 104:

1. Design (including)
 - a. Structures
 - i. Baird Drive retaining wall
 - ii. Bankhead Drive retaining wall
 - iii. Depot Access Bridge
 - iv. A8 Underpass

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- b. Roads section 1D
- c. Overhead Line System and foundations
- d. Track
- e. Integration and design assurance

The following areas have been identified as key themes from the audits. The draft reports are being finalised.

- a) There is little evidence that BSC have properly managed the design process.

BSC are obliged to manage SDS design against an outline design programme in accordance with the novation agreement. Despite requesting through face-to-face audit meetings with BSC they were unable to produce evidence of positively managing SDS. They were unable to produce any credible plans, letters, memos, emails and minutes of meetings to evidence this obligation.

- b) Lack of evidence to suggest that BSC have paid serious attention to best value design solutions

There was no evidence in any of the audits to suggest that these best value plans and best value reviews had taken place. They were unable to produce any credible analysis, letters, memos, emails or minutes of meetings to evidence this obligation. In fact, at the audit, BSC stated (as an aside) that Best Value for **tie** and for BSC were two different things. Searches of their BIW document archive system failed to reveal any supporting documentation. Further follow up meetings asking for the details of how they have considered Best Value in their design activities did not produce anything that demonstrates the discharge of this obligation.

There is no evidence of BSC utilising SDS to improve build ability and to deliver Value Engineering opportunities, even on structures specifically identified within the Agreement. In addition, there is no evidence of BSC utilising or considering the use of contractual provisions to manage SDS (e.g. use of LD or incentive provisions)

- c) Behaviours, lack of co-operation and discharge of duties as competent contractor

BSC have displayed a reluctance to engage positively with the audit process although they have generally managed to field the necessary personnel to support the audit when required. Access to their BIW system has always been available. Many of the requests for information have been prefaced by reference to there being a lack of understanding of the relevance of the request. They have not allowed access to any Email as they consider email to be an informal means of communication and that they do not have any obligation to provide such. They have on a couple of occasions produced an email in support of their position when it suits.

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d) Volume of correspondence

There appears to be very little formal correspondence between BSC and SDS in the BIW document system. Either there has been no adequate formal record of managing SDS or it is being recorded elsewhere and not exposed to tie. No evidence of alternative recording has been uncovered to date.

e) Delay and mitigation

There has been no evidence offered or found of mitigating actions taken by either BSC or SDS to minimise the effects of changes or delay in the design. This is supported by some of the rapid review analysis undertaken by Blair Anderson in his report.

f) Experts Commentary on design

The independent Aecom engineers who attended the structures and roads audits have commented on the basic quality/competence of the design solutions (including the changes) and the time taken to complete such designs or design changes. The basic design solutions are competent; however there is serious concern over the time taken to conclude such matters. This is supported by the analysis from Blair Anderson in his findings noted below.

g) Integration and design assurance

The process utilised by Infracore and their designer would generally provide an integrated solution capable of providing design assurance. However, Infracore are not complying with this prior to commencing construction. This imports additional rework risks and increases the risk of objection from the Independent Competent Person prior to operations.

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4.1.2.3 Review of SDS Delivery Programmes

In addition to the targeted Clause 104 design audit an independent rapid review was undertaken by Blair Anderson on the SDS design programme and its management by Infracore.

This includes evidence drawn from specific audit results and an analysis carried out on the comparisons between the SDS design delivery programme V31 (May 2008) and the latest submission V51a (data from November 2009). This was carried out to identify possible causes and comment on the findings and is still "work in Progress" but the initial draft conclusions are incorporated into the evidence base for this report. The key findings are:

- The programme does not permit easy management of the design process.
- There are a number of items later added which are an omission by Infracore / SDS.

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- The management of the design, particularly changes, takes no account of the construction activity requirements.
- Durations of activities do not appear to be considered, reviewed or controlled effectively by SDS or Infraco.
- Estimates of durations are conservative against normal market requirements and in some cases excessive.

Based on his rapid review information, Blair has concluded that Infraco have failed to manage the Designer and the design process and could be considered negligent in their duties. Similarly, SDS could be considered negligent in their duties as required by the contract having failed to understand and incorporate the construction activities and sequencing within the overall construction programme.

4.1.2.4 Linkage to other work streams and options

As elsewhere, the findings of this section will support the Work stream 4 in increasing the contractually assertive position (letters and escalation meetings on design management and progress / programme of design completion have been tackled in January and February). The delay impacts, further specific details on culpability and concurrency generated from the design audits feed into the work in Work stream 2 on Programme and provide necessary substantiation for conclusions.

There is specific action to be pursued in relation to both SDS and Infraco for the absence of design management and the failure of any evidence in addressing Best Value obligations. This will include examples relating to both BDDI – IFC disputed changes and Value Engineering. Based on the finalised reports, these specific targeted areas will be supported with finalised contractual argument and pursued as specific failures.

With regard to supporting the wider evidence of material breach, this audit also provides evidence of how Infraco's failure to of their general obligation to exercise the reasonable skill, care and diligence expected of an experienced contractor. Similarly, an approach through the SDS collateral warranty is being tested.

The above information supports all three option work streams. However, the 2B option will be specifically impacted and requires additional detailed development in relation to design completion responsibilities. {Final-section-to-be-expanded}

4.1.3.1 Clause 104 Programme Audit

The Programme has been a key contention between tie and Infraco. tie consider that Infraco's failure to progress the Infraco works with due expedition is a material breach of their obligations under clause 60.1.

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There have been protracted attempts to agree an updated Programme for completion of the Infraco Works with its attendant Open for Revenue Service date. Revision 1 of the Programme, reflecting design alignment (V26-V31) was accepted in 2008, although the cost effect was not agreed until October 2009 following mediation. Infraco prepared an updated programme (revision 2) in summer of 2009 but that was not capable of acceptance by tie. In August 2009, Infraco raised the impact of MUDFA Rev 8 utilities programme to DRP and this is being mediated on in March 2010.

As part of an initiative to move this matter forward, tie and Infraco agreed a process in November 2009 to try and reach a mitigated programme capable of acceptance, to completion of the Works, whilst accepting that the culpability for delay, and any appropriate extension of time would require to be settled after that Programme to completion.

To inform this work tie commissioned Acutus to undertake a targeted audit work stream to further inform the factual quantification of delay, together with reasons for it and evidence of mitigation actions taken or planned to be taken.

The key findings from this audit which are linked to section 4.2 are:

1. Delay in notification of INTCs and subsequent provision of Estimates

BSC's INTCs for BDDI to IFC have, in general, not been timeously notified. The contract does not specify when such notice should be served but if it takes a long time following IFC and this results in significant delay, BSC would appear to be in breach of several of its more general obligations. The time taken to provide estimates often appears unnecessarily long and without justifiable reason. In many instances BSC is relying on the date of the issue of tie Change Orders to justify its claims for EoT, despite its apparent culpability for delay in the process that delivers them.

2. Utilities diversion delays

Outstanding utilities diversions continue to be cited as causes of delay and/or potential delay. tie acknowledges that there has been an impact in On street sections from utilities diversions, however, that can be mitigated by Infraco.

2.3. Delay in procurement of Temporary Works arrangements

BSCs planned procurement of temporary works design appears to have changed as a result of it delaying the appointment of its civils sub-contractors. It would appear this has created delay to the preparation of temporary works designs, their certification and approval.

4. Infraco's delay or failure to notify delays affecting Programme

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There is no evidence of Infraco notifying in relation to delays which are their responsibility. Infraco appear to have only notified items they believe entitle them to relief or compensation. They have not provided supporting information to substantiate such claims, other than via a global assessment in their Rev 3 Programme submission. There has been no evidence provided in the items audited to demonstrate that Infraco has used reasonable skill and care to mitigate delay and hence minimise costs.

3-5. Unreliable / Inconsistent evidence

Some of the answers given by BSC representative at the audit meeting appear to be at odds with some of the evidence subsequently produced or retrieved. It is thought that in many instances this arises for errors in personal recollections rather than any attempt to mislead. However, in some cases it would appear it may arise from people being selective or very careful with what they say and/or are being economical in disclosing all of the relevant facts.

4-6. Alleged tie decision making delay

There would appear to be a number of design issues relating to road and track that BSC consider require tie to decide its requirements / preferences. These are being cited as causes of delay to the commencement of certain sections.

5-7. Utilities diversion delays

Outstanding utilities diversions continue to be cited as causes of delay and/or potential delay and there appears to be some uncertainty over who will be diverting them and when.

4.1.3.2 Links to other works streams and Options

This work primarily supports Work stream 2 (Programme) and Work stream 4 (increased contractual assertiveness) by providing validated evidence and analysis of that. The programme approach by Infraco, misuse and delay in Clause 80, failure to support Compensation Event notifications and consequential significant proposed deductions from Preliminaries are all subject of escalated contractual correspondence and action through Work stream 4.

It can be utilised to support one of the key material breach arguments (failure to carry out work with due expedition in accordance with Clause 60.). It will also support the key argument regarding the application of Clause 80 (tie Change) and, as necessary Clause 64 (relief) and 65 (Compensation Events).

Consequently, it will support the delivery of Option 1, as well as informing the negotiations and actions necessary for options 2B and 3. In both the latter cases it supports the evaluation of culpability for delay. All concurrency arguments and assessment of individual delay events and their causes will assist the tie position that Infraco should have evaluated issues individually and amended the Programme accordingly.

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4.1.4 Clause 104 Subcontractor Audit

Since contract award, **tie** has sought to ensure key subcontractors are properly appointed and receive the appropriate Collateral warranties and securities. Over an extended period, Infraco's mobilisation has been very slow and Bilfinger Berger in particular have not appointed key subcontractors in accordance with Clause 28 of the Infraco Contract and **tie** has not had visibility of the status of subcontract arrangements despite repeated requests.

Two main areas were audited; procurement of subcontractors and administration of subcontracts & subcontractors. As a result of extremely limited information made available by Bilfinger Berger on the arrangements little useful work was undertaken on the administration and management element as no formal subcontracts were in place. The main 'themes' identified by the audit team were:

- BB and Siemens do not have a standard procurement strategy or policy and each party appoint subcontractors independently of the other;
- BB could not evidence that they had a project specific procurement strategy in place; and
- That there was little evidence that BB had a procurement management processes in place.

BB has entered into contractual arrangements with subcontractors without the knowledge of **tie** and that in some cases entered into subcontracts in advance of requesting permission to subcontract from **tie**.

4.1.4.1 Procurement of subcontractors

The audit requested that INFRACO demonstrated their procurement strategy and the method of managing the procurement of subcontractors to insure timely appointment and best value.

Siemens were able to demonstrate this by providing an extensive list of all the subcontractors they have appointed to date (including minor works such as installation of the server for the site accommodation).

They have three major sub contractors Bam, Core and Border Rail. Siemens stated that the only outstanding contract to be awarded is to Border Rail. They also stated that the contract they had set up was on a 'Framework' basis as they were of the opinion that this represented Best Value when consideration was given to the scope and timing of the work. They further confirmed that Border had not yet carried out work on site and that it would be possible to execute the contract within a few weeks. This matter is being tested as Border Rail has undertaken works already on the guided busway. They also confirmed that procurement of Sub-contract Collateral Warranties progressed in tandem with agreement of the Contract terms and conditions.

Bilfinger Berger has no formal subcontracts in place, some 20+ months after Contract Award.

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Bilfinger Berger provided copies of the procurement strategy for the works which was found to be generic and required further forms to be completed regarding programming, issue of tender information, return of tenders and award of appointments. Bilfinger Berger has only provided sample documents which do not adequately demonstrate the process followed.

There does not appear to be in existence a procurement schedule which monitors anticipated and actual delivery of targets such as issue and return of tenders, review of scope, and award of contracts. Further investigation will be carried out into BBs method of managing the procurement process.

Bilfinger Berger provided a schedule of amendments to the subcontract terms and conditions which they consider adequately reflects these step down requirements. This has been checked by DLA who have concluded that the Schedule Part 38 clauses have not been incorporated / stepped down in the sub-contract in the way which was envisaged by the Infraco Contract.

Despite initially confirming that a tracker document was in place in respect of Collateral Warranty Agreements, Bilfinger Berger subsequently advised that such a document did not exist.

