



PROJECT PITCHFORK

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PROJECT PITCHFORK EXECUTIVE SUMMARY

Preamble

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 Executive Summary of the Pitchfork Report submitted to the Tram Project Board on 10th March 2010. The Executive Summary should represent a self-standing synopsis of the report, but considerable further detail is set out in the report, which itself is intended to be self-standing but and is supported by a range of documents providing the evidence base for the report's conclusions and recommendations.

The report was prepared at the request of the Tram Project Board (TPB) by ~~tietie~~ Limited, under the direction of Richard Jeffrey, Chief Executive Officer of ~~tietie~~. The narrative assumes familiarity with the development of the project and the related nomenclature.

By including reference to and extracts from specific Legal Advice which has been obtained by ~~tietie~~ and City of Edinburgh Council (CEC) in contemplation of dispute resolution and litigation, ~~tietie~~ does not waive in any way any privilege or confidentiality in connection with such Legal Advice. Nor does ~~tietie~~ intend to dilute or affect that privilege and confidentiality by sharing the Report with a limited distribution list of Directors, Senior Executives and Council officers.

~~tietie~~ regards the material in the Report as being of the utmost commercial sensitivity, the complete confidentiality of which is essential to protect the interests of CEC, ~~Transport~~Transport Edinburgh Ltd (TEL), ~~tietie~~ and the Scottish Government.

THE REPORT MUST NOT BE COPIED OR DISTRIBUTED BEYOND THE NAMED RECIPIENT.

Purpose of the Pitchfork Report

The purpose of the report is to capture in one document the important aspects of the dispute between ~~tietie~~ and the Infraco Consortium and to provide the TPB with a reasoned recommendation on the approach to resolving the dispute, progressing the project to completion and achieving the best value possible for the investment of public funds within an affordable cost envelope.

The analysis addresses legal, financial, commercial, technical and operational considerations and incorporates the views and knowledge of the ~~tietie~~ project team and expert external advice.

The following digest is intended to offer readers of the document a sense of its direction and conclusions which might be a useful in advance of reviewing the full document set.

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Digest

The report commences with an analysis of the current situation, which is characterised by serious dispute, programme delay and potentially material cost increase. Construction progress has been considerably slower than programmed. A summary of the principal events which have led to this scenario is set out, noting that during 2008 and 2009 **tietie** adopted an increasingly assertive approach to the promotion of its contractual rights and interests, but without achieving a breakthrough.

At the end of 2009, a revised approach was agreed which would focus on two sets of actions – a step-up in the intensity and formality with which **tietie** managed its contractual rights and applied pressure to BSC to meet its obligations ; and a series of workstreams designed to rigorously reinforce **tietie**'s position in the next stage of negotiations. The essence was to make Bilfinger Berger, Siemens, CAF Consortium (BSC) understand the robustness of the position taken by **tietie** and CEC on key issues and to seek the means of bringing matters to a head. Four options were examined – termination ; continue “as is” ; the means of negotiating the exit of Bilfinger Berger (BB) ; and a proposed “enforced adherence “ to the contract terms by BSC. Workstreams were established to test these options.

The audit workstream identified valuable information in support of **tietie**'s concerns about design management, programme management and BSC's sub-contractor relationships ; the design management and programme management workstreams set out the issues under each area for deployment in the legal and commercial negotiations to follow ; the proposal from BSC that a revised set of terms be applied to on-street work was examined and rejected, but in favour of an alternative proposal which will be pursued ; McGrigors LLP, with supporting Senior Counsel opinion, reviewed the legal underpinning to each of the key contractual matters in dispute referred to below and provided valuable analysis and direction ; throughout January and February 2010 **tietie** has stepped up the use of formal contractual mechanisms through a series of targeted letters to BSC, the responses to which, taken together, represent for the first time a statement of BSC's case capable of being both comprehensively understood and negotiated ; the financial implications of the options were analysed, concluding that termination would incur the least absolute cost, though with material uncertainty as to the financial outcome and very little uncertainty about the demise of the project ; the options aimed at project delivery contain different levels of uncertainty but all point to an outturn cost broadly in the range £600m - £650m ; the analysis of BB's corporate position concluded that the difficulties in Edinburgh coincided with group-wide toughening of approach to civils project management, well-publicised major problem contracts and public plans substantially to exit the civils business world-wide.

The analysis of the options, with the benefit of the information from the workstreams, concluded that the option most likely to produce best value was the enforcement of adherence to the existing contract, tempered by the possibility of appropriate amendment to its terms in relation to on-street works and risk transfer. This option could lead to the partial or full exit from the project of BB, but **tietie** cannot mandate this and will seek to develop that possibility indirectly, including through

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dialogue with Siemens who have not closed their minds to the possibility. At the heart of this is a desire now to engage with BSC from a position of much greater strength than previously.

The information drawn from these workstreams and option analysis has been drawn together into an action plan which is aimed at achieving better progress toward resolution over the period to June 2010. The actions ~~include~~include:

- demonstrating to BSC that their refusal to act on instruction is untenable (the major weapon in their armoury, as it prevents meaningful construction progress). Legal advice has indicated that there is a reasonable legal argument available that would entitle ~~tietie~~ to enforce instructions to proceed ;
- committed effort to resolve programme delay issues ;
- negotiation of the on-street arrangements ;
- defining the line of attack on BSC's management of SDS and its implications ;
- resolution of outstanding design evolution cost disputes on a commercial basis ;
- possible restriction of milestone payments ; and
- commitment of effort to resolve the matters affecting progress of Siemens work on the Airport – Edinburgh Park section.

In addition to these seven specific workstreams, steps will be taken to ensure that construction progress is maintained and media/stakeholder communications managed effectively.

In view of the potential outturn costs and the affordability risk, re-phasing of the programme will be negotiated to seek to ensure progress on continuous sections working West to North East. The possibility of truncation will be examined, including operational and financial viability.

There is an overriding requirement to monitor the impact of the resolution process on the cost estimate for the project and to relate this to the available funding and the delegated authority structure which governs the approval of changes to cost budget and to programme

On 5th March 2010, the BB Executive Board Director responsible for Civils, Kenneth Reid, met at his request with David Mackay. The meeting was followed by a lengthy (and pre-prepared) letter from Reid. This contained little that was new, but the expression of views of the most senior director below the Group CEO is a further sign that the resolution process has greater momentum than in 2009.

The report from ~~tietie~~ recommends that the TPB endorse the pursuit of the enforced adherence option, with regular progress reporting and a view to a further gateway assessment no later than June 2010.

The Executive Summary of the report follows.

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Current situation

The Infraco Consortium has achieved 14% of the physical construction of tram infrastructure compared to 75% anticipated in the programme within the Infraco Contract by the end of February 2010. Utility diversion work under the MUDFA Contract and related agreements with utility companies (including all telecoms cabling) is expected to be complete by December 2010, some 24 months later than in the Infraco programme. The design work, which has been under the control of Infraco since Financial Close, is expected to be substantially complete by April 2010, some 18 months later than in the Infraco programme. No reliable revised programme to completion has been agreed to deal with these delays and the most recent submission from BSC sought to confirm a commencement of revenue service date of October 2013, compared to July 2011 in the Infraco Contract. Construction of the tram vehicles has proceeded to programme.

The full project cost estimate has recently been revised to c£540m plus X, a factor which is driven by the cost of delay and other matters of dispute between ~~tietie~~ and Infraco. X is difficult to estimate with any certainty because of the nature and complexity of the matters in dispute, but the signs are that it will take the full project cost into the range of £600m - £650m.

The range of disputes includes claims for additional cost, responsibility for programme delay and the interpretation of the contract in some critical areas.

The report sets out an action plan aimed at resolving these disputes.

Principal events leading to current situation

In October 2007, the Infraco Consortium was awarded preferred bidder status after a formal procurement process. The Infraco Contract was signed in May 2008, after a lengthy period of difficult further negotiation.

The MUDFA Contract was signed in October 2006 with an expectation that works would be complete by end September 2008 and that other utility works would also be complete by this date. The target completion date was not achieved and although a revised programme was accommodated in the Infraco Agreement, the revised completion dates have not been achieved and this has been a significant cause of delay to the Infraco construction programme, which is explainable but which is contractually to ~~tietie~~'s account under the Infraco Contract.

The causes of delay to the utility programme have included ~~included~~:

- Slow delivery of the design

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- Increase in scope of utilities to be diverted, from c27,000m to c48,000m, mainly as a result of the poor quality of drawings provided by the utility companies upon which the design was based.
- Scope of utilities diverted – as a result of encountering underground obstructions and congestion of existing utilities
- Poor performance of Carillion (formerly Alfred McAlpine) which resulted in slower than expected progress and rework
- Attitude of the SUC's where commercial arguments were being used to prevent progress on the ground

The original project budget included a risk allowance for these matters which proved not to be adequate.

The project design contract was signed with Parsons Brinckerhoff (PB) in 2005. The target completion date was not achieved and the design contract was novated to the Consortium at Close, with a revised completion schedule, which has not been achieved.