The works undertaken by Bilfinger Berger “key subcontractors” to date has been on Letters of Intent with limited scope and financial exposure. Information was provided by (including poorly redacted latest information) and this is included in the table below :

Key Subcontractors	Latest Value of Letter of Intent	BB expected execution of Sub Contract
Farrans	~£2.5m	February 2010
Barr	~£1.2m	February 2010
Expanded	~£6m+	February 2010
Graham	No letter of Intent	February 2010
MacKenzie	£10m	April 2010
Crummock	£1.1m	March 2010
McKean	£400k	April 2010

Whilst the financial limits of the letters of intent have been amended, the scope and programme of the original letters appear to be unchanged.

Further a number of the Letters of Intent are poorly drafted however legal opinion is that the risk associated with poor drafting is unlikely to be of greater risk than the overarching risks arising due to the fact that there are not properly approved and executed sub-contracts in place.

Legal opinion as to the overarching risks are:

- No direct contractual relationship between **tie** and the Key Sub-Contractor; therefore no direct contractual duty of care (and no ability to make claims under the Collateral Warranty);

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- May put **tie** in breach of its statutory obligations under the Tram Acts that only authorised parties may carry out the authorised works;
- Falls short of what CEC is expecting, and puts **tie** in breach of its obligations to CEC under the Operating Agreement with CEC; and
- The failures regarding putting **tie** in breach of its obligations are in themselves a breach of contract by Infraco.

4.1.4.2 Conclusion

The audit has identified several areas which cause concern with Bilfinger Berger’s process of procuring and authorising subcontract works namely:

- An ad hoc procurement;
- Entering into contracts in the form of a Letter of Intent or Small Works Contract without consent;
- Letters of Intent which do not adequately deal inter alia with programme, scope, price and collateral warranties;
- In some cases Letters of Intent are extended by adding monetary value to unspecified scope; and
- Letters of Intent do not appear commensurate with the work carried out on the project.

In conclusion no evidence has been provided by BB to show that in carrying out the procurement of subcontractors the INFRACO has “exercised and undertakes to continue to exercise a reasonable level of professional skill, care and diligence to be expected of a properly qualified and competent professional contractor experienced in carrying out works and services of a similar nature”.

4.1.4.3 Linkage to other Work streams and Options

The subcontract audit provides supporting evidence of several examples of Infraco’s breach of their contractual obligations in relation to subcontractor procurement and management. There are specific failures and also part of a body of evidence to support wider evidence of material breach of Infraco’s obligations.

The specific failure to appoint Key Sub Contractors allows **tie** to operate Clause 67 to withhold payment for works undertaken by those subcontractors until they are properly appointed. This is being pursued in work stream 4 as part of the enhanced assertive commercial management of the Infraco Contract.

Such failure to appoint and the delay responsibility flowing from it will be incorporated into the Work stream 2 (Programme) assessments of concurrency and culpability when addressing the overall reasons and responsibility for delays. The failure to provide subcontractor collateral warranties to

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third parties (because subcontracts have not been executed) is a specific breach and will be utilised in Work stream 4.

With regard to supporting the wider evidence of material breach, this audit also provides evidence of how Infraco's failure to of their general obligation to exercise the reasonable skill, care and diligence expected of an experienced contractor. Infraco's failures also risk causing consequential failures in relation to **tie's** obligations to CEC, failure to assist **tie** in being able to meet Best Value obligations and failure to provide third parties with the securities such as collateral warranties expected under the various Third Party Agreements.

All of the above examples form part of the commercially assertive pressure on Infraco as Work stream 5 develops the options and recommendations. The specific evidence of Infraco's failure to meet obligations supports all three Options under consideration.

This Audit will support any preparation of case and provide some necessary factual evidence with regard to termination of the Infraco Contract (Option 1). It identifies the specific challenges to be overcome and the further work required to validate the exact current commitments and relationships with Bilfinger Berger's subcontract arrangements in order to progress Option 2B. It gives significant evidence to allow continued active and assertive contract management of the Infraco, including key commercial financial levers in pursuing any Option 3 variants, with or without specific on street amended arrangements.

4.1.4.4 The next steps

Further audit is required to review the management of the subcontractors and their work. Documentation and evidence previously requested is outstanding. This will be pursued to facilitate a better understanding of the scope of the works and financial liability to which BB has committed. (It should be noted that this commitment is without the execution of formal contracts). Validation of the scope of the works contained in the Letters of Intent together with an understanding of the time-line associated with the authorities to proceed will support **tie's** assessment of the delay attribution. It is also likely that production of information by BB in this regard will result in further avenues of inquiry. Finalised legal support to the contractual positions will be concluded.

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4.2 Programme

4.2.1 Historic Evolution of the Current Situation

The Infraco Contract incorporated the:

- Infraco Construction Programme,
- SDS Design Programme (v26), and
- SDS consents programme.

These are all to be found in Schedule Part 15 of the Infraco contract. BSC bound the design programme into their construction programme by creating programme logic links between design completion and construction start activities. This provided the following completion dates for the project :

Section	Description	Contract Programme Rev.00
Section A	Depot completion	25-Mar10
Section B*	Test Track Available	23-Apr-10
Section C	All Phase 1a Construction complete	17-Jan-11
Section D	Open for Revenue Service	16-Jul-11

Programme Contract Provisions

There are 3 mechanisms in the contract for BSC to seek and extension of time (EOT). These are Clause 64 – Relief Events, Clause 65 – Compensation Events and Clause 80 – tie Changes. Under these clauses BSC should provide details of the delay event, the impact that it has on programme, mitigations attempted, proposals for acceleration and the costs. The details of notifications received from BSC under each of these clauses are as follows:

Clause	Notifications
Clause 64 – Relief Events	0
Clause 65 – Compensation Events submitted	Xx
Clause 80 – INTC’s submitted	453

Following agreement of the EOT in relation to each of the delay events identified by BSC in accordance with the programme, BSC should follow Clause 60 of the contract and submit a revised version of the programme for tie’s acceptance. BSC has never fully complied with

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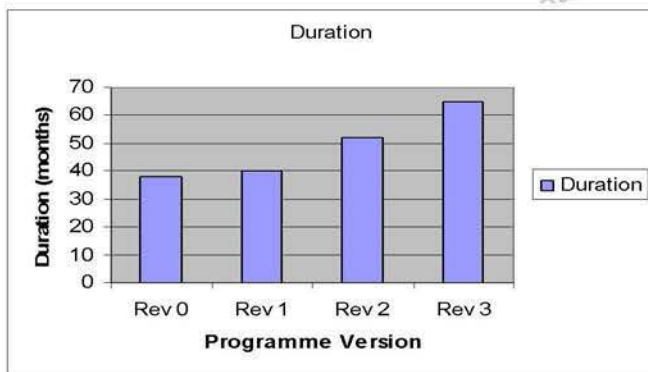


these contract clauses, claiming that it is too complex, there are too many changes and that the programme has not been stable enough to properly assess the impact – **tie** has consistently refuted this allegation and the **tie** MUDFA Revision 8 position paper explains the rationale behind this in detail. This means that **tie** has not been able to properly assess the validity or impact of the notified delays, assess the cost impact or make informed decisions concerning acceleration.

The Infraco contract contains a number of provisions relating to the Infraco’s obligations to mitigate any delay to the Infraco works (clause 60.9) and also obligations to take all reasonable steps to manage, minimise and mitigate all costs – clause 6.3.6.

Since contract close there has only been one formal revision to the contract (Rev 1) accepted by **tie**. BSC has submitted further revision of the programme Revision 2 (which was rejected by **tie**) and latterly Revision 3 which is still undergoing detailed analysis and discussion with BSC. Each of these revisions will be explained in detail in this report.

The overall movement in contract completion dates shown in these Revisions provided by BSC has grown from 38 months at contract award to 65 months in the current version of the Revision 3 programme and is shown on the graph below:



Period Programme Forecasts

Each period, BSC has submitted an updated programme as part of its formal Progress Report which has shown a systematic slippage in the contractual end dates as shown in the graph below:

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The reasons for delay as established by **tie** include:

- MUDFA – delay to the utility diversion programme;
- Slow mobilisation of Infraco and failure to appoint sub-contractors;
- Failure of Infraco to submit preparatory paperwork – method statements, work package plans etc;
- Design slippage, and
- Time taken by Infraco to advise of changes (particularly in relation to BDDI – IFC) and then time taken to provide compliant estimates.

Programme Revisions

Revision 1

It was recognised that during the gap between finalising the contract programmes and signing the contract, the design programme had moved on and it was agreed that the impact of this movement on the Infraco construction would be dealt with as a notified departure. BSC submitted an Infraco Notice of **tie** Change (INTC) on 25/11/08 (some 6 months after contract award) and the time element of this was agreed by **tie** on 17/12/08 with an EOT of 38 business days awarded by **tie** on 18/03/11.

Revision 2

In response to the ongoing slippage mentioned above **tie** engaged in dialogue with BSC in an attempt to get a revised programme which included mitigation to bring the contract end dates back in line with the contract programme. This discussion resulted in BSC providing a Revision

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2 programme on 20/05/09. During June 2009 **tie** embarked on a period of intensive mediation with BSC. The issue of a revised programme was one of the subjects of mediation but this did not result in any breakthrough and the Revision 2 programme was formally rejected by **tie** on 21/08/09. The core reasons for this rejection were:

- BSC have not followed the contract mechanism for seeking EOT and the attempt to obtain EOT through a global assessment of delay;
- The methodology for assessing the overall delay by BSC is commonly known as “impacted as planned” – a method not favoured by the courts;
- Ignores impact and mitigation of delays for which BSC is culpable;
- Programme not submitted in accordance with the contract
- Lack of robust mitigation or acceleration measures included

MUDFA Rev 8

In response to the mediation, and probably with the benefit of information and understanding shared between both parties at mediation, BSC submitted an INTC in relation to the impact of MUDFA delays on the construction programme on 8/07/09. This was followed up by BSC’s Estimate for the impact of this INTC on 6/08/09. **tie** had made an assessment of what it felt the impact of utility delays had on the overall programme and this was used to inform the discussions with BSC which were held in accordance with the programme to try and agree any EOT. Following one such meeting where a range of further actions were agreed by both parties, BSC formally put this INTC into dispute.

It was anticipated that this would be discussed at mediation but in advance of that, during November 2009, and as a gesture of goodwill to try and get BSC working with **tie** in accordance with their obligations in the Infraco contract, **tie** offered BSC a 9 month EOT with 6 months of costs subject to Tram Project Board approval . This was also subject to evidence by BSC that they were working with **tie** to demonstrate a concerted joint effort to produce a revised construction programme to which mitigation and acceleration would be integral, and a number of different behaviours being implemented. The list of evidence expected and progress at January 2010 is listed below:

-as follows:

Progress on site

- Delivery of Princes Street for 28/29 November - Achieved
- Work starting at Haymarket Viaduct in Mid November – Started very slowly at end Nov
- Drainage and Earthworks starting Edinburgh Park – Guided Bus way – Not yet started
- Depot Drainage next phase seamless progress - OK
- Commencement at A8 Underpass – Piling started 4/1/10
- Work Starting in section 2A (Haymarket - Russell Road – slow and affected by trackform discussion
- Track Laying starting now on Guided Bus way - Started

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- Commencement of Building Fixings work – Planned for January 10

Behaviours

- Increased Management Control and Problem solving on site and in the design office – little evidence
- Inter Disciplinary Check fully integrated and applied across the works with no delay – no real improvement yet
- Further active SDS management and Integration – not evidenced
- A joined up consortium approach to issues – not evidenced

Commercial / Programme elements

- On Street Agreement Works makes a step change to management from disinterested administration – some effort made in negotiations
- Estimates are grounded in realism, not “inflated” then negotiated down – no change
- Programme approach supports workable construction programme as well as a route to a revised, agreed Contract Programme – there has been active engagement but significant stumbling blocks re: difference of opinion

Insert-behaviours

This offer was made on the basis of **tie**'s assessment of the liability it had in respect of the MUDFA delays at that time (not just up until MUDFA Rev 8).

Revision 3

A timeline was agreed by both parties to work towards producing the programme which was discussed as part of the MUDFA Rev 8 discussions. The process for this was agreed as follows:

- Step 1 – Rev 0 programme
- Step 2 – Rev 1 programme
- Step 3 – Latest view of the unmitigated programme with effects of all known delays
- Step 4 – mitigated programme
- Step 5 – accelerated programme

The definition of “mitigation” agreed between the parties is important in respect of the step 4 programme. It was agreed that if the costs of the mitigation was less than the cost of the delay it mitigated, then this was mitigation, not acceleration.