The performance of PB has been problematic throughout, arising from :

- Slow mobilisation at the very start of the contract
- Geographic spread of PB designers
- Early lack of co-ordination and communication between PB, CEC and **tietie**
- Poor relationships between PB and their main sub-contractor (Halcrow)
- Poor quality of design requiring multiple iterations leading to consistent late delivery of the design

Over the period from Close in May 2008 to the end of 2008, it became increasingly clear that the project was not progressing smoothly. BSC's engagement and the pace of mobilisation of competent resources on the ground was poor despite an advance works agreement being in place several months prior to contract close for this purpose and there was little evidence that they took their responsibility to mitigate delay and cost problems sufficiently seriously. From autumn 2008 relationships deteriorated.

During this period, **tietie** sought to operate the contract in a firm manner while seeking to agree accommodation with BSC on several fronts to assist with the over-riding requirement to deliver the tram project in a best value manner.

In February 2009, Infracore refused to commence the construction works as planned on Princes Street, despite the access and extensive traffic diversions arranged by **tietie** and CEC.

tietie considered that this was a smokescreen to create additional stakeholder pressure and force **tietie** to accept the Bilfinger Berger allegation (made in early February) that c£80m of additional costs were required to enable them to complete the civils works. In addition to rejection of the principle,

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tietie was not provided with substantive support for the financial claim. Rather than accede to BB's request in order to avoid delay to this prominent section of work, **tietie** and CEC concluded that a firm line needed to be taken, regardless of the potential for poor publicity which BB appeared to wish to use as leverage.

This eventually resulted in a proposal for a Supplemental Agreement (known as the PSSA) which would modify the Infraco Contract in a limited way for the 1km section of Princes Street and which allowed work to commence in late March 2009.

The scope of works for the PSSA related specifically to civil engineering works, and is primarily associated with excavation and construction up to the underside of the track construction box. There were a number of obstructions either known or suspected which would have been addressed as either Compensation Events or **tietie** Changes under the usual contract mechanisms as a **tietie** liability.

It was also agreed that a Project Management Panel (PMP) comprising representatives of **tietie** and BSC would be convened to resolve a number of the more contentious differences between the parties. Although this showed some potential to assist issue resolution, the early impetus petered out with no material change to the manner in which BB were approaching engagement despite new senior personnel being introduced by both BB & Siemens.

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. A meeting was held with Dr Keysberg of BB and Dr Schneppendahl of Siemens. This meeting resulted in both parties agreeing to an intensive week of informal mediation which was held in the week commencing 30th June 2009 covering a range of critical issues. On 8th July 2009, **tietie** 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 – Dispute Resolution Procedure (DRP) and other contractual mechanisms
- 3) Reduce/re-phase BSC scope
- 4) Terminate the BSC contract

TPB endorsed option 2) and approval of the detailed approach was given at the TPB on 29th July 2009. This approach represented a step-up in the assertiveness with which **tietie** was approaching resolution of the dispute, reflecting the failure of more informal methods. It was recognised that there was a hierarchy of steps to be taken, with termination the ultimate step but one that was not appropriate at that stage. The objectives of this strategy were 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;

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- get work started at a number of locations through the application of Clause 80.15 of the Infraco Contract; and
- drive change in behaviours by the contractor;

A discrete number of disputed matters were initially selected for dispute resolution. The proposition was that without DRP there would be no agreement on entitlement or value unless **tietie** conceded unacceptable positions, especially on cost where the evidence was of consistently inflated estimates.

The DRP strategy was intensive of management time and expensive in advisor costs. 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 **tietie** had achieved the objectives of getting work started at some locations put into dispute and significantly driving down the final value of Estimates being submitted by BSC, success had not been as visible on matters of legal interpretation and especially on the principles of the Pricing Assumptions contained in Schedule Part 4 of the Infraco Contract. Whilst the resolution of these DRP's has required investment of time and cost, the process has not unduly delayed the programme in itself because of the continuing impact of the late utility diversions (and subject to the debate about concurrency).

Recommendations were made by **tietie** to the December 2009 and January 2010 TPB meetings which set out a further series of steps aimed at resolving the dispute, controlling project cost and regaining traction on the programme. The recommendations were approved and Project Pitchfork was launched.

Project Pitchfork

The view underpinning the Pitchfork work was that BSC, but particularly BB, had not responded to the partnerial approach **tietie** feels it deployed in the period from Close to early 2009. BB/BSC appeared to have adopted an extremely aggressive approach to the Princes Street works which went beyond contractual entitlement in early 2009 and had shown at best inconsistent interest in improving progress during the latter half of 2009 when formal dispute procedures were deployed on specific issues. It was also the view that any softening of **tietie**'s approach would not be met by accommodation from BB.

Options examined

The fundamental options available to **tietie** and CEC fall into three categories :

1. Termination of the Contract with the probable consequence of project termination ;
2. Continue "as is" with the Contract and players, with progress dependent on BSC adapting their behaviour ; or
3. Enforce adherence to the Contract, settlement of disputed matters, amendment and amendment of terms as necessary.

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The issues around option 1 include the probable loss of the project, the waste of public investment and the likely risk of expensive litigation. However, this would be examined further to establish whether there were grounds upon which **tietie** could terminate and what the consequences of termination might be.

Despite ratcheting up the use of contractual rights through the DRP process, BSC had not meaningfully responded and by end of 2009 there remained serious doubt about the ability to get the disputes resolved and to progress the project. Option 2 is the default position, which would continue in the absence of a change in approach by **tietie** or BSC.

Option 3 is conceptually the most desirable approach, so long as the outcome is on acceptable and affordable terms. To achieve an acceptable outcome, two broad lines of attack were developed – a considerably more assertive approach to contract management by **tietie**; and detailed examination of the causes of the current disputes and their possible solutions (allowing fully for the extent of **tietie**'s liability). The approach to contract management would be designed to enforce compliance with the Contract and support the resolution of all material disputes within acceptable boundaries, by making it plain to BB and their partners that the weight of legal and commercial argument is firmly on **tietie**'s side. As a corollary, the objective is to demonstrate to BB that failure to deliver contractual obligations would place BB in a very unattractive place. Examination of the causes of the disputes would provide a platform for their resolution on acceptable terms.

The three fundamental options identified above were examined in detail along with a range of variants. The termination and “as is” options remain available and the “enforced adherence” model was developed into two sub-options (numbers 2 and 4 in the table below). These four resulting options are regarded as the most credible outcomes.

Option	Original Option no	Description
1	1B	Termination - without cause
2	2B2	BB exit - Infraco Contract remains intact with BB full or partial exit
3	3A	As is - Continued application of the Infraco Contract in its present form with the present players
4	3C	Enforced adherence - Assertive application of the Infraco Contract in its present form but with disputes settled in the short term and a negotiated new way of working

These were the main drivers behind the Pitchfork Project. The results of the more assertive approach to contract management and the conclusions from the examination of the disputed matters would be brought together in an action plan to be presented to the TPB on 10th March 2010.

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In addition, workstreams were established to ensure that construction progress and normal contract management processes were maintained, so far as **tietie** could do so; and to ensure that stakeholder and media communications were managed effectively.

Workstreams

In addition to **tietie**'s project team and principal advisers, **tietie** had increasingly deployed additional expert resource in the areas of contract and dispute management, technical, commercial, forensic planning/delay analysis and legal expertise over the period to end-December 2009. This resource was fully integrated into the workstreams executed under the Pitchfork Project, which were as follows:

(1) Performance Audits

tietie is entitled under the Contract to audit BB's performance in key areas. Audits were conducted on design management, programme management and sub-contractor arrangements.

In overall terms, there was clear evidence that BSC's approach to design and programme management has been deficient. The evidence gathered from these audits will reinforce the actions described below in relation to resolving the dispute.

While Siemens appear to have proper arrangements in place with their sub-contractors, BB havehas no such arrangements. All BB's sub-contracted work to date has been performed under letters of intent, which breaches obligations in the Infraco agreement with regard to the approved engagement of sub-contractors.

(2) Design

The design process has been problematic throughout the project and completion of the work is badly behind the programme established in the Infraco contract. Whilst **tietie** Changes have driven some of this delay, for example in areas such as Gogar Interchange and Picardy Place, there has been no clear justification from BSC as to the reasons for overall delay. There are also indications that the scope of what SDS has been asked to deliver compared to the base scope has increased substantially, though the reasons have not been communicated to **tietie** by BSC. There is further work to do in this area, but it is a key component of the action plan, including the approach to ensuring that Parsons Brinckerhoff, now a BSC sub-contractor and owned by Balfour Beatty, are brought fully to account.

(3) Programme

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The most recent submission from BSC points to revenue service commencement in October 2013, which **tietie** believes is unacceptable and unrealistic if the present disputes can be resolved. Amongst a number of documented failings, BSC have not demonstrated that they have effectively sought to mitigate delay.

tietie does not have no dispute that utility diversion delays, which are to **tietie**'s account, have caused substantial delay to the construction programme. This was acknowledged in an offer from **tietie** in late 2009 of Extension of Time for 9 months and costs covering 6 months. It appears this offer has not been accepted, but the resolution on reasonable terms of the utility delay impact will form an important part of the overall programme resolution as explained further below.

(4) On-street contractual arrangements

The precipitate action taken by BSC in early February 2009 when work was halted on Princes St was resolved by agreeing an adaptation of the Infraco Contract on acceptable terms. BB are seeking to impose a new set of terms governing all on-street works which are unacceptable to **tietie**, not least because, if accepted, **tietie** would potentially be exposed to sanction for breach of procurement regulation.