At the end of January, once BSC had delivered version 1 of what they proposed was a mitigated Revision 3 programme, they opted to put the MUDFA Revision 8 dispute, back into the DRP process. Mediation will take place on 16/17 March 2010.

Notwithstanding that, **tie** has been assessing the Revision 3 programme to identify the level of mitigation incorporated, the relative programme durations and the particular details of

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programme logic, critical path and float contained within this programme. The proposed Sectional Completion dates for the Rev 3 programme are currently:

Section	Description	Revision Programme	3
Section A	Depot completion	27 June 2011	
Section B*	Test Track Available	16 Feb 2012	
Section C	All Phase 1a Construction complete	13 May 2013	
Section D	Open for Revenue Service	9 Nov 2013	

This programme currently contains:

- Durations for full depth road reconstruction – linked to BSC’s proposed OSSA. This impacts on durations and traffic management and is a worst case scenario programme but puts all this programme EOT tie when we believe there is a shallower construction which would save time and money
- All current contract embargos periods
- Delays to date associated with agreeing Estimates and for BDDI – IFC alleged changes
- Delays for which BSC are accountable

We can assume from the behaviours demonstrated to date that this is the EOT that BSC is seeking in respect of the programme.

4.2.2 Evidence for tie’s view on the current situation

The Clause 104 audit on programme has already been mentioned in Section 4.1 of this report. The results of this clearly indicate that BSC appear to be in breach of their obligations in the following areas:

- Clause 60.1
- Clause 6.3.1
- Clause 6.3.5
- Clause 6.3.6
- Clause 7.5.5
- Clause 64.9
- Clause 65.10

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- Clause 64 , Clause 65, clause 80 – in respect of information provision and within specified timescales for each event/change
- Clause 80 in respect of interpretation of Clause 80.13 and not starting works until changes are agreed
- Clause 80 in terms of unnecessary and unjustified delay to works by taking exceptionally long periods of time to deliver Estimates for notified/alleged changes
- Clause 80 and clause 65 in terms of the average timescales taken by BSC to review and process IFC drawings.

Simona – should we make a comment about BSC’s approach to seeking EOT v’s case law. Eg;

- Global assessment
- Using impacted as planned
- Lack of substantiation behind compensation events?

4.2.3 How do the technical/commercial arguments interface with the legal and financial arguments?

tie – Employer Delay Events

tie clearly has responsibility for delay associated with the delay of the utility diversions, design delivery delays and other Employer type delays. We do believe that BSC are in breach by not having attempted to mitigate these delays or offer options for **tie** to accelerate to recover the programme.

BSC – Contractor Delay Events

BSC has failed in their analysis of delay taken into account any delay for which they are responsible. To date they assume that any delays associated with agreeing changes are to **tie**’s account. Clearly, this is not the view of **tie** and BSC’s interpretation of Clause 80 whereby they insist on not starting work until changes are agreed or put into dispute is described in other parts of the report.

Assessment of Programme Liability and EOT

It is important that **tie** understands the liability it has in terms of the delays caused by the all delays and is able to quantify what means in terms of EOT and cost. Over the past few months the following controls have been put in place to capture information to use in this assessment:

- Daily telephone conference with Project Managers – to identify all delays
- Production of concurrency charts to identify all delays and attribute liability to **tie** or BSC
- Implement a delay attribution database to link all correspondence & information relating to delay in the event that further disputes emerge

This means that despite BSC not providing the information required under the contract about delays, particularly in respect of BSC caused delays, **tie** have captured a large amount of delay

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information which has informed the assessment of **tie** liability. However, the lack of substantiation by BSC in relation to delay has frustrated **tie**'s ability to administer this aspect of the contract and make robust assessment of BSC's entitlement to any extension of time. Notwithstanding this, **tie** has appointed delay and disruption specialists "Acutus" to assist us with this assessment using the information that tie has been recording and the latest summary of this is:

Insert narrative from Acutus assessment

This is based on a comparison of the Revision 1/Revision 3 programmes as they stand to date. However, clearly BSC are using the Revision 3 programme as a basis for their EOT claim and have already indicated willingness to take this topic to dispute in the form of the MUDFA Rev 8 delays.

4.2.4 What are the implications?

The Edinburgh Tram Project programme is an extremely complex programme and the analysis of overall delay culpability is even more complex and onerous. This is likely to be an area of continued tension between the parties and a continual area of risk in terms of cost to **tie** and BSC. It is unlikely that both parties will be able to reach agreement on EOT and costs given the current opposing views of the parties in terms of administration of the contract and management of programme. Whilst tie have attempted to be reasonable in offering an EOT despite this not being fully substantiated by BSC, they appear to have dismissed this and opted to take the matter back to DRP.

Simon – what do you think the strength of our legal case is here?

One of the most significant areas of unforeseen costs on construction projects arises from delay and disruption claims and it is clear that BSC are using the programme to try and manipulate additional payment from the project. Case law relating to delay and disruption on construction contracts is not well developed for standard contract types never mind bespoke contracts such as the Infracore Contract. Simona – do you agree with the above para?

4.2.5 How would the argument be best taken forward?

It is clear that the main risk to the programme lies in the on-street section of works. This is where the critical path lies and where the latest delivery dates are indicated in the Revision 3 programme. This is also where risk lies in relation to the OSSA, and where a great deal of the heat is being generated in relation to stakeholder concerns due to traffic management, phasing and code of construction practice compliance.

Currently the Revision 3 programme shows the Airport – Haymarket section being complete by end January 2013. Check Acutus assessment of improvements that could be made to this?

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4.3 On Street Supplemental Agreement

STILL TO BE PROVIDED

OS Works Executive Summary

The only on-street works performed to date under the Infraco Agreement have been the 1,010m section on Princes Street during the period of 9 months between March and November 2009. These were performed by BSC under a supplementary agreement to the Infraco Agreement, negotiated and signed during February 2009. Phase 1a of the Edinburgh Tram route includes a total on-street section of works between Haymarket and Newhaven of 7,234m the remaining balance of which BSC propose should be performed under a revised form of the Princes Street supplementary agreement known as the OSSA.

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Since June 2009 negotiations on the details of the OSSA have been ongoing between tie and BSC with the latest drafting contained in a proposal from BSC received by letter dated 19th February 2010.

Under this proposal, the remaining on-street works would be undertaken by BSC on a cost plus basis with regular invoicing of labour, plant and material costs in accordance with agreed schedules of rates and procedures.

The on-street section of works forms a sizeable part of the overall scope of the Infraco Agreement signed in May 2008, and subject to a series of pricing assumptions contained in the Agreement, principally in schedule part 4, is contained within the fixed lump sum construction works price.

The pricing assumptions leave certain risks under the Agreement as the responsibility of the Client, tie, and these risks have been used by BSC as generic grounds to argue that the only effective manner in which to undertake the on-street works is by means of a cost plus basis. In their proposal, dated the 19th February 2010, BSC offer a credit to tie for the on-street section of works from their fixed lump sum construction works price of £37M (which represents XX% of the BB element).

Whilst significant elements of the OSSA detail provides an acceptable basis upon which to perform the on-street works, there remain a number of fundamentals which prevent it being taken forward at this point. These are inter alia:

- 1) As a result of the scale of the supplementary agreement works, DLA advice (Ref.XX) states that under procurement law tie would be exposed to a challenge for not having competed the revised works.
- 2) The tie commercial team's assessment of the credit due from the fixed lump sum construction works price should be in the amount of £46M, a difference of £9M.
- 3) There is not an effective mechanism within the OSSA for incentivizing timely completion of the works by BSC and their subcontractors.
- 4) The rates contained in the OSSA schedules, whilst fixed at point of signature, are all subject to adjustment for actual cost revisions either by 31st March 2010 or 30th June 2010.

The on-street section of Phase 1a is critical to the successful operation of the trams and achievement of the benefits foreseen in both the Final Business Case for the scheme and the TEL Business Plan. The Joint Revenue Committee, SDG/Colin Buchanon, has evaluated that 70% of the Phase 1a patronage will come from the on-street section of the Phase 1a route.

Of the on-street section of route, the section between Haymarket and York Place accounts for 20% of the Phase 1a patronage, with a further 20% coming from addition of the section down to the Foot of the Walk and the final 30% from addition of the remaining section out to Newhaven.

The table below details the patronage for the on-street sections and the potential capital cost for completing the on-street works based upon the known costs from Princes Street.

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Patronage	Forecast on-street capex cost	Distance	Section
% of Phase 1a	£M	m	From Airport
100%	87	7,234	To Newhaven
70%	63	5,211	To Foot of the Walk
50%	26	2,177	To York Place
30%	12	1,010	To Haymarket (Princes St sunk cost)

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It is important to note that the capital costs equate to approximately £12k per metre of track laying which includes the additional support slab and full depth road reconstruction for the adjacent road traffic lanes as implemented in Princes Street, and represents therefore a pessimistic assessment.

As can be seen from the table above, the credit offered by BSC in their latest proposal represents less than a half of the pessimistic forecast cost of completing the on-street works, which indicates a high probability of underpricing originally by BSC coupled with a significant growth in the work scope from that originally envisaged, notably the full depth road reconstruction and track slab reinforcing layer.

The way forward so far concluded with this workstream is:

- 1) The current OSSA proposed by BSC is not acceptable in the current form for the reasons outlined above.
- 2) It is essential to introduce some competition into the pricing of the undertaking of the on-street works.
- 3) It is imperative that there is a production rate incentive built into whatever contractual mechanism is used to take forward the on-street works, the rate of 1000m in 9 months, (112m/month) achieved on Princes Street using two subcontractors is insufficient to effectively complete the works even when this is increased to 3 subcontractors working on different areas concurrently.
- 4) The scope of the on-street works must be pulled back to the minimum specification per metre of track absolutely necessary in order to reduce the direct costs and the time cost of undertaking the works.
- 5) For operational profit and loss account reasons, it is essential that the on-street works at least as far as Foot of the Walk/Bernard Street are constructed as quickly as possible. A short term option of opening the tram between the Airport and York Place would be tolerable for a limited period of time.
- 6) The future contractual arrangements for commencement of and completion of the sections of on-street work must be within tie and the City's direct control.

The implications of Pitchfork options 1 to 3 in connection with this workstream are relatively similar regardless of which option is selected as detailed in the following:

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Option 1 The on-street section of Phase 1a is critical to the success of the trams and the works would require to be reprocured as soon as possible using the lessons learnt from PSSA.

Option 2 In reprocuring an alternative civil works contractor and supporting subcontractors, again all the lessons learnt with PSSA must be included in the reprocured contract terms and work scope. Production rate per metre must be improved and the cost per unit length of on-street track reduced.

Option 3 An OSSA with the existing civil works contractor, BB, and the existing subcontractors, McKenzie, Crummocks and McKeans will only prove possible if an element of competitive tendering is introduced and incentives for production rate bought into. Without significant improvements in production rate from that which was achieved on Princes Street there is no option but to evaluate phased opening options.

Privileged and confidential - prepared in contemplation of litigation. FOISA

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OSSA Background

Work stream 3

The subject first came up in a meeting Richard Jeffery (RJ) had with the consortium (Walker (RW)/ Flynn / Urriza) on 3/6/09, where Richard Walker asked if we were happy, in principle with the operation of the PSSA (Princes street Supplemental agreement) and if this would be an acceptable basis for progressing the remainder of the on-street works. RJ said that we would prefer that the original contract was used, but that in the interests of progressing the project we were prepared to consider the extension of the PSSA into the OSSA.

The notes RJ made in preparation for the meeting show that he was planning to say "you have made no secret of the fact that you do not like the structure of this contract and would prefer to switch to a cost plus approach. RJ made it clear that he had no intention of setting aside this contract and switching to a different approach and even if he did such a move would not be possible given the nature of what has been approved by Government/CEC..... That being said RJ was concerned that the breakdown in the relationship between our two organisations is hindering the sensible progress of the project" It is RJ's recollection that in response to this 'speech' RW suggested extending the PSSA into the OSSA.

At this time the planned start date for Leith Walk and Haymarket was 1st August according to RJ notes.