However, a detailed counter-proposal has been prepared by **tietie** and will be a key feature of the search for resolution.

(5) Contractual mechanisms

In addition to the comprehensive advice provided to **tietie** and CEC from DLA Piper and partly at the suggestion of **tietie**'s peer review group, McGrigors LLP were tasked with creating an overarching report which would address the legal aspects of the key contractual matters in dispute and suggest the approach which might be deployed by **tietie** and CEC. McGrigors LLP sought the opinion of Richard Keen QC on the most important of these matters.

The areas addressed by McGrigors LLP are :

- Price – particularly the operation of Pricing Assumption 1 (PA1) in Schedule Part 4 to the Contract in relation to the evolution of design ;
- Progress – particularly **tietie**'s ability to instruct that construction progress continues notwithstanding that matters are the subject of change processes or in dispute ;
- Time – the issues surrounding causes of delay and their effect on EOT claims ;
- Breach – the grounds on which **tietie** and Infraco may reasonably rely in pursuing termination through breach ; and
- DRPs – further application.

In short form, McGrigors LLP conclusions were :

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- PA1 – The language in the Contract is open to differing interpretations and whilst there is strong common sense argument which militates against BSC’s interpretation uncertainty does exist as to how far a court would go in supporting **tietie**’s interpretation.
- ~~Progress - There is a strong argument available to **tietie** that they are entitled to instruct Infraco to progress work, even when there is a dispute about who should bear the risk of that work.~~
- ~~There is a reasonable argument available to **tietie** that **tie** is entitled to instruct BSC to progress work, even where there is a dispute about who should bear the risk of that work.~~
- Time – the analysis focuses on the need to identify the dominant cause of delay, prominent among which is the late completion of utility diversions, but which could also include design delay arising from BSC’s management of SDS. BSC’s failure to provide programme information may be another influential feature.
- Breach – there are not clearly substantive grounds to support termination by **tietie** for breach by Infraco, but certain aspects may reinforce this option, notably failure by BSC to comply with instruction from **tietie**, a matter which is being progressed.
- DRPs - approach to further formal process on key issues and the need to consider potential deadlines for commencing court proceedings in particular in relation to the risk of design evolution in the context of PA1.

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Simultaneous with the workstreams described above, **tietie** developed a series of contractual letters which were sent to BSC during January and February 2010 covering the following topics:

- Design management
- Programme
- Change
- Obligations under Clauses 6 & 7 of the Infraco Contract
- OSSA (On Street Supplemental Agreement)
- Confidentiality
- Compensation Events
- Milestone payment reductions

The messages being relayed in this correspondence were indicative of **tietie**’s desire to operate the existing contract mechanisms, expressed concerns about BSC’s approach to fulfilling their obligations and challenged their interpretation of key contractual mechanisms such as Clause 80 (**tietie** Changes) and Pricing Assumption 1.

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These messages and the contractually assertive approach were clearly understood by BSC and a range of responses were received the evening before a critical meeting between the parties which is explained below. Of significance is a comment made in one of the letters:

*“In this regard we would also record what we see as a marked shift in **tietie**’s approach since the beginning of this year. We have been required to respond to a large number of allegations of breach of contract which have been developed now for the first time, including in relation to our management of SDS, Best Value, as well as very general accusations of breach of Clause 6, 7 and 73, all of which are entirely lacking in any detail. We remain confident of the veracity of our position in response to all these spurious accusations and respond to some of them below and in separate correspondence sent today. This exceptionally aggressive approach by **tietie**, no doubt designed specifically to place Infracore under pressure, is accordingly both transparent and entirely baseless.”*

The paragraph quoted contains a number of important assertions which **tietie** rejects. However, it was an objective of Pitchfork that BSC would see a step-change in **tietie**’s approach and this at least has been achieved.

(6) Financial analysis

Project cost estimates were reworked to align with the options developed under the Pitchfork process.

Based upon an assessment of confidence in the base costs and risks comprising the outturn costs in each of the above base estimates an assessment of the range of possible outcomes is as follows:

	Option 2 “Exit BB”	Option 3 “As is”	Option 3A “As is”	Option 3C4 “Enforced adherence”
Base Estimate	£667.2m	£661.5m	£661.5m	£639.9m
High Estimate (Higher Confidence)	£699.1m	£691.5m	£691.5m	£664.9m
Low Estimate (Lower Confidence)	£646.8m	£641.6m	£641.6m	£622.7m

Relative to the 2007 Business Case cost budget, which was finalised at £512m at Close, the main drivers of increased cost have included increased allowances for delay and disruption, including

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impact of utility diversion delays, design development, project management costs and on-street works. Detailed reconciliations of the movement in cost estimates have been performed.

As is explained in detail in section 5, the termination option assumes cessation of the project for the foreseeable future. It is possible that full re-procurement of the infrastructure could be executed, but there are material uncertainties about funding availability, timescales, market appetite and therefore costs. These variables make it difficult to flesh out a full re-procurement option with any degree of reliability.

Sustainable asset value is restricted to the utility work executed in the absence of a continuing project, representing £60m out of a total estimated at £388m, the balance of which would represent dead investment.

The currently approved funding availability is £545m. Each of the continuing options carries estimated cost materially in excess of this. Within each estimate there are significant variables which will only be determined by further legal and commercial negotiation. In addition, preliminary discussion has taken place with BSC about re-phasing the project to move from West to North-East in stages, which would support a phased delivery model within the funding envelope. Further work would be required to assess the re-phasing options, including their operational and financial viability.

The extent of public funding already invested and the low prospect of achieving sustainable value from that investment in the event of contract termination combine to justify continuation of construction works and the efforts to resolve the contractual disputes. The fall-back position is the likelihood that a valuable tram system asset can be delivered even if short of the original full scope of Phase 1A. ~~tietie~~ and its stakeholders require to keep this area under close consideration as the dispute resolution process proceeds.

(7) Assessment of BB's corporate approach

In the last two years, BB's Civils Division, a material part of their Group results, has made public announcements about three major problem contracts. Two of these have required disclosure in the context of their reported results (the road projects in Norway and Qatar) because of the significance of the losses incurred. The third has been the subject of considerable press coverage and interest from analysts (the Cologne tunnel collapse). ~~tietie~~ is also aware of a major dispute in Canada, which resulted in termination and litigation.

Since 2008, BB's public position has been to tighten its risk management procedures on acceptance and execution of civils projects, to limit the scale of their civils portfolio and to actively exit the civils business.

BB has made persistent attempts to restructure the contract onto a "cost-plus" or similar arrangement, which would mitigate their cost pressures and risk, an approach consistent with their corporate direction.

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Current state of relationships

A series of three meetings took place in the week beginning 1st March, which have relevance to the conclusions to be reached.

tietie insisted on a meeting between the senior representatives of the Consortium as entitled under Clause 6.5 of the Infraco Contract. A proposal for re-phased construction was tabled by the consortium. However as this had pre-conditions attached **tietie** advised BSC that it was not acceptable. There was no appreciable change in attitude detected in the behaviour of BB but there were evident tensions between the Consortium parties at the meeting.

A meeting was held with Siemens senior UK management (at **tietie**'s request) on 3rd March 2010. The general view was that Siemens felt that something had to be done and that they were very aware of their joint and several ~~liability~~liabilities with BB. When pressed, they indicated that they would consider proceeding without BB but this was not an easy option.

Finally, a meeting between David Mackay of **tietie** and TEL and Kenneth Reid, the Executive Board Director of Bilfinger Berger AG responsible for Civils, was held on 5th March 2010 at Reid's request. This was the highest level of active engagement from BB to date. The meeting was cordial, but contained no material new proposals from BB to resolve the dispute. Reid indicated that BB were willing to look at any option and suggested putting the "6 key issues" to an independent expert for decision (on a without prejudice basis).

tietie agreed to consider this and the proposal is implicit in **tietie**'s proposed action plan, set out below.

Later that day a detailed letter was received from Reid, which was clearly pre-prepared under legal advice and probably with the knowledge and consent of the Consortium partners. The letter was heavily slanted in favour of BB's previously stated view of the issues and contained no new arguments which may have weakened **tietie**'s position. The principal arguments remain around design changes and utility diversions. **tietie** believes a critical weakness in BB's position is their refusal to execute works when instructed under Clause 80. Reid's letter makes no comment on their claimed right to refuse instruction, which may reflect concern on their part about the real strength of their argument.

The letter contained a clear statement that the existing contract was capable of being followed and could produce the tram system, in sharp contrast to previous comments about the inoperability of the contract by BB senior UK management.

Reid's letter is the clearest documented statement of BB's position and the approach adopted by **tietie** in early January 2010 has significantly heightened the profile of the dispute within BB.

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There was evidence in the period to Close that the Consortium members were not operating in harmony. There was also evidence of tension between BB and their proposed sub-contractors. Since that time, a number of discussions with senior representatives of Siemens and CAF have confirmed the view that there are significant differences of opinion within the Consortium on key aspects of their contract management and with the approach BB are adopting toward construction progress. Although Reid's letter seeks to imply unanimity, the tensions within the Consortium remain.