This was RJ's first meeting with the consortium, and he recalls it was quite bad tempered, (there is a follow up exchange of correspondence which reflects this)

RJ then met with Dr Keysberg (BB) and Dr Schnependahl (Siemens) at Citypoint on 22/6/09. At this meeting it was agreed, given the wide range of issues that were in dispute between us, that an intense period of mediation was required to see if all the issues could be resolved. We discussed what issues should be put to mediation including (inter alia) the issue of the OSSA. RJ intimated that he was agreeable to extending the PSSA into the OSSA but that he would not contemplate a 'renegotiation'.

The mediation then took place from 29 June – 6 July.

Following the (unsuccessful) mediation RJ then met again with Drs K and S. Dr K was clearly frustrated at the lack of agreement reached during the mediation and said at this meeting (and RJ wrote these down)

"this is a great contract for us, it allows us to hold the client to ransom"

"We behave believe you (tie) have behaved dishonourably in this contract, you knew very well what the parties intended when the contract was signed"

"You can only choose to agree with us or to litigate"

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Following this embarked on the strategy of launching DRPs (there is a clear record of when this all happened (Board approval for the approach 8 July and 29 July; initial items into dispute from 11 August 2009)), and there were ongoing discussions with Messrs Walker and Flynn on several of the issues that had been discussed at mediation, including Shandwick Place. (Records from meetings with RJ on 28/7, 11/8) RJ became concerned that BSC were saying to Frank McFadden that they would not be starting on Shandwick Place without an OSSA and in the end this prompted Steven Bell to write his letter on 31/7, which starts a detailed correspondence trail.

August to September 2009 – DRPs were launched during this time which diverted focus away from progressing the on-street agreement.

Richard's meeting with David Darcy in Germany on 18/9, triggered a renewed kick-off of the OSSA discussions and working towards agreement of a revised programme.

RJ next recollected discussing this directly with BSC in his first meeting with David Darcy (DD) on the 6/10 in the UK (he had previously met DD in Germany on 18/9) where a session was held in the Novotel to discuss all of the outstanding issues with the OSSA, notably costs, programme and risk. This session had R Walker and M Foerder of BB and S Bell and F McFadden of tie in attendance. It mapped out an outline way forward to try and achieve an acceptable OSSA and also discussed their need for acknowledgement of relief and EOT related to delays already incurred and the responsibility of tie, most notably from MUDFA. By this time, BSC had already launched a DRP back in August related to MUDFA Rev 8 delays.

It became clear at this point that BSC were coming at this from the point of having one OSSA to sweep-up the remainder rather than tie's view of several section by section.

There was a further meeting with David on the OSSA (and other issues including EOT) in my office on 19/10 where David informed me that they were planning to start work on Shandwick place on 4/1/10, and he said to David Mackay earlier that day they would be mobilising to get started in Jan. I reported to the Board and stakeholders that I thought we might have achieve a 'breakthrough'.

EOT1 mediation was successfully agreed on 23 October 2009 after 2 days of intensive mediation.

I then had a further conversation on 25/10? Sunday where I suggested we were looking for changes in BSC behaviour as assign of things moving forward, and again a further conversation on 2/11.

November – tie gave a list of 15 key issues where they were seeking progress and improvement from BSC, in response Martin provided a schedule of start dates for Haymarket viaduct, section 2a, guided busway and the like.

There was also a focus on completion of Princes Street during November which meant that for both tie and BSC the future OSSA was not of prime importance.

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RJ e-mail of 9/12 picks up the thread again

'David, I understand you are in Australia and travelling and we are scheduled to speak at 3.30 on Friday afternoon.

Given the time pressures and the fact that you mentioned you have a meeting on Friday in preparation for the BB main board next week I thought it might be helpful if I set out the areas I would like to discuss.

Of course the trouble with e-mail is that one cannot convey tone of voice or other subtleties, so maybe a word or two of preface would help. I believe that your arrival on this project offers the possibility of a new type of relationship going forward, and indeed I have reported to the board that I believe your presence is indeed the last chance to save this project for both our organisations, (in fact we call it the 'David Darcy Effect'). As an investment in this relationship, I made certain concessions following our meetings in November, and in return I was looking forward to some signals back from you.

At our last meeting in my office last week you mentioned some hardening of BB's position, and this combined with what I have seen (or not seen) over the last two weeks causes me grave concern.

In particular,

- I believe BB's approach to the extended supplementary agreement is way off the mark in both cost and programme terms, as of today I can see no way in which I will be able to recommend that we sign such an agreement.
- The (almost) complete lack of progress on some of the sites we identified as being key indicators suggests that BB have no intention of mobilising or increasing their work rate (the current average rate of work on this project so far is 0.6% per month, at this rate it will take 15 years to complete the project).
- The criticism I made to you on the lack of management ownership on this project has not resulted in any new approach, despite us already having paid you 40% of the contract price with only 11% of the project completed, indeed Steven interpreted Martin's response to this criticism to be one of 'ambivalence'
- Additionally, our research from around the world suggests to me that non co-operation (or to use Dr Keysberg's word's 'holding the client to ransom') may not be unique to this project.

I am now under extreme pressure from my board to withdraw the offer made to you over the extension of time as they believe BB have not delivered on your side of our agreement from November, and I will be expected by my board at our meeting on Wednesday of next week give some clear recommendations as to how we move forward. Clearly I have my own views on this but if you have any ideas I would welcome them!

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I must emphasise at a personal level that at no point in this e-mail am I questioning your personal integrity, and please do not interpret my comments as such, I understand that being new in an organisation it is not always easy to assert your personal style.'

File Note – Conversation by phone RJ with David Darcy in response to above email
FRIDAY 11TH DECEMBER 2009 – 3.30pm

'David Darcy called me. After initial pleasantries we discussed my email of Wednesday 9th December, especially the four items raised under the heading "in particular".

I started by explaining to DD the dilemma that I faced in that all of the signs, (feedback from other clients, attitude of Dr Keysberg, current progress on site etc) leads me to believe that Bilfinger don't want to complete this project or at least not unless it is on their terms and conditions.

DD assured me that they did want to complete the project and that he personally had never been involved in a project that failed and did not intend for this to be the first.

DD seemed concerned about potential reputational damage, particularly when I mentioned I had been discussing BB with other clients. I mentioned to him that I had sat next to a senior individual from TFL at dinner the other night and that we had discussed BB's performance. He was keen to know who I had spoken to, it was in fact, the Chief Operating Officer for TFL Railways.

I explained to him that I felt that we were a long way apart on both costs and programme issues for the OSSA and that a fundamental difference remains between our two organisations. He suggested that he felt that I was not being fully or properly briefed (a theme that has subsequently emerged in an email from Martin F to Steven).

I suggested to DD that all of the signals I had lead me to a very negative place and that the only positive signals were from DD himself.

He responded that he didn't think that I necessarily had the full picture and that there were two sides to the argument.

I asked him if he is committed to progressing the project, why BB haven't used the compensation event and why they consistently use the change clause. He said he would look into this.

His overall tone was disappointed or even depressed by the position and he has said he will call me back on Monday after he has discussed the situation with Kenneth Reid.

He was disappointed that I continually referred to the conversations I had previously with Dr Keysberg as he felt that I was clinging on to this. I explained to him that the heart of my dilemma was to work out

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whether or not I was dealing with DD or BB and at the moment I had no certainty as to which approach would prevail.

I suggested that the time was approaching for us to start discussions about a "mature divorce", he felt that it is too early to have such discussions.'

Next exchange of correspondence was an email of which the following extract from RJ email of 19/01/10 is relevant.

'At times over the last six months we have engaged positively together with you in discussions on a revised agreement. We have, in accordance with our discussions in October, increased our efforts to reach a conclusion and we have also consistently made your team aware of the challenge we will face in recommending any new agreement to our board and shareholders. The more the OSSA departs from a rational meaning of the Agreement, the more difficult seeking any approval becomes.

My statement of the potential issues (legal, risk, value etc) and the possible timescale required to achieve any approval should not be interpreted as a lack of commitment or urgency on our part, more an effort to place realistic expectations on all parties. If Infraco seeks to materially and substantially change the proposed terms of the OSSA from those of the PSSA, to an extent which may make it very difficult for tie to legally accept, an OSSA Agreement will not happen.

I note from my records that as early as 3 June 2009 and on numerous occasions since, most recently in a conversation between Martin Foerder and Steven Bell on 23 December 2009. Infraco have consistently stated that they are not prepared to start the next sections of on-street works without a revised supplemental agreement. In my view there is no justification for this.

I believe there are, and have been for some time, areas across the project where there is no impediment to Infraco starting or progressing with the works and yet Infraco have not started or progressed with the works with due expedition in these areas.'
Following this exchanges have only been at Project Director and Commercial Director level in progressing the detail of the OSSA schedules culminating in the proposal from BSC on the 19/02/10.

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OSSA OPEN ISSUES AND STATUS

Workstream 3

Legal Agreement

Largely tidy-up of the PSSA, key issues of substance BSC looking for uplift to be increased from the 15% in PSSA to 17.5% for the new OSSA, tie require more programme dependent control including incentive/penalty, in new agreement. The legal position (under procurement law) of awarding an OSSA to the present consortium without competition remains a challenge with regard to procurement and competition legislation.

Last exchange: 19th February 2010 (BSC Proposal)

Next exchange: Response letter planned

Credit for Contract Scope

Key stumbling block a c.£5M issue over planning drawings status and a c.£2.5M difference on the respective positions over roads reconstruction credit.

Last exchange: meeting on 19th February 2010 (BSC Proposal)

Next exchange due: Response letter planned

Scope and Schedule of Rates

Close to agreement on the format of these, specifics to be worked through David Gough (BSC) and Micahael Pattinson.

Plant rates agreed

Material rates 95% agreed

Methodology for the audit of sub-contractors rates has been agreed and audit ready to commence

Key open item arising from the BSC proposal of 19th Febraury is that the rates are only valid either until the end of March 2010 or June 2010 whereupon they are subject to variation based on actual cost on an annual basis. Therefore barely any works will be done based on them.

Last exchange: 19/02/10

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Next exchange: Response letter planned

Programme

<u>Section</u>	<u>Earliest start if OSSA reached</u>	<u>Key current issue</u>	<u>Comment</u>
<u>Lothian Road to Haymarket</u>	<u>End of March</u> <u>Some areas available now for start</u>	<u>West Maitland St. Utilities diversion work</u> <u>Haymarket and Coates Crescent</u>	<u>High risk of being held to ransom</u>
<u>Waverley Bridge to St. Andrew Square</u>	<u>early June</u>	<u>BT cabling (linked also to Broughton St works)</u>	<u>High risk of being held to ransom</u>
<u>York Place to London Road</u>	<u>May</u>	<u>Broughton St utilities, cabling and final design for Piccadilly Place.</u>	<u>High risk of being held to ransom</u>
<u>Leith Walk</u> <u>- Lower section</u>	<u>Available now</u>	<u>None, except for localised utility conflicts</u>	<u>Medium risk of being held to ransom</u>
<u>- Upper section</u>	<u>End of July</u>	<u>BT cabling</u>	
<u>Constitution St to Newhaven</u>	<u>Imminently when 80.15 instructions issued as part of next wave of DRPs</u> <u>June</u> <u>End of Aug</u> <u>June</u> <u>May</u> <u>March</u>	<u>Structures design changes (if excluded from agreement) then could start now on Ocean Drive and at Ocean Terminal</u> <u>Foot of the Walk</u> <u>FOW to Baltic St Junction</u> <u>Baltic St to Ocean Drive</u> <u>Forth Ports</u> <u>Lyndsey Road</u>	<u>Low risk of being held to ransom due to relatively low profile. Conversely pressure on Forth Ports if no funding agreement</u>

Last exchange: 01/02/10

Next exchange: w/c 08/02/10

Processes

Discussion over organograms which have been replaced by lists of named individuals and job titles, (who can be charged who is overhead), processes and procedures for reimbursement are now agreed.

Last exchange: 19/02/10 (BSC Proposal)

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Next exchange: Response letter planned

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OSSA Negotiation Strategy

Workstream 3

The negotiations so far confirm that it is unlikely that we will get full value rebate back from BSC for the on-street works that we take back from them. Therefore as part of the negotiation strategy it would be sensible to leave responsibility for undertaking at least some of this work with them until it becomes in their interest to give-up the work through lack of progress and internal claims from their consortium partners. In this way we reduce the value of the works (and therefore the loss of profit etc) that we are seen in the first instance to be resting off them to only those areas which are most critical to us. In due course the rest can follow when/if Bilfinger fail to make progress on the lower profile areas.

Analysis of PSSA Costs

Analysis of the PSSA costs, by time and by contractor has been undertaken to establish which methodology and contractor performed best in costs terms. Crummock appear to have performed slightly better financially (around 7%) which reflects their lower labour rates (£4/hr lower than Crummocks typically) which more than off-set the 4.5% higher prelims rate charge. This analysis has helped to calibrate our forecast of the costs for completing the full on-street section of works. The costs equate to approximately £12k per metre of track laying including the additional support slab and full depth road reconstruction for the adjacent road traffic lanes as implemented in Princes Street. The table below shows the forecast total costs for various phases of on-street track scaled from Princes Street. A patronage modelling assessment has been undertaken by the JRC on the proportion of the Phase 1a patronage

Patronage	Capex Cost	Forecast Capex Cost	Distance	Phase
% of Phase 1a	%	£M	m	From Airport
100%	100%	87	7,234	To Newhaven
70%	72%	63	5,211	To Foot of the Walk
50%	30%	26	2,177	To York Place
30%	14%	12	1,010	To Haymarket (Princes St sunk cost)

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The forecast is currently based upon the worst case, as per Princes Street methodology of full-depth road reconstruction and the excavation and construction of a full reinforcing layer under track slab we have yet to calculate what the potential saving in the labour and material costs for doing a shallower reconstruction would yield and more importantly the overall project timescale cost saving from achieving the works quicker.

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We are also preparing the information that will be required to form a tender pack, in order for us to be able to put some or all of it out to the market for tendering should this be decided by the Board.

We are endeavouring to obtain informally a market based quote for undertaking the more critical work under the cover of a 'market testing' exercise of the change areas.

When we have this pricing we will be able to issue BSC more of an ultimatum limited in the first instance to a relatively small scope of work, Haymarket to Lothian Road and Waverley Bridge to York Place. The draft OSSA schedules form a starter of the scope definition and realistically this could be prepared ready for tendering between now and April with a view to obtaining quotes during May. Realistically mobilisation would take around 3 months by which time the Festival embargo would be in force, so it should be possible to start work with the new contractor early September 2010.

Patronage assessment of on-street section

Patronage as a result of introducing tram (and as an approximate % of the full Phase 1a service pattern)

Option 1a: Airport – St Andrews Sq only

Tram 48%; DeltaTEL: 65%

Option 1b: Airport – St Andrews Sq + Haymarket to St Andrews Sq shuttle service

Tram 50%; DeltaTEL: 65%

Option 2a: Airport to FoW

Tram c. 60% (though sensitive to assumptions); DeltaTEL: 90%

Option 2b: Airport to FoW + Haymarket to FoW shuttle service.

Tram 70%; DeltaTEL: 91%

Option 3: Airport to Haymarket

Tram c. 30% (though sensitive to assumptions); DeltaTEL: %54

Time forecast scaled on PSSA

	Months
From Airport	
To Newhaven	55
To Foot of the	37

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Walk	
To York Place	10
To Haymarket	9

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Latest Proposal for OSSA from BSC

The proposal by BSC, dated the 19/02/10, is on the face of it a reasonable proposal, that from the covering letter, which has been extremely carefully crafted, appears to offer everything which a reasonable Client should want. It is peppered with 'best value', hints at control over re-sequencing and unsurprisingly draws the deadline at a

Do we agree with their explanation of the deletion of the non-recoverable scope? 1st sub-para

What is meant by 'agreed resource' does this mean quantum, I think not, or just that there is a schedule of rates? 4th from last paragraph. See below, price fixity is rendered meaningless after the 31st March 2010.

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Appendix 1 Section B Part (i) summary of scope split:

Item 1 - Preliminaries both green and red boxes filled? Should be only green.

Item 16 - Change orders issued before 31/1/10 are excluded, seems wrong but the list seems to be innocuous. It does however beg the question, if we could agree these why we couldn't agree all on this basis (i.e. as per reasonable operation of the existing contract).

Appendix 2 Section A 1 BBUK rates

Item j – redundancy, surely this should not be relevant or applicable?

Insert 'Business allowable' in front of several of the categories eg 'expenses'.

No fix in annual uplift in Sub-contract costs which are only applicable up to 31st March 2010.

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'with any increase reflecting the actual rate increase as defined in the Working Rule Agreement'.

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Appendix 2 section A – B Labour

These labour rates are set until 30th June 2010 and then adjusted according to the Working Rule Agreement.

Appendix 2 section A – C Plant

The plant rates are set until 30th June 2010 and then adjusted in accordance with actual rate increase which shall be reflective of 'industry standard rates'.

Appendix 2 section A – D Materials

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The plant rates are set until 31st December 2010 'unless otherwise stated'.

Appendix 2 section A – E Subcontractor Prelims

Why is Crummock's uplift 4% higher at 19.5% compared to Mackenzie and Macean at 15.5%? Why use them at a premium? The labour rates are between £3 and £4 per hour cheaper on £14 per hour for them

Appendix 2 section A – F Disallowable Expenses

Vi – sounds good 'defective workmanship' until the final text in brackets which takes the protection away 'except snagging'.

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4.4 Contractual Levers

[This section is substantially dependent on the McGrigors Report due on 5th March]

The period from July through to December 2009 saw a hardening of BSC's tactical commercial position, during which time it was intimated that they would be unwilling to commence any further on-street works without an "On Street Supplemental Agreement " (OSSA) - discussed in detail in Section 4.3. This was coupled with continued slow progress on the ground.

Section 2.4 outlines the progress made with the DRP process which hadn't clarified the issues surrounding the Pricing Assumptions contained in Schedule Part 4 of the Infraco Contract as far as **tie** were concerned.

As a result of the position now emerging, **tie** reported to the TPB in December 2009 that it had secured the services of Tony Rush, a specialist in disputes and claims to work with **tie** to assist enforcing the full range of commercial mechanisms contained within the contract. This work has resulted in a number of significantly important contractual letters being sent to BSC in the period from mid - January covering the following topics:

- Design management
- Programme
- Change
- Obligations under clause 6 & 7 of the Infraco contract
- OSSA
- Confidentiality
- Compensation events
- Milestone payment reductions

These letters are all targeted at **tie** being in a position to prove that Infraco has failed in a number of its contractual obligations and to set out a very assertive approach to management of the current issues. This is with the overall objective of weakening the consortium stance by:

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- putting further stress onto the internal relationships
- weakening their own view on the strength of their position
- demonstrating to the consortium that we are willing to force them to abide by the contract

At time of writing only x responses to these letters have been received which indicates that their responses are being considered carefully.

As a result of this more assertive approach tie insisted on a meeting between the senior representatives of the consortium as required under Clause 6.5 of the Infraco Contract. The result of this meeting was:

- xxxxxxxxxxxx

Additionally, McGrigor’s were tasked with pulling together the “Statement of Case”. This document pulls together the output from:

- audits;
- QC opinion on the Pricing Assumptions in Schedule Part 4 and how this might make the contract “commercially absurd”;
- Interviews with those involved in the final states of the contract negotiations to determine tie’s view on the Pricing Assumptions contained in Schedule Part 4 of the Infraco Contract and the definition behind normal design development;
- Evidence of potential breach by BSC

The output of this report is xxxx

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4.5 Financial Analysis

The following is a side by side tabulation of the Options formally evaluated financially. Full details of the options are discussed in Section 5 of this report. The assumptions and characteristics behind the figures and of re-phasing to address affordability is considered in narrative form.

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Opening Date	Spend Jan 10	Option 1		Option 2B2		Option 3A		Option 3B	
		Termination / Cancellation		Civils tie step-in On-street		Carry-on No OSSA		Carry-on w/ OSSA	
		N/A		Dec-12		Oct-12		Oct-12	
		To Go	Outturn	To Go	Outturn	To Go	Outturn	To Go	Outturn
BSC Contract	90.4	(10.4)	80.0	105.7	196.1	155.7	246.1	155.7	246.1
New Civils Procurement				61.0	61.0				
Vehicles (CAF)	37.8	20.7	58.5	20.7	58.5	20.7	58.5	20.7	58.5
Design (SDS)	31.1	0.9	32.0	2.6	33.7	2.6	33.7	2.6	33.7
Other Infrastructure	15.3	0.7	16.0	3.8	19.1	3.8	19.1	3.8	19.1
Utilities (incl MUDFA)	62.2	(2.6)	59.6	(2.6)	59.6	(2.6)	59.6	(2.6)	59.6
Project Costs ("tie prelims")	61.6	8.4	70.0	33.4	95.0	29.9	91.5	29.9	91.5
Other Costs	30.2	1.8	32.0	3.6	33.8	3.6	33.8	3.6	33.8
Base Costs	328.6	19.5	348.1	228.2	556.8	213.7	542.3	213.7	542.3
Existing BSC Risks/Uncertainties:									
Design Development				21.0	21.0	21.0	21.0	21.0	21.0
Prolongation (incl EOT1 - £3.5m)				13.5	13.5	21.0	21.0	21.0	21.0
PSSA				5.3	5.3	5.3	5.3	5.3	5.3
OSSA				22.8	22.8	22.8	22.8	40.1	40.1
Other				16.0	16.0	16.0	16.0	16.0	16.0
Behaviours and Competence				0.0	0.0	30.0	30.0	10.0	10.0
				78.6	78.6	116.1	116.1	113.4	113.4
Civils Reprocure Risk/Uncertainties									
Siemens & CAF Premia				3.0	3.0				
BB Demobilisation and Premia				0.0	0.0				
Direct Reprocurement Costs				2.0	2.0				
Civils/Systems Interface				10.0	10.0				
Execution Risk				10.0	10.0				
				25.0	25.0				
Cancellation and Reinstatement									
BB Demobilisation and Premia		10.0	10.0						
S Demobilisation & Premia		5.0	5.0						
Reinstatement		15.0	15.0						
Vehicle Disposals		(30.0)	(30.0)						
Execution Risk		40.0	40.0						
		40.0	40.0						
Total outturn including Ph1b w/off	328.6	59.5	388.1	331.8	660.4	329.8	658.4	327.1	655.7

Status of Analysis

The figures in the table above are all anchored off the financial evaluation of Option 3B completed in December. There have been no significant changes in the Base Cost estimates or quantified risks since that estimate was produced.

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Red Risks

Red risks have been introduced to facilitate a meaningful comparison between the options. At present these are broadly the **Behaviours and Competence** risks of carrying on with BSC on the one and the additional **Interface** risks it is assumed we'd be taking by doing it a different way and the **Execution risk** of being able to “make it happen” including finding a legal and commercially sensible contractual route map which BSC and our stakeholders agree to.

The red risks are subject to a wide range of outcomes depending on the future actions and aspirations of each of BB and S and the extent to which we can exercise greater control and mitigation over these risks through the outputs from WS1,2 and 4 in particular.

Option 3B – Carry on with OSSA

- Oct 2012 OFRS date and the completion of the entire route in one phase
- Utilities costs (Carillion) settle at amounts provided
- Project Costs run at £0.5m per month for a prolonged programme
- OSSA risk cost includes for £22.6m of anticipated change and £17.5m for “premium cost” – essentially the cost of being opened up to demonstrable costs under the OSSA
- OSSA anticipated changes includes for Full Depth Road Reconstruction (£11.6m) Additional slab to support the trackform adopted (£4.1m) and rejected delay and disruption on remaining on-street (£2.4m)
- Effective PM by BSC and engagement with tie /CEC there would be opportunities to manage the OSSA incremental costs down.
- Current OSSA proposal relieves BB from risks and any under pricing in their bid – they should be paying us to enter into the OSSA
- Design Development (BDDI – IFC) of £21.0m being progressed through DRP. **Trend is reducing liability** notwithstanding continuing impasse on contractual design development liabilities.
- Prolongation costs allowance is £21m – comprising £3.5m for EOT1 (settled) and £17.5m for our further liability for delays/disruption (sufficient to pay 9 months BSC costs). **Trend is increasing risk due to late finishing utilities.**
- **Behaviours & Competence** allowance is £10m – much lower than carrying on without an OSSA (see 3B below) on the basis that any OSSA for on-street would necessarily include or sit alongside a separate agreement which wraps up other uncertainties in a VfM fashion.