Principal findings and conclusions

tiotie has formed the following conclusions :

Option 1 - Termination

If **tiotie** did terminate, it is very likely that litigation will follow, pursued by both parties. Should BB terminate, it is possible that their grounds for doing so could be flimsy offering a prospect of a financially successful litigation result. However, this is not a scenario which is easy to define, risk assess and promote with any degree of confidence. BB may have the resources and the appetite for lengthy litigation with the attendant financial risks, but this is not a scenario the project funders will find attractive from a financial perspective. Regardless of which party actions termination, it is almost certain that funders would freeze or cancel the project until the financial outcome was clear, which could be many years ahead. Termination would mean the end of the project for the foreseeable future.

A negotiated termination of the Infraco could minimise the financial risk and limit the period of uncertainty. However, if the project is to continue, full re-procurement of the uncompleted works would be needed with no certainty of market appetite or price. This option would also be likely to end the project for the foreseeable future.

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Option 2

An attractive scenario for **tietie** and CEC could be to continue under the present contract, but with BB exited and all financial and programme uncertainties resolved in an acceptable range. The importance of BB's exit lies in the lack of trust **tietie** has in BB's willingness to adhere to proper rules of engagement and to deliver their contractual obligations without further material dispute arising. It is also realistic to assume that BB would prefer this option, subject to the terms of the divorce, which would be in line with their group approach of limiting the scope and risk profile of their civils business.

tietie however, cannot enforce this option on the Infraco Consortium and the underlying terms of a negotiated exit of BB will be complex. It would be necessary for the remaining Consortium members to come to agreement with BB on the financial separation terms and on risk transfer or retention, including adoption of lead responsibilities for the Consortium.

In summary, although a desirable option to pursue, its deliverability is very uncertain.

Option 3

The default position of no material change to the present scenario is unattractive, as it offers no certainty on price or programme. A continuation of the current lack of progress will also probably cause public and political support to evaporate. All factors considered, this approach is likely to lead to termination, negotiated or enforced, with substantial risk as to the ultimate financial outcome. To follow this approach would also pre-suppose that BB will change tack and there is little evidence supporting this assumption.

Option 4

Accordingly, the 4th option emerges as the preferred route. It should be noted that pursuit of this option may lead to the exit of BB indirectly, which reinforces the rationale for pursuing Option 4. The approach which **tietie** will take to pursue this option is set out below and is considered to be deliverable and to carry a reasonable prospect of success.

Action plan

In the short term, **tietie** recommends that the current Infraco Contract is utilised and that the increasingly contractually assertive approach by **tietie** continues. This is clearly showing signs of

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impact and should continue whilst the medium term recommendation is pursued. Of the four credible options, Option 1 – termination could be executed in the short term but would carry a high risk of creating a very uncertain financial outcome with limited sustainable asset value.

In the medium term **tietie** would aim to move BSC towards a position of more co-operative working in two stages :

- Using the weight of argument developed over the last eight weeks, clarify the contractual interpretation of significant areas of difference between the parties. This can be done through DRP or litigation or by taking such matters by agreement to an independent expert (without prejudice) to decide on such matters. A critical part of this strategy is the determined application of the contractual levers available to **tietie** so that BB are in no doubt about the strength of **tietie**'s position ; and
- By moving BB into a position where their current approach has started to be eroded, move them into a more collaborative method of working providing **tietie** with an increased level of control in the contract and more significantly in the on-street works. The two dimensions which make this a credible outcome, in summary, are 1) **tietie**'s ability with the benefit of the analysis now completed to convince BB and BSC that alternatives to this outcome are unpalatable ; and 2) pressure from Siemens on BB.

A third important aspect of this approach is that it potentially incorporates the full or partial exit of BB crystallising Option 2 above). There are good reasons to think that BB at a corporate level would find exit an attractive option on the right terms. Were **tietie** to progress this option the cost to **tietie** and CEC in terms of divorce settlement and risk absorption will be worse than if BB promote the option.

The application of the contract terms will be targeted at achieving breakthrough in the following critical areas :

1. Application of Clause 80 and 34.1 ;
2. Agreement on EoT, including reasonable allowance for the effect of utility diversions ;
3. On Street working mechanism ;
4. Exposure of the risk created for BSC by their design management performance ;
5. Resolution of the design cost risk dispute (BDDI – IFC cost evolution) ;
6. Milestone payments ; and
7. Focus on the off-street Airport – Edinburgh Park section to support Siemens .

Infraco has now responded in reasonably comprehensive fashion to a number of recent targeted letters from **tietie**. It is thought that these replies will allow **tietie** to establish Infraco's "heads of claim", which has previously not been possible because BSC have not hitherto provided sufficient insight into their position. Whether or not BSC's position is tenable, the new information should facilitate a much more rational negotiation than has previously been possible. This, coupled with the

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heightened profile of the dispute at senior levels within BB and **tietie**'s ability to access those senior directors, provides a more promising backdrop to the next stage of negotiation than at any time since Close.

The specific actions to be taken are set out below.

Clause 80

Bringing about Infraco's recognition that pursuant to Clause 80 (in particular Clause 80.13) and Clause 34.1 they are obliged to carry out alleged changed work before the agreement of Estimates is a fundamental issue which will have to be addressed before the revised contract is finalised. If BSC's position on Clause 80 can be unequivocally settled in **tietie**'s favour, a major plank of their approach will have been removed. Legal analysis suggests this may be within **tietie**'s capability. Construction progress would have less risk of being impeded and a valuable argument in the EOT dispute will be available to **tietie**. Commercial planning must assume that it may be many months before there is a decision which Infraco will accept. It has to be recognised that under such circumstances Infraco would more than likely not be amenable to agreeing to any change in scope which may be required for affordability purposes. This aspect will require careful monitoring.

Utility Diversions

It is a matter of fact that Infraco has been substantially delayed by late completion of utility diversions. Moreover, such delays would warrant substantial extension of time without mitigation and acceleration. Agreement on this matter would facilitate the agreement of a new programme and measures required to achieve that programme. Infraco's compensation should thereafter be based on this revised programme and the agreed measures.

On Street Mechanism

It is thought that **tietie** cannot agree to Infraco's OSSA proposal because it is based on open-ended cost reimbursement and programme. Moreover, EU procurement Law considerations arise.

An alternative approach is to agree a revised programme with BSC based on a shallower depth road reconstruction with any soft ground encountered being dealt with via the Clause 65, Compensation Event route. A skeletal heads of terms for agreeing a Clause 65 route has been drafted by **tietie** and consideration can now be given to its deployment.

Infraco's performance including SDS performance

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The evidence from the audit of BSC's management of SDS confirms **tietie**'s assessment that BSC has not fulfilled its contractual responsibilities in this area, with repercussions for BSC's position in the disputes over design cost liability and programme. The formulation of the precise legal argument may yield further strengths and weaknesses in this line of attack, but at this stage the line seems well worth developing.

Design cost liability

The legal underpinning to this consistent problem area is now much clearer, while the commercial consequences remain uncertain. The Infraco contract language does not provide **tietie** with the unequivocal strength it would wish, and which **tietie** had a strong commercial expectation of achieving. However, nor does the language unequivocally support BSC's position. Cost estimates have included contingency for this matter from an early stage.

The action here will include finalisation of the legal argument and an assessment of how best to take the matter forward in negotiation. Issue in relation to a timeline for pursuing court action require to be addressed further. It seems now that there is little benefit in further DRP submissions around this issue, beyond those already in play (which contain additional dimensions where clarity and an outcome is sought). The matter should be susceptible to a negotiation around the legal, technical and commercial aspects of each main section where the design and its evolution from BDDI is an issue.

Pressure on milestone payments

In November last year **tietie** offered to extend the completion dates by nine months, offering Infraco relief from LDs for that period. Infraco's current position on this appears to be to reject that offer and **tietie**'s simultaneous confirmation that **tietie** will pay for six months' delay costs on an established formula.

BSC's response causes them to be put at risk for increased claw-back of milestone preliminaries. The proposition has been put to BSC but not yet executed. When it is, the financial impact on BSC will be significant. The quantum and timing of this action are under detailed assessment.

Focus on the off-street Airport – Edinburgh Park section to support Siemens

A proposal was made by BSC, driven by Siemens, at the Clause 6.5 meeting on 2nd March 2010 in relation to a quick resolution of the matters in dispute (25 INTCs) in the most westerly section, where Siemens have the lead role. Since part of **tietie**'s strategy is to enhance Siemens influence over BB, it is appropriate to pursue this matter and this has already been actioned. However, there are some difficult matters under dispute and a quick resolution cannot be guaranteed.

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In addition to the seven specific workstreams described above, it is essential that construction progress is maintained and media/stakeholder communications managed effectively.

There is an overriding requirement to monitor the impact of the resolution process on the cost estimate for the project and to relate this to the available funding and the delegated authority structure which governs the approval of changes to cost budget and to programme.

Summary of Action Plan

The specific actions proposed to deal with these circumstances can be summarized as :

Mobilise action on Clause 80 and 34.1
Seek conclusion on impact of utility diversion delays and overall EOT claim, with consequent revision to a new agreed programme
Respond to OSSA and offer the Clause 65 alternative
Refine argument over SDS management and deploy as appropriate
Omnibus approach to resolution of outstanding BDDI – IFC disputes ; Expedite response to INTC’s (other matters)
Quantify and execute amended position on prelims
Seek to resolve the Airport – Edinburgh Park disputes
Action plan for implementing more collaborative working

Remaining risks

Even if breakthrough is achieved in the areas set out above, there is no guarantee of avoiding further significant conflict with BSC. However, a successful outcome in those areas will leave BSC with considerably less scope for argument, with a further reinforcement that BSC will be well aware of the strength of argument brought to bear by ~~tie tie~~ and its advisers, coupled with a diminished expectation that stakeholder pressure will improve BSC’s position.

Success measures

It is unlikely that there will be a simple series of measurements which can be used to indicate success from this strategy. However, each of the elements in the action plan is capable of being deployed quickly and an outline of the time required to assess impact can be established. Progress may not be quantifiable in minute detail, but the direction of travel should become increasingly clear over the next 3 months, in advance of a further decision gateway in June 2010. Progress will be reported regularly during that period.

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As progress becomes clearer, the concern about affordability will also come into sharper relief and a parallel workstream to assess re-phasing options, and if necessary truncation options, will be executed in the same period to provide the information necessary for robust conclusions in June 2010.

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7.0 Recommendation

The work performed in early 2010 constituted:

Detailed examination of the matters in dispute and the means to resolve them ; and

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Determined application of ~~ti~~tie's rights under the contract .

The approach adopted appears to have had a significant impact on BSC and the basis on which ~~ti~~tie can seek to achieve an acceptable legal and commercial outcome is now considerably clearer. Accordingly, the recommendation from ~~ti~~tie to the TPB is that ~~ti~~tie should :

- ~~Eliminate the option of continuing "As is" – Option 3~~
- ~~Continue to pursue ~~ti~~tie's rights under the existing contract with vigour and seek acceptable resolution of the main disputes ; both according to the action plan described in section 6 ;~~
- ~~RigoureouslyRigorously Mmonitor the opportunity to achieve a partial or full exit of BB from the primary contract role they currently play, on acceptable cost and risk transfer terms ;~~
- ~~Retain the Option 1(termination), not as an option to be pursued currently but kept under review for serious consideration if evidence emerges which merits this approach ;~~
- ~~Assess affordability and rephasing options, including operational and financial viability ;~~
- ~~Reach a resolution of these matters with BSC in the form of a revised version of the existing contract which remains compliant with procurement regulation ;~~
- ~~Confirm a new way of working with BSC which mitigates against further dispute risk ;~~
- ~~Report progress regularly to the TPB ; and~~
- ~~Formally reassess the revised arrangements as soon as practical .~~
- ~~Continue to pursue ~~tie~~'s rights under the existing contract with vigour and seek acceptable resolution of the main disputes ; both according to the action plan described above ;~~
- ~~Actively address the opportunity to achieve a partial or full exit of BB from the primary contract role they currently play, on acceptable cost and risk transfer terms ;~~
- ~~Actively address affordability and re-phasing options, including operational and financial viability ;~~
- ~~Reach a resolution of these matters with BSC in the form of a revised version of the existing contract which remains compliant with procurement regulation ;~~
- ~~Confirm a new way of working with BSC which mitigates against further dispute risk ;~~
- ~~Report progress regularly to the TPB, especially in relation to cost estimates, programme forecasts and potential scope changes in the context of funding availability and the structure of delegated authority which will govern any material changes ; and~~
- ~~Formally reassess the revised arrangements on or before 30th June 2010.~~

Comment [S1]: Passive?

Comment [S2]: Passive?

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Pitchfork Limited

10th March 2010

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1. Introduction

The Infraco contract was signed on 14th May 2008 between **tietie** Limited and the Bilfinger Berger – Siemens – CAF (BSC) Consortium. Simultaneously, the design contract between **tietie** and the SDS Provider (led by Parsons Brinckerhoff (PB)) was novated from **tietie** to the BSC Consortium. The City of Edinburgh Council is formal guarantor of **tietie**'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 **tietie** and the Consortium over responsibility for the cost and programme implications of design changes, programme delays and other matters. Construction progress continues to be very slow. It was decided by the Tram Project Board (TPB) in January 2010 that **tietie** 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.

A number of different options were originally identified for consideration and these are discussed in Section 5 of the report. The options which were analysed in detail for the future relationship with the Consortium are:

- Option 1 – Termination of the Infraco contract;
- Option 2 – Exiting Bilfinger Berger from the Consortium wholly or partly;
- Option 3 – Assertive application of the Infraco Contract in its present form with the present players; and
- Option 4 – Assertive application of the Infraco Contract substantially in its present form but with a negotiated new way of working and limited contract revision.

The project work schedule required the civil 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 dispute, 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:

- A description of the nature of the dispute
- The detailed background to the options review
- The process adopted to manage the review
- The workstreams implemented to analyse the options
- The analysis of the options
- Recommendations for the way forward

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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 Scottish Government through Transport Scotland has provided grant funding of £500m to the Council and retains certain rights under the grant award letter. 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
- There are material changes in scope.

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 Infraco construction contract and tram vehicle 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 tram vehicles; and
- novate the design contract to the Infraco contract to ensure design and integration risk was passed to the private sector.

This procurement strategy was thoroughly reviewed and tested by the TPB and included formal OGC reviews. Following the May 2007 elections the project arrangements were also reviewed by Audit Scotland. The Audit Scotland report made the following comments:

- The project cost estimates have been subject to robust testing;
- There is a clear corporate governance structure for the project which involves all key stakeholders;
- Project management and organisation is clearly defined;
- Financial management and reporting of the project appears sound;
- Procedures are in place to actively manage risk associated with the project; and
- A procurement strategy has been designed to minimise risk and lead to successful delivery of the project.

The Infraco Contract was awarded to the consortium comprising Bilfinger Berger, Siemens and CAF on 14 May 2008 following TPB approval and a protracted procurement process during which time the key stakeholders were kept informed through the TPB and its Financial, Legal and Commercial sub-committee. The timeline to this procurement process was as follows:

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	Infraco	Trams
ITN	3 October 2006	31 November 2005
Tenders received	12 January 2007 / 7 August 2007	April 2007
Evaluation completed	September 2007	March 2007
Preferred bidder awarded	October 2007	September 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 including risk transfer.

The behaviour of the Consortium in the period between Preferred Bidder award and contract close was unexpectedly aggressive, incorporating a series of demands for material improvement to the commercial terms. The management of this behaviour was fully documented for discussion by the ~~tietie~~ project management team, 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.

2.2 Performance of the Designer ("PB" or "SDS")

The SDS Contract was awarded to Parsons Brinkerhoff on 19th September 2005, albeit mobilisation had commenced on 5th September 2005. PB's main sub-contractor for design is Halcrow. Performance of the SDS supplier has been poor during the entirety of the relationship between ~~tietie~~ and SDS. Problems included:

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- Slow mobilisation at the start resulting in the replacement of the SDS Project Director and Project Manager
- Geographic spread of SDS designers and appearance of weak coordination and management
- Early lack of co-ordination/communication between PB and CEC who were the planning and technical approvals authority
- Poor relationships between PB and their main sub-contractor
- Late delivery of design – utility and core design
- Poor quality of design requiring multiple iterations
- Lack of understanding of the approvals process

This resulted in the design for the Tram network not being complete at the time of contract award as had originally been anticipated. Negotiations took place over a lengthy period of time with the objective of defining a process and set of contractual terms which would enable ~~the~~ CEC to manage the risks arising from the overlapping design and construction periods. The discussions took place under the umbrella of the SDS Novation Agreement as part of the Infraco Contract, but it is important to distinguish two groups of issues:

- Cost certainty : The primary objective of the novation approach was to ensure that design work could commence long before commitment to the construction contract suite generating maximum construction price certainty and transferring design risk to the construction partner.
- Outstanding design risk : SDS resisted accepting liability to BSC for the timeliness of submission and approval of design packages after Financial Close. Their concern was that the risk is different from (and incremental to) the underlying risk arising from the quality of their work. A delay, they argued, could result in exposure because of the linkage to construction programme delay. SDS did not anticipate this risk when committing to their contract - the expectation was that the majority of design scope and certainly all approvals would be complete prior to Financial Close.

The risks which were identified from the overlap of design and construction periods are summarised below :

- A. The Submitted packages are not of requisite standard, preventing CEC from providing consent timeously and creating delay to the construction programme.
- B. The Submitted packages are of requisite standard, but CEC fail to provide consent timeously, creating delay to the construction programme.
- C. SDS fail to provide the Outstanding packages on a timely basis relative to the agreed programme, preventing CEC from providing consent timeously and creating delay to the construction programme.
- D. SDS fail to provide the Outstanding packages to the requisite standard, requiring rework and delay, preventing CEC from providing consent timeously and creating delay to the construction programme.

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- E. CEC provide consents and approvals timeously, but SDS then fails to provide IFC (“Issued For Construction”) drawings to BBS timeously creating delay to the construction programme.
- F. SDS provide the Outstanding packages on time and to the requisite standard, but CEC fail to provide consent timeously, creating delay to the construction programme.

SDS resisted accepting any liability in the event of any of these scenarios. Since the point of investing in procurement of a design appointment in Autumn 2005 was to secure a completed approvals process with an advanced network design development, there was no allowance for the implications of a coincident design and construction process in the existing SDS agreement. Accordingly, **tietie** / CEC’s leverage over SDS on the issue was limited.