Option 3A – Carry on without OSSA

- By default the Option we are currently following.
- The differential to Option 3B is that we do not bear the £17.3m “premium cost” element of the projected OSSA costs but the projected changes on street of £22.8m would still crystallise –

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subject to our control and mitigation over these changes. Conversely the **Behaviours and Competence** risk is higher at £30m and has a far greater cone of uncertainty around it.

- The judgement with Option 3A the point in time where we will get the best outcome in terms of VfM from our Pitchfork engagement (neither party is likely to prevail 100%) and either BSC delivery improves or we precipitate another option which is more VfM.

Option 2B2 – Civils tie step in On-street

- Value of remaining on street Civils work in the BSC contract price is £50m and we re-procure those works on a like for like basis for £61m allowing for new sub-contractors mobilisation costs and inflation
- In programme terms we have assumed it will take until the end of 2010 to negotiate and conclude the BB exit re-procure ready for a 2 year construction and commissioning programme with OFRS at the end of 2012.
- Project costs increase by £3.5m for extended programme and increased PM resource to manage the Civils works and interfaces.
- Changes to on-street works assessed for OSSA £22.8m assumed will still crystallise. In the event it is likely that to the extent these are scope changes they would be included in the scope of work being tendered.
- The core BSC risks off-street remain including design development. Reduced the overall allowance for prolongation to reflect that prolongation of Civils in respect of on street works will no longer apply – but we will still have a liability Siemens.
- The **Behaviours and Competence risk** is zero but in reality there is a positive risk arising from BBs continued involvement off-street offset by improved performance off-street having been relieved of on-street works.
- £3m premium payable to Siemens to settle their cost for new programme and escalation.
- Direct cost of reprocurement including legal fees is assessed as £2m
- An additional **Civils/Systems Interface** risk is included – assessed at £10m. This is intended to cover off 2 types of interface risk:
 - The risk of physically delaying and disrupting Siemens as they follow on from the civils work being managed by tie.
 - The engineering interface between the civils and systems works – meaning any aspect of the civils work which has an impact on the integrity, reliability or performance of the system going forward.
- An additional **Execution** risk is included – assessed at £10m. This is analogous to our original procurement stage risks including market appetite and competition for the work and any significant risks we would choose to pass onto the new civils subcontractors.
- No allowance for BB loss of profits above – in theory we reduce their loss by relieving them of remaining on-street works.

Option 1 – Termination / Cancellation

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- Recorded COWD BB and S is £90m (certified £105m including accounting prepayment. Costs which BB and S would be entitled to recover on a termination £80m including cost of physical work done and prelims they could demonstrate as actual expenditure.
- Assumes we complete the vehicle contract – a high proportion of CAFs fixed and variable costs having already been spent – and recover 50% of the vehicle costs on a forced sale.
- Project Costs for an orderly shut-down of the project and of tie – c£8m (12 mths)
- Demobilisation and loss of profits £10m for BB and £5m for S
- Reinstatement costs £15m –extent of reinstatement of works in progress eg structures and depot would need careful thinking about.
- Execution risk (risk of extended litigation for damages) is potentially very large and very difficult indeed to estimate with reliability

Re-phasing, staged opening in response to affordability

- We need to be clear about the operational viability of whatever scope is finally delivered – TEL and therefore CEC will bear the cost of any enduring operating losses as a result of a sub-optimal. Desk-top analysis indicates that the tram must at least get from the Airport to York Place / Picardy place to be capable of being viable operationally.
- In September 2009 we reported the reduction in capital costs of a reduced first phase of construction as follows:

Termination at Ocean Terminal	-£9.0m
Termination at Bernard Street	- £26.4m
Termination at Picardy Place	-£49.0m

- Taking these figures and the tabulation of our options at face value only a first phase opening at Picardy Place is likely to deliverable an affordable first opening in the context of CECs expressed affordability threshold limit of £600m.
- Subject to assessment of the most recent modelling outputs – the desktop analysis of a first phase opening which terminates at Haymarket indicate this will perform poorly both in terms of absolute patronage and integration with bus services as it does not reach the city centre. As such it can be only considered as a short term (1 year?) option before further phases open.

5.0 How the options were analysed

We considered a range of possible courses of action and subsequently distilled these into 5 core options detailed below. We also considered what options may be available to BSC. We acknowledge that there are many more options than the five we identified, but we considered that all the other options would be considered as a variant to one of the five we finally settled

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on. These options were discussed with several key members of the CEC team to ensure that there were no other obvious options which were not considered. We gave each option a working title, which we think helps identify them, but should not be taken literally. We also identified sub-options under most of the five key options.

The five options are:

1. Terminate the infraco contract (the Vancouver option)
2. Negotiate the exit of BB (the Mature Divorce option)
3. Administer the current contract to the best of our ability (the Grind-on option)
4. Accept BB’s interpretation of the contract (the Blank Cheque option)
5. That BB accept our interpretation of the contract (the Wishful Thinking option)

The options we identified that would be on BB’s list were:

1. Terminate the contract
2. Negotiate an exit from the consortium
3. Seek to remove **tie**
4. Grind on
5. Accept **tie**’s interpretation
6. **tie** accept’s BB’s interpretation

For each of **tie**’s options we then considered:

- a) what would be the effect on the project be (timing and other impacts)
- b) what would the effect on cost be
- c) what degree of certainty applies (risk)
- d) is the option deliverable
- e) is the option legal
- f) What sub-options or variations are possible

When we looked at each of these options it became clear that there were a number of sub-options in Options 2 & 3 which are identified below:

	Description
	Description
Option 1	This is a straight termination by tie of the Infraco contract between tie and BSC

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Option 2	
2A1	Exit BB from all civil works – they remain as a sleeping partner in the Infraco Contract for the purposes of retaining joint & several liability for design and integration
2A2	BB complete from Airport to Haymarket & then 2A1
2A3	BB complete from Airport to Princes Street & then 2A1
2A4	BB complete from Airport to York Place & then 2A1
2A5	BB complete from Airport to Haymarket and also from Constitution St to Newhaven & then 2A1
2A6	BB complete the civil elements that they have started
Option 2	
2B1	<p>The Infraco Contract remains intact to complete the works from Haymarket – Airport.</p> <p>The Infraco contract is then terminated.</p> <p>Siemens are re-procured to undertake the on-street systems work. This is done on the basis of already tendered prices from Siemens and achieving best value – design will have Siemens design integrated already.</p> <p>tie procures the on-street civil works through a competitive tendering process and also manages design, programme and an element of the integration – exact spilt to be agreed with Siemens.</p> <p>On street works are let on an incremental geographic basis.</p>
2B2	<p>The Infraco contract remains intact to complete the works from Haymarket – Airport.</p> <p>BB then exit the Infraco contract</p> <p>The Infraco contract is then de-scoped to leave only systems elements for Siemens for the on-street systems work.</p> <p>tie procure the on-street civil works through a competitive tendering process and also manage design, programme and an element of the integration which are de-scoped from the Infraco contract – exact spilt to be agreed with Siemens.</p> <p>On street works are let on an incremental geographic basis.</p>
Option 3	
3A	Continue without an OSSA
3B	Continue with an OSSA
3C	tie provide Project Managers working to BB to procure and manage the civil element of the On-street works
Option 4	Blank Cheque
Option 5	Wishful thinking

We agreed that options 2A2 – 2A6 were phasing options which could be considered as part of all the options and so these would be set aside for the purposes of the main option comparison.

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It was important to us that a robust decision making process was out in place with the criteria clearly defined. The following criteria were chosen, weighted and used in a scoring matrix to compare the options against each other and give an overall Value for Money score(VfM).

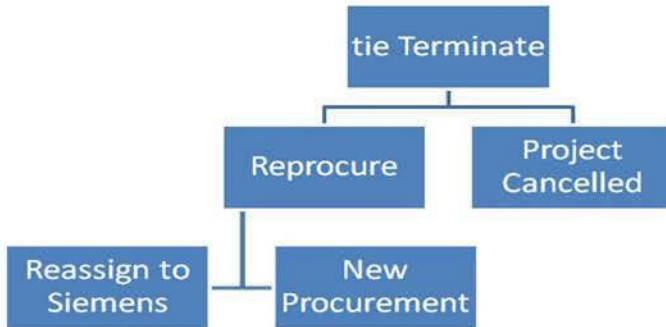
- Cost
- Programme
- Operational viability
- Legal challenge
- Political
- Stakeholder acceptability
- Deliverability

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5.1 Option 1

Under this option the entire Infraco contract is terminated and contractual ties with all parties in the consortium severed.. This can be done by **tie** “with cause” due to an Infraco default or “without cause” which is effectively a **tie** default. Following termination there are 2 possible scenarios for the project which are i) cancellation and ii) a re-procurement.



In this scenario all contractual ties would be severed with all parties in the consortium. The table below identifies the risks and benefits of such an approach.

Options 1 Risks	Option 1 Benefits
Project cancellation	Poor performing partner removed
Litigation/cancellation costs	
Abandoned assets - requirement to re-instate under the Tram Act	
Traffic Management removal required	
Sites would need to be made safe by tie /CEC	
TS ask CEC for return of full grant	
Reputation	
Tram powers expire – AS to confirm	
TRO powers expire	

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Title for assets mixed and not all assets would transfer to CEC upon termination – particularly the Trams	

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5.2.1 Option 2A

This option involves negotiating a situation where BB remain in the consortium but act only as a sleeping partner for the purposes of joint and several liability. Siemens take over the civil elements of work. There are phasing options which could be considered as part of this option but this is not considered here. The benefit to tie would be that a poor performing part of the consortium plays no visible, active role in the ongoing works.

The following risks and benefits were identified for each of these options;

Options 2A Risks	Option 2A Benefits
Siemens not willing to take over the civil elements of work	Retention of BB for off-street ensures continuity of work for Siemens and avoids gap in programme which may lead to call for project cancellation.
Potential legal challenge	On-street works can be phased according to affordability constraints
Cannot negotiate this with BSC	On street works can be managed and controlled
BB could manipulate within the consortium as	

5.2.2 Option 2B1

In this option the Infraco Contract remains intact to complete the works from Haymarket – Airport. The Infraco contract is then terminated.

Siemens are re-procured to undertake the on-street systems work. This is done on the basis of already tendered prices from Siemens and achieving best value – design will have Siemens design integrated already.

tie procures the on-street civil works through a competitive tendering process and also manages design, programme and an element of the integration – exact split to be agreed with Siemens.

On street works are let on an incremental geographic basis.

Options 2B1 Risks	Option 2B1 Benefits
Retention of BB for off-street could perpetuate same behaviours – lack of trust	Retention of BB for off-street ensures continuity of work for Siemens and avoids gap in programme which may lead to call for project cancellation.
System may operate at a loss if partial opening occurs	On-street works can be phased according to affordability constraints
	AIR-HYM commences first and provides tangible benefits

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	On street works can be managed and controlled

5.2.3 Option 2B2

In this option the Infraco contract remains intact to complete the works from Haymarket – Airport. BB then exit the Infraco contract

The Infraco contract is then de-scoped to leave only systems elements for Siemens for the on-street systems work.

BB procure the on-street civil works through a competitive tendering process and also manage design, programme and an element of the integration which are de-scoped from the Infraco contract – exact split to be agreed with Siemens.

On street works are let on an incremental geographic basis.