BSC similarly resisted accepting any liability for the consequences of delay arising from the Submitted or Outstanding packages. Their position was reserved (as was the under-bidder Tramlines’ position) at preferred bidder stage, pending due diligence on SDS, as they were aware of the issue at the Preferred Bidder stage, but again only had limited sanction over them.

There was no sustained attempt by BSC to sidestep the transfer of design quality risk once the Submitted and Outstanding packages are eventually signed over to them with consent. In fact they explicitly accepted the design quality risk as part of the Agreement made on Friday 7 March 2008 for Contract Price adjustment. Accordingly, the remaining risk was focussed on construction programme delay as a result of late delivery of design and hence IFC drawings impacting construction.

In summary therefore, **tietie** / CEC were exposed to risks relating to timeliness of submission and / or quality. The risk could be heightened by deliberate or inadvertent actions by BSC / SDS.

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.

tietie put in place a number of processes to limit its exposure to the risks in the Infraco contract. These controls included:

- Schedule Part 14 – Design Review & Design Management Plan;
- Appointment of an Engineering Director to oversee the design review process from **tietie**’s perspective; and
- A project manager appointed to manage the contractual design issues.

The procurement strategy had not anticipated that the final outstanding design packages would not be delivered until Autumn 2008. The option of delaying Financial Close to eliminate that risk was considered but it was concluded that the risk was manageable through the mechanisms agreed at the time of Close and that further delay to await a completed design was unattractive.

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However, it has been apparent that Infraco have not managed SDS effectively since May 2008 resulting in further design slippage. This is discussed in more detail in Section 4.2.

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 **tietie** 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 **tietie** and the nature of the MUDFA contract means that any delays caused to the Infraco contractor could not be recovered from the MUDFA Contractor.

At the time of the Infraco contract award, **tietie** 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 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 have caused delay to 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 27,000m 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, Scottish Power and Scottish Water diversions on Constitution Street which required BT cables to be diverted outwith Constitution St.;
- Poor performance of Carillion(formerly Alfred McAlpine) which resulted in slower than expected progress and rework, some of which is still ongoing;

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- 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; and
- Poor records held by SUC's in relation to location and depth of utilities.

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 on 15th June 2009, ~~tietie~~ 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 following TPB approval on 18th November 2009. It is expected that the delay and disruption dispute will be subject to formal dispute resolution in Spring 2010.

BSC has submitted a number of Compensation Event claims under Clause 65 of the Infraco contract in relation to MUDFA works not being complete according to their programme. It became apparent following Close that if MUDFA works were not complete in an entire intermediate section then BSC would not commence Infraco works in that section claiming that Clause 18 of the Infraco Contract required them to have been given unrestricted access to the entire site before tram works could commence. ~~tietie~~ does not believe that this is in accordance with their other obligations in the contract which oblige them to mitigate delays.

~~tietie~~ advised BSC of the MUDFA Revision 8 programme in April 2009 but it was not until July 2009 that BSC notified ~~tietie~~ that they considered this to be a change. They submitted an Infraco notice of ~~tietie~~ Change (INTC 429) in relation to the impact that MUDFA delays were having on the Infraco programme in August 2009. ~~tietie~~ made its own assessment of the MUDFA delay impact on the Infraco programme and when BSC put this into formal dispute in September 2009 ~~tietie~~ made an offer of 9 months relief from LD's and 6 months Extension of Time (EOT) to BSC following a meeting between the parties. TPB endorsed this at the meeting on 18th November 2009. At time of writing BSC have not accepted this offer, have intimated in a recent meeting between the parties that they will not accept it and have put this application for EOT into formal dispute with mediation scheduled for 16/17 March 2010.

~~There is no dispute.~~ It is accepted that utility diversion delays have caused construction delay, but there is 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

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seek improved commercial outcomes. Section 4.7 documents this in more detail as a basis for analysing BSC / BB's current position on the dispute.

2.5 *Princes Street agreement*

In February 2009, Infraco refused to commence the construction works as planned on Princes Street, despite the access and extensive traffic diversions arranged by **tietie** and CEC.

This precipitated a dispute over whether Infraco were obliged to undertake the works in the absence of agreement over Estimates for contingency traffic arrangements and restrictions in areas as a result of incomplete utility works at The Mound.

tietie considered that this was a smokescreen to create additional stakeholder pressure and help force **tietie** to accept the BB allegation (made in early February) that c£80m of additional costs were required to enable them to complete the civils works. In addition to rejection of the principle, **tietie** was not provided with substantive support for the financial claim. Rather than accede to BB's request in order to avoid delay to this prominent section of work, **tietie** and CEC concluded that a firm line needed to be taken, regardless of the potential for poor publicity which BB appeared to wish to use as leverage.

During March 2009, extensive discussions took place with the key city stakeholders, funders and the Consortium (now represented by a new Project Director, Martin Foerder). This eventually resulted in a proposal for a Supplemental Agreement which would modify the Infraco Contract for the 1km section of Princes Street.

This modification amended the way costs of items which would have been **tietie**'s responsibility were evaluated and paid, retaining the basic liability and risks, but ensuring no artificial delay in agreeing Estimates for Changes or Compensation Events. The Programme impact of the Princes Street Supplemental Agreement (PSSA) was designed to allow any entitlement to relief/extension to flow through the main Infraco arrangements and be addressed in any subsequent amendment of the Programme.

The scope of works for the PSSA related specifically to civil engineering works, and is primarily associated with excavation and construction up to the underside of the track construction box. A number of obstructions were encountered during the works which were either known or suspected and which would have been addressed as either Compensation Events or **tietie** Changes under the established contract mechanism as a **tietie** liability. The substance of the Infraco contract was materially unchanged by the PSSA but Infraco appeared to regard the actual cost recovery and payment mechanism as more acceptable. Work commenced in late March 2009.

It was also agreed that a Project Management Panel (PMP) comprising representatives of **tietie** and BB would be convened to aim to resolve a number of the more contentious differences between the parties. Although this showed some potential to assist issue resolution, the early impetus petered out with no material change to the manner in which BB were approaching engagement.

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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 2 (Princes Street % prelim uplifts) was agreed via mediation, and **tietie** 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 or by mediation. At the TPB in June 2009, **tietie**'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 Dr Keysberg of BB and Dr Schneppendahl of Siemens. This meeting resulted in both parties agreeing to an intensive 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 and its status within the Contract documents hierarchy;
- BDDI – IFC;
- Risk allocation and substantiation of changes;
- Programme – EOT2;
- Valuation of EOT 1; and
- Value Engineering.

On 8th July 2009, **tietie** 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; and
- 4) Terminate the BSC contract.

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

This approach represented a step-up in the assertiveness with which **tietie** was approaching resolution of the dispute, reflecting the failure of more informal methods. It was recognised that there was a hierarchy of steps to be taken, with termination the ultimate step but one that was not appropriate at that stage. The objectives of this strategy were 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 through the application of Clause 80.15 of the Infraco Contract; and

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- drive change in behaviours by the contractor.
- drive change in behaviours by the contractor.

DRP No	Subject	Nature	Decision/Status	Additional value achieved/saved
1	Contingency bus lane Princes Street	Getting work started	Agreed between the parties – supplemental agreement	
2	% uplift in prelims	Costs	Agreed at Mediation	
3	Hilton Car Park	Contract definition	Awarded in tie's favour	£100k
4	EOT1	Costs	Agreement reached through mediation	£3.5m
5a	Gogarburn	BDDI-IFC	Decision made	~£150k
5b	Carrick Knowe Bridge	BDDI-IFC	Decision made	~£150k
5c	Russell Road Bridge	BDDI-IFC	Decision made	~£2m
5d	Haymarket	BDDI-IFC/Costs	Agreement reached prior to reaching formal stages – costs reduced substantially	£200k
5i	Baird Drive	BDDI-IFC	Awaiting adjudication	
5j	Balgreen Road	BDDI-IFC/costs	Agreement reached prior to reaching formal stages – costs reduced substantially	£500k
5k	Depot Access Bridge	BDDI-IFC/costs	Recently launched	
A	MUDFA Rev 8	Time	Awaiting mediation	
5l	Section 7 track drainage	BDDI-IFC/costs	Just launched	
5e	Tower Bridge	BDDI-IFC/costs	Just launched	
				£6.6m to date

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The following DRP's have been launched to date:

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A discrete number of disputed matters were initially selected for dispute resolution. This followed concerted efforts to reach compromise through mediation. It should be understood that the DRP was commenced with full recognition that, despite reasonable levels of confidence on outcome, there could be adverse findings. The proposition was that without DRP there would be no agreement on entitlement or value unless ~~tietie~~ conceded unacceptable positions, especially on cost where the evidence was of consistently inflated estimates. Understood in this context, the use of DRP was the only route open to ~~tietie~~, indeed not deploying DRP would have meant ignoring the proper contractual mechanism for resolving disputes.

Additionally, the DRP contains an internal process to achieve settlement by agreement and ~~tietie~~ wished to engage this to ensure that all effort had been used to avoid formal proceedings. In numerous instances this has resulted in ~~tietie~~ driving Infraco to a compromise on the Estimate which would not have been achievable without either the reality or threat of DRP coercing the Infraco to revisit its valuation of the variation in question.

The outcome of this approach, as measured at the end of February 2010 is ~130 Changes finally agreed at an average value of 60% of the original submissions; a saving of £9m.