Options 2B Risks	Option 2B Benefits
Retention of BB for off-street could perpetuate same behaviours – lack of trust	Retention of BB for off-street ensures continuity of work for Siemens and avoids gap in programme which may lead to call for project cancellation.
System may operate at a loss if partial opening occurs	On-street works can be phased according to affordability constraints
	AIR-HYM commences first and provides tangible benefits
	On street works can be managed and controlled

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5.3.1 Option 3A Detailed Analysis

This is effectively carrying on with the status quo. We would continue to:

- use the contract and try to enforce it through a commercially assertive approach;
- continue to put topics to DRP and issue clause 80.15 letters to try and get work started
- we try to get BSC to work on-street without a revise on-street supplemental agreement
- contract remains intact and the consortium remains intact

Why would we continue in this manner? This is the fundamental starting position of the contract which we should try to enforce. There are, however risks and benefits associated with this approach as follows:

Risks	Benefits
BDDI-IFC continues	No breach of EU procurement rules
Programme dispute and cost of time – risk of protracted dispute over EOT and costs	
Programme uncertain as BSC unwilling to establish a robust programme and current on-street philosophy is to construct full depth roads	
tie costs	
Cost of disputes	
Additional 3 rd party/CEC costs	
Pricing assumptions – schedule 4 remain uncertain	
Non-delivery of VE	
Logistics costs	
Misalignment costs	
QSSA	
Unknown utilities and obstructions	

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Continued abuse of Clause 80	
Continued failure to mitigate all delays	
Continued failure to manage design	
Supply-chain mismanagement	
Failure to integrate leading to rework	
Failure to deliver best value	
Compensation events and notified departures	
Affordability	
Lack of control over phasing	
Continued lack of trust	

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5.3.2 Option 3B Detailed Analysis

This option is very similar to option 3A except that it contains a revised on street supplemental agreement. The risks and benefits are similar except where shown in blue below

Risks	Benefits
BDDI-IFC continues	BSC would commence working on-street
Programme dispute and cost of time – risk of protracted dispute over EOT and costs	
Programme uncertain as BSC unwilling to establish a robust programme and current on-street philosophy is to construct full depth roads	
Programme – current OSSA proposal has all programme risk with tie	
tie costs	
Cost of disputes	
Additional 3 rd party/CEC costs	
Pricing assumptions – schedule 4 remain uncertain	
Non-delivery of VE	
Logistics costs	
Misalignment costs	
OSSA – potential breach of EU procurement regulations	
Unknown utilities and obstructions	
Continued abuse of Clause 80	
Continued failure to mitigate all delays	

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Continued failure to manage design	
Supply-chain mismanagement would be less as tie in control for on street civils	
Failure to integrate leading to rework	
Failure to deliver best value	
Compensation events and notified departures	
Affordability	
Lack of control over phasing	
Continued lack of trust	

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Option 3C Detailed Analysis

This option is again similar to 3B except that **tie** puts a project management team in to manage the on-street works under BB.

Risks	Benefits
BDDI-IFC continues	BSC would commence working on-street
Programme dispute and cost of time – risk of protracted dispute over EOT and costs, although tie in control of sub-contractors and can try to limit this	tie could attempt to control costs as it has control over procurement and direct management of sub-contractors
Programme uncertain as BSC unwilling to establish a robust programme and current on-street philosophy is to construct full depth roads	
Programme – current OSSA proposal has all programme risk with tie and this would need to be discussed in detail in terms of who take the programme risk	
tie costs	
Cost of disputes	
Additional 3 rd party/CEC costs	
Pricing assumptions – schedule 4 remain uncertain	
Non-delivery of VE	
Logistics costs	
Misalignment costs	
OSSA – potential breach of EU procurement regulations	
Unknown utilities and obstructions	
Continued abuse of Clause 80	

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Continued failure to mitigate all delays - would be less as tie in control for on street civils	
Continued failure to manage design	
Supply-chain mismanagement - - would be less as tie in control for on street civils	
Failure to integrate leading to rework - would be less as tie in control for on street civils	
Failure to deliver best value	
Compensation events and notified departures - would be less as tie in control for on street civils	
Affordability – less impact as tie in control of on-street civils	
Lack of control over phasing	
Continued lack of trust	
Potential breach of EU procurement regulations	
No certainty that BB would allow tie full visibility of all commercial information	

5.4 Option Selection

Using the decision making criteria and matrix, each of the options 1-3 were scored. The results can be seen in the table below.

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Option No.	Risk Rating								Black Flag Item
	Cost	Programme	Operational Viability	Legal Challenge	Political	Stakeholder Acceptability	Deliverability	VFM	
Option 1									Yes/No
2A1									
2B1									
2B2									
3A									
3B									
3C									

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6.0 Contractor position

Background

Bilfinger Berger AG have proved to be the most difficult of the Consortium partners to deal with, by some distance. This is perhaps partly because the weight of work to date has been BB's responsibility, but the strong view of the tie project team is that BB have never engaged constructively nor adopted a partnerial approach to project delivery. The support for these views is set out below. One of the options examined elsewhere in this report is the reduction or elimination of BB's role in the project, but the analysis of BB's position is needed to support the assessment of each option.

Accordingly, the purpose of this section is :

1. To document BB's approach to the contract and their relationships with client and fellow consortium members.
2. To assess BB's wider business strategy in relation to civils business
3. To summarise the key elements of the above and their application to the tram project dispute resolution.

BB's behaviour as a member of the BSC Consortium

(A) Process leading to financial close on 14th May 2008

A report for CEC was prepared by tie in May 2008 to support of a recommendation in favour of completing the Infraco contract and which provided CEC with a detailed view of the events which led to close. This report – entitled "The Financial close Process and record of recent events" dated 12th May 2008 – contained the extracts set out below.

"(1) Background and record of events

This document is intended to be an objective synopsis of the evolution of the Infraco contract suite negotiations in order to put on record in one place the key events and to support approval of the final negotiated position.

Preferred bidder selection, business case approval and Wiesbaden

BBS were appointed preferred Infraco bidder in October 2007 along with CAF as preferred Tramco bidder. The procurement process and evaluation was conducted under normal rules of

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public procurement and the appointment decisions were approved within the project governance structure.

In December 2007, the Final Business Case was approved by the Council and appropriate delegated authorities created to execute the project. A series of negotiations culminated in a meeting of senior representatives at Wiesbaden when the contract price was concluded within the business case budget of £498m, supporting revenue service in Spring 2011. This became known as “the Wiesbaden Agreement”. The anticipation was that Close would be executed within a few weeks allowing for the Xmas break.

Continuing negotiations, Rutland Square and Award Notification

Negotiations in the period from October to December 2007 were conducted in a constructive if robust manner. However, from January 2008, it became increasingly concerning that the BBS consortium was operating in a manner which militated against an efficient Close. The behaviours included lack of competent senior commercial management involvement, leadership on commercial as well as legal issues by BBS’s lawyers, lack of a cohesive approach between the consortium partners and their use of different law firms, consistent re-opening of apparently agreed positions and lack of focus on important matters in favour of volumes of detailed points.

A consistent additional problem was the under-performance and unhelpful approach of PB. This was critical as PB needed to enter into the tri-partite Novation of their design contract. CAF played a more constructive and passive role.

Extended negotiations took place in which the prevailing theme was the attempt by tie to remain close to the draft terms which supported preferred bidder selection in the face of attempts by BBS to improve their position. These negotiations led to a further summit meeting in March 2008, when a further series of lines were drawn. This “Rutland Square Agreement” included different (offsetting) cost and risk transfer terms which drove the overall cost to £508m. The delay in reaching close meant that revenue service could not now commence until July 2011. The negotiations at this stage were substantially driven by Siemens.

Both the Wiesbaden and Rutland Square Agreements were documented and signed by senior representatives of the parties. Tie proceeded to report to the Council that terms were agreed and that Notification of intent to award letters could be sent to the unsuccessful bidders. This was duly approved and the letters were issued on 18th March 2008. De-briefs with Tramlines and Alstom were held in early April, which were based on the terms agreed at Rutland Square.

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Period to Financial Close

Negotiations over detailed documentation continued, although BBS's approach continued to cause concern and delay. On 14th April, senior representatives of BB and S visited tie and marginal residual issues were agreed. The meeting concluded with confirmation that all terms were agreed and the final documents should proceed to final legal quality control and then signing on 2nd May.

On 30th April 2008, in a telephone call to Willie Gallagher, BB (Richard Walker) requested a last minute and largely unsupported price increase of £12m. This was at the final point before the pre-agreed timing of contract approval for signature. No such request had emerged from Siemens or from CAF or indeed SDS. The anticipation had been that the contracts would be signed on 2nd May and a preparation period of 36 hours was needed.

An emergency meeting of those members of the Tram Project Board who were available plus tie / TEL / CEC representatives was held on 30th April. The options available were discussed and it was concluded that we should deploy tough tactics, but not stonewall the BB request completely as it was felt that the alternatives were likely to be worse notwithstanding the intense frustration at BB's tactics.

Final process

BB senior management visited Edinburgh on 5th May 2008, met by messrs Gallagher, Mackay and Bell. Their support for the price increase was sketchy and confused, focussing around an admitted failure on their part to assess or control their supply chain prices, £ / € movement and a claim for underwriting of central demobilisation cost which they had allocated to their bid for Phase 1B in the light of a more cautious view on the execution of 1B.

All signs pointed to last-minute unprofessional brinkmanship. BB claimed their costs were actually £17m wrong, but that they had reworked internally to arrive at £12m, casting further doubt on their credibility. There were veiled threats that failure to meet the demand now would force BBS to seek every opportunity to create claims during the construction period to achieve their financial target. As a matter of record, tie is comfortable with its contractual position and the experienced people recruited to manage the contract effectively.

The 5th May meeting culminated in a proposal from tie that tie would :

- Absorb £3m of additional cost in return for tangible contractual and risk improvements ;*
- Agree to meet BBS allocated demobilisation costs of £3.2m in event that Phase 1B does not proceed*

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The BBS response on 6th May was disjointed (different responses from different senior people in the BB team). A series of meetings involving messrs Gallagher, Mackay, Bell, Fitchie and Bissett concluded that a formal letter to BBS in the form of an ultimatum was needed to bring matters to a close. In addition to the continuing delay and attendant costs, and the unpalatable alternatives to concluding with BBS, there were concerns that Siemens, CAF and PB may also seek price increases if BB were seen to be making inappropriate progress.

A letter was sent to BBS late on 6th May which reiterated the tie proposal described above. A response was received on 7th May which proposed :

- A payment of £9m to BBS
- Further examination of the contract terms surrounding the design management process, which although unclear pointed to an extended design and consent programme with potentially material adverse consequences for the construction programme.

The letter was silent on tie's contractual requirements.

A combined meeting of the TPB and tie Board was held (as scheduled) in the morning of 7th May. The meeting reviewed the position thoroughly and concluded that the approach which best protected the public sector's position would be to seek a conclusion with BBS within their demand for £12m.

Conclusion to negotiations

Further negotiations were conducted on 7th, 8th and 9th May and an acceptable conclusion reached. The final terms negotiated reflect agreement by tie to increased consideration and contingent cost underwriting in return for early progress to contract signing, improvement in terms and capping of cost exposures.

In summary, the late price pressure from Bilfinger Berger arising from their claimed supply chain pressure has been contained at £4.8m with a further agreement that tie will underwrite contingent 1B demobilisation costs of £3.2m if Phase 1B does not proceed with BBS. Some £4.6m of exposures have been removed acknowledging that their evaluation is judgemental. £0.5m is explicitly reflected in the QRA and can be reduced and the balance represents elements of the other provisions noted above. Tie recommends that c one-third of the remaining specific evaluated risk improvement be reflected in the risk contingency, reducing it by a further £1.3m. A range of additional unquantifiable exposures are also eliminated.

Although the funding challenge surrounding Phase 1B remains, there is an intention to pursue this aggressively, sustaining confidence that Phase 1B can be funded and delivered. The balance of evaluated risk improvement amounts to £2.8m which implicitly offsets the risk that

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the Phase 1B demobilisation payment should become due. It should be borne in mind that Phase 1B design costs of £3m sit outside the Phase 1A budget and other Phase 1B costs may be authorised before it is certain that the phase will proceed. It is therefore logical that the contingent demobilisation costs should be shown separate from the Phase 1A budget for consistency.

Finally, tie recommends that a general risk provision of £1m be included to provide a final level of cushion.

Taking all these matters together, the net result is that tie has negotiated a cash and contingent price amendment in favour of exposure elimination which substantially offsets the majority of the price amendment. tie would recommend that the budget be increased to accommodate the agreed cash amendment of £4.8m ; and that the risk contingency be reduced by a total of £1.8m reflecting a conservative portion of the improved specific risk positions, then augmented by an increased general provision of £1.0m resulting in a net increase to the headline budget of £4.0m. This will result in the overall budget moving from £508m to £512.0m. The underlying base cost is now £480.8m and the risk contingency is £31.2m. Although a case could be made for further reduction in the risk contingency, it would be tie's recommendation that the balance be retained."

The report also addressed in detail the alternatives available to tie / CEC and concluded that the Infraco contract represented the best approach. The threat of challenge by Tramlines, the underbidder, was assessed including final cost comparison, and it was concluded that there was no risk of a serious challenge.

The Close Report submitted by tie to CEC provided a comprehensive appraisal of the Infraco contract suite, including Risk assessment of in-process and provisional arrangements ; update on critical workstreams and readiness for construction ; and the means of managing the design novation from tie to the Consortium. Parallel reports from DLA provided a review of the legal underpinning to the final contract positions and risk transfer across the contract.

In overall terms, the descriptions and conclusions documented in these various documents prepared in support of close, have been the basis on which tie has acted in post-close negotiations with Infraco and especially BB. In other words, the basis on which tie believed it had entered the contract is the benchmark for tie's position on all disputes which have arisen since.

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(B) Assessment of specific aspects of BB’s behaviour pre and post Close

The aspects of BB’s behaviour which tie believes are inconsistent with BB’s contractual responsibilities include :

- High number of changes being submitted including the emergence of the Base Date Design Information – Issued for Construction (BDDI – IFC) design issues;
- Non compliance with the contract in terms of Changes (Clause 80). This included not complying with the timescales for notifications, information to be provided and the time taken to provide Estimates;
- Inflated Estimates being provided;
- Refusal to start work where change Estimates not agreed until the issue was put into dispute;
- Unwillingness to mitigate programme delays or provide an updated revised programme. High dependence on MUDFA as a dominant factor causing delay;
- Lack of mobilisation of sub-contractors;
- Poor management of SDS and continual slippage to the design programme with no justification;
- Non compliance with the contract in terms of Compensation Event notifications, and
- Insistence on a revised agreement before works started on Princes Street and then further insistence on a new On Street Style Agreement (OSSA) before works commenced anywhere else on-street. The history of this is outlines in section 4 of the report.

[Evidence references required for above]

Tie’s analysis of BB’s approach is best set out in a series of Q&As :

Q : In December 2007, Mobilisation & advance works contracts were awarded to Tramco & Infracore – what was impact of these and does BSC’s execution of these arrangements add to tie’s case ?

A :

Q : What was BSC’s position on the key issues now under dispute at the time of award of Preferred Bidder status ?

A : [Summarise key aspects of current dispute and highlight themes and any changes in approach by BB]

Q : What were the key drivers behind BSC’s / BB’s demands in the period from preferred bidder award to Close

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A :

Q : Bearing in mind the likelihood that their risk management procedures around the commitment to contracts are generally robust (especially those applied from Germany), what could have enticed their risk managers to accept a contract which depended financially on interpretation of Sch Part 4 PA1 for relief on the cost of design evolution. What could they have pointed to at Close which robustly supported their claimed position on BDDI / IFC responsibility ?

A :

Q : What management procedures and deficiencies led to their supply chain assembly being dislocated and the failure to bind in the supply chain at the point of Close when BB / BSC were committed.

A :

Q : What was the scope and quality of their due diligence on design at the time of award of Preferred Bidder status, then at Close ; and what is tie's assessment of whether they could have misunderstood the maturity and quality of the design

A :

Q : What is tie's assessment of the development of their management resource and their on-the-street management performance ; how may this have contributed to the dispute.

A :

Q : What is tie's assessment of why they have apparently failed to deliver the documentation needed to support Notified Departures and other claims

A :

Q : What is tie's evidence that BB have consistently sought to underline the pricing basis in the contract in favour of a cost-plus or equivalent arrangement which would substantially change the contracted risk transfer ?

A :

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BB AG – Group perspective and recent commercial history

BB is a substantial international group, with shares listed in London and Frankfurt. 2009 sales were €10.4bn, EBIT of €250m and PBT €140m. Nearly half of their sales come from Services (mostly M&R, FM and related works, but including PFI or equivalent projects such as the M80 extension) and in 2009 this division generated almost all their profit. The civils business had sales of €3.3bn and lost €7m (2008 sales €3.9bn, profit €11m).

The group has gross assets of c€7bn, debt of c€2bn (mostly non-recourse in joint ventures) and net equity of €1.5bn (after a €260m capital raising exercise in late 2009).



BB's share price has suffered since early 2007, falling from a peak of €74 to €14 in early 2009, from which it has moved upward to €mid 50s. This profile is not dissimilar to that of many companies, including construction groups against the recessionary background and the profile is also in line with the DAX 30 Index.

Group results in recent times have been stable at around the €250m - €300m range, but the Civils business has been a consistent problem area. The 2008 results were marred by the need to record a loss on the Norwegian E18 motorway project of €65m (in addition to €25m provided discretely in 2007) and the group also recorded a €45m provision for unspecified further losses, a provision which was tucked away in a central pot and not allocated to any division. It is possible that this related to the tram project but it may relate to their German building division. There has been no reference to this provision since that time.

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A serious dispute in Vancouver emerged in 2008, which resulted in the termination of a C\$100m twin tunnel project, which is now in litigation. This has not been mentioned in any of their public reports.

As a consequence of these issues, BB began to adopt a much more restrictive approach to civils and construction business. Their 2008 Annual Report, highlighted the following (matters relevant to the tram project underlined) :

- *“Our stated goal is to achieve significantly higher earnings in our Civil business segment. In the future therefore, we will only work on projects in our core regions that are of great strategic significance or projects with particularly good earnings prospects combined with a controllable risk profile. With intensified risk management and more efficient organization, we have created the right conditions for growing financial success.”*
- *Our capacities are fully utilized. We have a selective approach to tendering and concentrate on projects with good margins. We have intensified our risk management and have carefully extended our criteria for the acceptance of new projects.*
- *Great Britain and Northern Ireland are also major markets for Bilfinger Berger’s Civil business segment. In Scotland, the city of Edinburgh awarded the contract to build a new urban tram to Bilfinger Berger and Siemens. The consortium under our leadership will be responsible for the turnkey construction of the main section of the system with a length of 18.5 kilometers. This contract is worth €350 million and our share amounts to €190 million. The double-tracked tram line, which is due to go into operation in the middle of 2011, will connect the airport and the northern suburbs of Edinburgh with the inner city.*
- *[In the Risk Management section] : Projects above a certain volume or with a high degree of complexity are additionally monitored by a central unit with clearly defined regulations in each phase of the business, so that any required measures can be taken in good time.*
- *We strive to avoid legal disputes wherever possible. This goal cannot always be achieved, however, with the result that our German and international companies are sometimes involved in litigation or arbitration. It is naturally impossible to predict the outcome of such cases with certainty. Nonetheless, following careful examinations, we can assume that sufficient provisions have been recognized in the balance sheet for all such disputes.”*

They sold their Civils business in France in Q3 2008. Their Q3 Report also noted that

“we will only accept new projects if they meet our risk and return criteria. This is reflected by decreasing levels of orders received.”

The 2007 Report on Civils by contrast was dominated by news of growth and major contract wins by the Civils Division.

In February 2010, they announced the proposed disposal of their Australian subsidiary in February 2010, either by trade sale or IPO. This business has sales of €2.7bn, of which half are civils and most of the rest buildings and construction. This disposal would reduce their civils business by a third.

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So in summary, the primary position in the Group enjoyed by their civils division in years up to 2007 was reversed during 2008. More rigour was to be applied to new contract acceptance and the direction would be to reduce exposure to this business across the globe.

The tone of reporting in 2009-10 has been optimistic and those analysts reports which have been unearthed are broadly supportive. However, aspects of their results reporting are less than transparent and there is evidence of selectivity in BB's choice of comparator information in support of a bullish outlook. There has been no reference to the tram project in any of BB's main published reports or analysts calls since the 2008 Annual Report.

Despite the sustained positive tone, there is no doubt that the civils business has continued to cause considerable angst. The 2007-8 problems in Norway and Canada were followed by further major problems in 2009.

In March 2009, the Cologne archive building collapsed into the north – south rail tunnel being excavated by a joint venture lead by BB.

In September 2009, they announced an €80m provision against the Doha Expressway contract in Qatar, noting that costs had doubled and blaming the client for the dispute which was in the 'courts.

The February 11th 2010 analysts call about the preliminary 2009 results announcement contained no reference to (and no questions about) Cologne, though there were a number of questions about Doha.

This was followed by a flurry of press comment on the apparent acceptance by BB that the Cologne joint venture's work was inadequate, specifically in relation to diaphragm wall reinforcement. BB had launched investigations into their other German rail projects (stated to be less than 10) to identify any similar issues.

A special analysts call was held on 22nd February, apparently due to the number of inquiries about "deficiency situations" including Cologne. Herbert Bodner, chairman and CEO, claimed on the call that there was as yet no clear evidence as to cause or blame; their public liability insurance would be adequate and that there was only limited rectification work needed. He acknowledged that they have concerns about their quality control procedures and that there is evidence of falsification of records.

Bodner also commented that he could not quote the penalty per day for delay, but

"...in any case the time schedule in Cologne has been altered so much that at the end -- I mean also before the accident there have been many changes. So that the contractual view is that the original contractual time scheme that governs the contract has become unimportant from a today's perspective. And the question of penalties or liquidated damages is very much linked to the original construction schedule."

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Which attitude may have some resonance in Edinburgh.

They expect to break even on the contract and do not expect any major provisioning to emerge from the investigations into other projects.

Although the analysts' questioning was reasonably benign, there are clear signs of some at least beginning to dig deeper.

There has been further German press speculation that similar problems have arisen in Dusseldorf and that organised crime may be involved. Some BB employees have been dismissed, amid statements that only low-level employees are involved – important because any evidence of senior management involvement could apparently negate insurance cover and have substantial further ramifications for the people involved.



The movement in their share price over the latter part of February was significantly downward from €54 on 19th February to €46 by the 26th, driven by the press comment on Cologne and other problem projects. Normal volumes are < 2m per week, this rose to c2.5m in early February (2009 results announcement) but reached 6.5m in week ending 26th February.

It is worth noting that Kenneth Reid was appointed to the Executive Board in December 2006, when he took responsibility for the Civils business.

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The air cover protecting BB is their stated objective of exiting most civils business, otherwise analysts and investors would be downgrading price expectations significantly. There is also a questionmark about the clarity of their financial reporting. The Norwegian problem was recognised by a provision in 2007 without any reference to the matter; no mention has been made of the Vancouver dispute; there was ample opportunity to address the Doha problem in reporting their 2008 Q2 results, but within a month they announced a provision and a profit warning; Cologne received no profile on 11th February 2010, but within a fortnight they were launching a country wide probe into the Cologne practices, finding problems elsewhere in Germany and holding an emergency analysts conference call. Against this background of questionable shareholder reporting clarity, the silence over the Edinburgh Tram project may not imply comfort on their part with their reported position.

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In summary,

1. BB is a group with shares listed on the German Stock Exchange and which is sensitive to short-term financial risk and results
2. The Civils business was a vibrant part of the group's activities in 2007 and early 2008. Market conditions and major exceptional losses have created a much more risk-averse approach to this business since mid-2008, and they are now in the process of exiting Civils.
3. The margins generated by Civils are very precarious and the scope of the Tram project is highly material to their Group published results
4. Taken together, there has been a substantial change in the approach BB Group are taking to their Civils business since Financial Close.
5. The range and seriousness of the disputes BB have encountered would imply a combination of weak controls and management in their Civils division, leading to or reinforced by a combative rather than partnerial approach to client management.
6. [Subject to conclusions around their approach to the tram project as outlined above] BB's management of their Infraco responsibilities has been poor and it is reasonable to conclude that the lack of clarity about their senior management team's individual responsibilities is indicative of tension within BB, including between the UK and Germany.
7. Their weak on-site organisation contrasts with the early mobilisation of their claims team; there is little or no evidence of a concerted effort to deliver the project; undertakings to improve progress have been routinely broken. The signs are that this has been a very uncomfortable contract for BB since Close.
8. The problems surfacing in Germany must be of serious concern to their Board, such that their Civils business will be high on the Board agenda and it is understood that the tram project has featured prominently in Board reporting.

It therefore seems likely that BB from the Board down have a powerful damage limitation attitude to the tram project. The problems in Germany may be opportune in that they may contribute to an environment in which a deal can be done on terms acceptable to tie and CEC. If BB were able to walk away or reduce their scope with some semblance of a financially acceptable outcome, they could present that as successful risk management. This looks to be their rationale, to be executed either by forcing tie and CEC into an unpalatable financial settlement; or by inducing tie and CEC into termination, following which BB may feel they can rely on their core and well-practised competence in commercial litigation. This line of argument is picked up in Section 7 which leads to formal recommendations on the options to be pursued and the tactics to be deployed.

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7.0 Conclusions and Recommendations

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