Each DRP was subject to detailed preparation using legal and commercial support from parties external to the main ~~tietie~~ team where appropriate, coupled with a robust challenge process which also involved the Finance, Legal and Commercial sub-committee of the TPB.

The DRP strategy was intensive of management time and expensive in advisor costs. The effectiveness of the strategy was addressed in detail in December 2009 and it was concluded that the strategy was not delivering the desired outcomes. Whilst ~~tietie~~ had achieved the objectives of getting work started at some locations put into dispute and significantly driving down the final value of Estimates being submitted by BSC, 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 ~~tietie~~'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.

Whilst the resolution of these DRP's has required investment of time and cost, the process has not unduly delayed the programme in itself because of the impact of the late utility diversions (and subject to the debate about concurrency) whilst at the same time driving through best value by challenge to the value of the Estimates.

Recommendations were made by ~~tietie~~ to the December 2009 and January 2010 TPB meetings which set out a further series of steps aimed at resolving the dispute, controlling project cost and regaining traction on the programme. The recommendations were approved and 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 piece of work would be undertaken and a series of workstreams and supporting activities have now been executed, in support of the assessment of the options available to ~~tietie~~ and CEC planned for the TPB meeting on 10th March 2010. The workstreams were chosen as they reflected, through knowledge and experience, where the greatest contractual friction lay between the parties and where ~~tietie~~ anticipated it would find the areas of non-compliance by BB which would offer the most leverage over the contractor in negotiations to get the project moving.

3.1 Project Team

The workstreams were split into key areas – analysis of the current disputes (1, 2, 3, 4, 6, 7 and 7), application of contractual rights (5) and maintaining progress on construction and communications (8 and 9). Team responsibilities were :

	Leader
Assessing the Options	Richard Jeffrey
Option workstream	
1. Audit	Steven Bell
2. Design	Steven Bell
3. Programme	Susan Clark
4. On Street	Alastair Richards
5. Use of Contractual Mechanisms	Tony Rush
6. Financial Analysis	Stewart McGarrity
7. BB corporate position	Graeme Bissett
Maintaining business as usual	

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8. Maintaining construction progress	Frank McFadden
9. Communications	Mandy Haeburn-Little

The output from workstreams 1-7 is contained within section 4 of this report. The work on contractual mechanisms was a natural progression from the heightened pressure deployed in the second half of 2009, which had achieved only some of the objectives of that strategy and which had not noticeably improved overall construction progress.

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 of documentation

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 ~~ti~~ti~~ie~~ 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. Our Intranet/Extranet is based on SharePoint. Access to SharePoint is only possible if the user has a ~~ti~~ti~~ie~~ created account with user id and password. The account is granted access privileges to authorised designated areas within SharePoint. The content owner for the area within

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question requests access for a user granting them either read only or edit rights to the area in question.

Hard copy only of this report will only be circulated as required and each copy will be numbered and identified to individuals.

4.0 Workstreams

This section outlines the key findings from the workstreams executed.

4.1.1 Audit

This section covers :

- Design management audit
- Programme audit
- Sub contractor arrangements audit

4.1.2.14.1.1.1 Design management 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, the design contract was 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)
- Best value solutions in design
- Lack of effective management of the design to completion

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- 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, **tietie** executed its contractual right under clause 104 to undertake a targeted set of formal Audits on design issues in January and February 2010 and a rapid review of SDS delivery programmes by Blair Anderson (a design and construction specialist) in February 2010.

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The areas covered were:

- a. Structures
 - i. Baird Drive retaining wall
 - ii. Bankhead Drive retaining wall
 - iii. Depot Access Bridge
 - iv. A8 Underpass
- b. Roads section 1D
- c. Overhead Line System and foundations
- d. Track
- e. Integration and design assurance

4.1.21.2.2 Design Audit Themes

The following areas have been identified as key themes from the audits, and the backdrop of a design process which is badly delayed should be borne in mind.

- 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. BSC were unable to produce evidence of positively managing SDS, for example 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 best value planning and best value reviews had taken place. This is in principle a contractual obligation under Clause 7.3.15 generally and Clause 73 in particular. BSC were unable to produce any credible analysis, letters, memos, emails of minutes of meetings to evidence this obligation. In fact, at the audit, BSC stated (as an aside) that Best Value for **tietie** and for BSC were two

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different things. The contractual obligation in fact requires Infraco to support tietie's obligations under the Local Government legislation, so there should never be misalignment if they discharge their obligations. 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.

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There is no evidence of BSC utilising SDS to improve buildability 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 has supported their position.

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 tietie. 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.

f) Experts Commentary on design

The independent Aecom engineers who attended the structures and roads audits on tietie's behalf 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.

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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.

g) Integration and design assurance

The process utilised by Infraco and their designer would generally provide an integrated solution capable of providing design assurance. However, Infraco 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.

4.1.1.2.33 *Review of SDS Delivery Programmes*

In addition to the targeted clause 104 design audits an independent rapid review was undertaken by Blair Anderson on the SDS design programme and its management by Infraco.

This includes evidence drawn from the specific audit results and an analysis of 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 of delay and 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 Infraco / SDS. The lack of design programme management evidence over an extended period helps support this case.
- 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 excessively conservative.

Based on his rapid review information, Blair Anderson has concluded, based on his expert interpretation which is grounded in factual data and analysis, that prima facie Infraco have failed to manage the Designer and the design process to an appropriate standard and could be considered negligent in their duties. The lack of design programme management evidence over an extended period, helps support this case. 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.

4.1.1.2.4 *Linkage to other work streams and options*

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The delay impacts, further specific details on culpability and concurrency generated from the design audits feed into the work in Workstream 2 on Programme (see below) and provide further 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 includes examples relating to both BDDI – IFC disputed changes and Value Engineering. These specific targeted areas will be supported with finalised contractual argument and pursued as specific failures. See section 6.

This audit also provides evidence of Infraco’s failure to fulfill their general obligation to exercise the reasonable skill, care and diligence expected of an experienced contractor, with implications for possible breach actions. Similarly, an approach through the SDS collateral warranty is being tested. See section 6.

4.1.1.2-5 BSC Position

Infraco suggest that they are managing the SDS design process and that the delays are a result of either awaiting decision from ~~tietie~~/CEC or incorporating “change” from ~~tietie~~/CEC. They refute Inter Disciplinary Checkbook related delays and allege that they are entitled to Compensation Events for late issue (and re-issue) of IFC drawings.

This last point is relevant to programme and is particularly ambiguous. It is one area of the legal issues to be resolved in the examination of Clause 65 operation and entitlement. This is being explored as part of the ongoing work on BSC’s responsibility for managing design (section 6).

Infraco’s position on Best Value appears to be that the Contract Works Price provided for this obligation and there is no evidence of further consideration in any changes. In addition, VE opportunities are stated as unable to be realised but no visibility or evidence is provided to support this position.

Finally, Infraco allege that they have no obligation to assist ~~tietie~~ meet Clause 7 Best Value obligations because ~~tietie~~ is not a local authority. However, Clause 73 of the Infraco contract also contains a requirement in respect best value.

4.1.3-12.1 Programme Audit

The Programme has been a key area of contention between ~~tietie~~ and Infraco. ~~tietie~~ 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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Comment [S16]: Andrew and Tony are picking up but irrespective of any technical definition, the obligation under clause 73 will still catch them.

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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 **tietie**. 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, **tietie** and Infraco agreed a process in November 2009 to try to 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 **tietie** commissioned Acutus to undertake a targeted audit workstream to further inform the factual quantification of delay, together with reasons for it and evidence of mitigation actions taken or planned to be taken.

4.1.32.2 Programme Audit Themes

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The key findings from this audit which are linked to section 4.2-3 are:

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- a) Delay in notification of INTCs and subsequent provision of Estimates.
- b) 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.
- c) The time taken to provide estimates often appears unnecessarily long and without justifiable reason.
- d) In many instances BSC is relying on the date of the issue of **tietie** Change Orders to justify its claims for EoT, despite its apparent culpability for delay in the process that delivers them.
- e) Utility diversion delays.
- f) Outstanding utility diversions continue to be cited as causes of delay and/or potential delay. **tietie** acknowledges that there has been an impact in On street sections from utility diversions, however, that can be mitigated by Infraco.
- g) Delay in procurement of temporary works arrangements.

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- h) BSC’s 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.
- i) Infraco’s delay or failure to notify delays affecting Programme.
- j) 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.
- k) Unreliable / Inconsistent evidence.
- l) Some of the answers given by BSC representatives at the audit meetings appear to be at odds with some of the evidence subsequently produced or retrieved. It is thought that in many instances this arises from errors in personal recollections rather than an 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.
- m) Alleged **tie** decision making delay.
- n) 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.
- o) Utility diversion delays.

Comment [MSOffice17]: To ensure **tie** has specific evidence for this

Comment [S18]: Iain McAlister's Audit

4.1.32.3 Links to other workstreams and Options

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

4.1.32.4 BSC Position

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Infraco consider delays in providing Estimates to be a **tietie** responsibility (because it is an alleged Notified Departure) or because **tietie** have to grant an extension to the 18 days for the provision of Estimates acting reasonably).

Similarly with regard to Clause 65 information and Compensation Events, Infraco, having made a notification take the position that **tietie** must accept this even without any interim particulars.

4.1.43 Subcontractor Audit

Since contract award, **tietie** has sought to ensure key subcontractors are properly appointed and establish 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. **tietie** has not had visibility of the status of subcontract arrangements and related collateral warranties despite repeated requests.

Two main areas were audited; procurement of subcontractors and administration of subcontracts & subcontractors. 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 **tietie** and in some cases entered into subcontracts in advance of requesting permission to subcontract from **tietie**.

4.1.43.1 Procurement of subcontractors

The audit requested that Infraco demonstrate their procurement strategy and the method of managing the procurement of subcontractors to ensure 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.

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Comment [MSOffice19]: Result / implications ?

Comment [S20]: Siemens not perfect.

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They also confirmed that procurement of Sub-contract Collateral Warranties had progressed in tandem with agreement of the Contract terms and conditions.

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

Schedule 38 identifies both key subcontractors and the key obligations which should be stepped down into the subcontract terms and conditions. BB provided a schedule of amendments to the subcontract terms and conditions in the Infraco Agreement Contract 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 proposed 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, BB subsequently advised that such a document did not exist.

The works undertaken by BB “key subcontractors” to date has been executed on Letters of Intent with limited scope and financial exposure. Information provided is included in the table below :

Key Subcontractors	Latest Value of Letter of Intent	BB expected execution of Sub Contract at time of audit
Farrans	~£2.5m	February 2010 – still not executed in March
Barr	~£1.2m	February 2010 – still not executed in March
Expanded	~£6m+	February 2010 – still not executed in March
Graham	No letter of Intent	February 2010 – still not executed in March
MacKenzie	£10m	April 2010
Crummock	£1.1m	March 2010
McKean	£400k	April 2010

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Comment [MSOffice21]: ??

Comment [S22]: Schedule 38 identifies both key subcontractors and the key obligations which should be stepped down into the subcontract terms and conditions

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Comment [MSOffice23]: We say they have no sub-contracts ??

Comment [S24]: Bilfinger Berger have not executed any subcontracts. We have reviewed and approved a subcontract for Farrans as long ago as March 2009 which has yet to be executed. In addition, we have received proposed subcontracts for both Barr and Graham at the end of January 2010 which this comment refers to.

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Comment [MSOffice25]: Status given we're in March ?

Comment [S26]: None executed

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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.

DLA’s Legal opinion as to the overarching risks are:

- No direct contractual relationship between **tietie** and the Key Sub-Contractor; therefore no direct contractual duty of care (and no ability to make claims under the Collateral Warranty);
- May put **tietie** in breach of its statutory obligations under the Tram Acts that only authorised parties may carry out the authorised works;
- Any failures which put **tietie** in breach of its obligations are in themselves a breach of contract by Infraco. This would apply also to the terms of the Operating Agreement between **tietie** and CEC.

Comment [MSOffice27]: State source

Comment [S28]: Now added

4.1.43.2 Conclusion

The audit has identified several areas which cause concern with BB’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” [Extract from Clause 7.2 of the Infraco Contract].

Comment [MSOffice29]: Source of quote ???

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4.1.43.3 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

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failures and also part of a body of evidence to support wider evidence to advance a case of material breach of Infraco’s obligations.

The specific failure to appoint Key Sub Contractors allows **tietie** to operate Clause 67 to withhold payment for works undertaken by those subcontractors until they are properly appointed. As noted in the Subcontract and the Programme Audit, Failure–failure to appoint and the delay responsibility flowing affects consideration of programme delay.

The failure to provide subcontractor collateral warranties to third parties (because subcontracts have not been executed) is a specific breach.

4.1.43.4 The next steps

Further audit work 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 **tietie’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.

4.1.43.5 BSC Position

Infraco’s latest position is that **tietie** are now delaying sub-contractor appointment based on requests made January 2010 and February 2010, with no regard for the first 20 months following Close. In addition they have argued that the “decision” not to appoint sub-contractors was taken to mitigate **tietie’s** costs for delays that are **tietie** responsibility (e.g. utility diversions). **tietie** accept that it is responsible for a number of utility diversion delays. **tietie** had no opportunity to comment on this alleged course of action/mitigation as Infraco purported to take it on our behalf with no consultation and only raised it when pressed on why they had failed to appoint subcontractors anywhere. Indeed they used this reasoning for locations where there were no material utilities delays (Off street sections). This is not a credible position.

Comment [MSOffice30]: Link to where picked up.

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Comment [MSOffice31]: What is **tie**’s response to BSC’s assertion ?

Comment [S32]: **Ti** accept we are responsible for a number of Utility diversion delays. **Tie** had no opportunity to comment on this alleged course of action/mitigation as Infraco purported to take it on our behalf with no consultation and only raised it when pressed on why they had failed to appoint subcontractors anywhere. Indeed they used this reasoning for locations where there were no material utilities delays (Off street sections). It is not a credible position.

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4.2 Design

4.2.1 Historic Evolution of the Current Situation

The history of the design up until the point of novation of the design contract to the Infraco is captured in Section 2.2. This section deals with the events from novation to date.

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 and change in critical path design items. The comparison of last delivery dates for the various programme revisions is:

Programme Version	Last Finish Date
V26	09-02-09
V31	21-01-09
V51A November 2009 & latest design programme)	19-08-10

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Comment [s33]: Latest date for V31 was earlier than V26 and so I have taken the v26 line out. The overall impact of the changes in v31 was to delay the contractor's construction programme. however,

Comment [MSOffice34]: One of these must be wrong, presumably v26 s/b 2008 ??

Comment [S35]: No but the linkage to construction critical path amended the construction final completion.

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Whilst **ti** Changes have driven some of this delay, for example in areas such as Gogar Interchange and Picardy Place, there has been no clear justification from BSC as to the reasons for overall 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 substantiated by the findings of the audit which identified additional activities being added into the design programme and is further 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. The table below shows the jump in number of IFC's since contract close (V26).

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	

ti were concerned about the progress of design because of the continual slippage being shown in successive versions of the design programme being supplied, the apparent lack of integration of design into the main construction programme and finally lack of design assurance and Inter-disciplinary design checks being carried out. **ti** therefore set up a number of forums to try to

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identify blockages and potential opportunities to improve processes, particularly in relation to the ongoing approvals process with CEC:

- Design issues meetings
- Approvals & consents taskforce
- Design progress meetings

tietie's view is that the first two forums have worked well. The progress meeting has not worked well and it is tietie's opinion that this is because SDS have not been in attendance at the meeting.

4.2.2 Evidence for tietie's View

Several audits were carried out on the management of design during January 2010. This is reported in more detail in Section 4.1 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
- Time taken to complete designs appears excessive
- Infraco not complying with inter-disciplinary design check in advance of construction
- Programmes does not allow for easy management of the design process
- Large number of items added to the design programme by Infraco
- Durations of activities

There are examples of delays which have been caused by late decision making by tietie and CEC in the design process. However, the quality and timeliness of the design process is a critical dimension of the dispute and 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.

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

The delay impacts, further specific details on culpability and concurrency generated from the design audits feed into the dispute over Extension/Extension of Time .

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There is specific action to be pursued in relation to both SDS and Infracore for the absence of design management and the failure of any evidence in addressing Best Value obligations. This includes examples relating to both BDDI – IFC disputed changes and Value Engineering.

The novation agreement included an incentivisation package for SDS which was aimed at encouraging them to deliver the IFC packages according to the V26 programme. SDS stand to lose a proportion of this if tietie can prove that completed IFC's were not delivered on time. Additionally, Infracore are obliged under the contract to seek damages from SDS in relation to their failure to complete design on time before coming to tietie for such relief/compensation. There is no evidence that this has been done.

Finally, there a large number of Compensation Events submitted by BSC in relation to late design. There is potential to demonstrate that this is due to their lack of management and so a contractor delay as opposed to a tietie delay – this impacts on the programme argument and concurrency debate outlined in the programme section of this report.

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4.3 Programme

4.3.1 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 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

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Clause 65 – Compensation Events submitted	275
Clause 80 – INTC's submitted	453

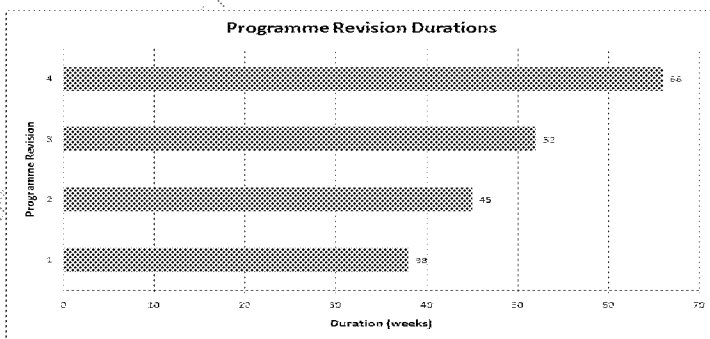
Following agreement of the EOT in relation to each of the delay events identified by BSC in accordance with the programme, BSC should follow Clause 60 of the contract and submit a revised version of the programme for **tietie**'s acceptance.

BSC has never fully complied with 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 – **tietie** has consistently refuted this allegation and **tietie**'s MUDFA Revision 8 position paper explains the rationale behind this in detail. This means that **tietie** 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 **tietie**. BSC has submitted a further revision of the programme Revision 2 (which was rejected by **tietie**) 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:

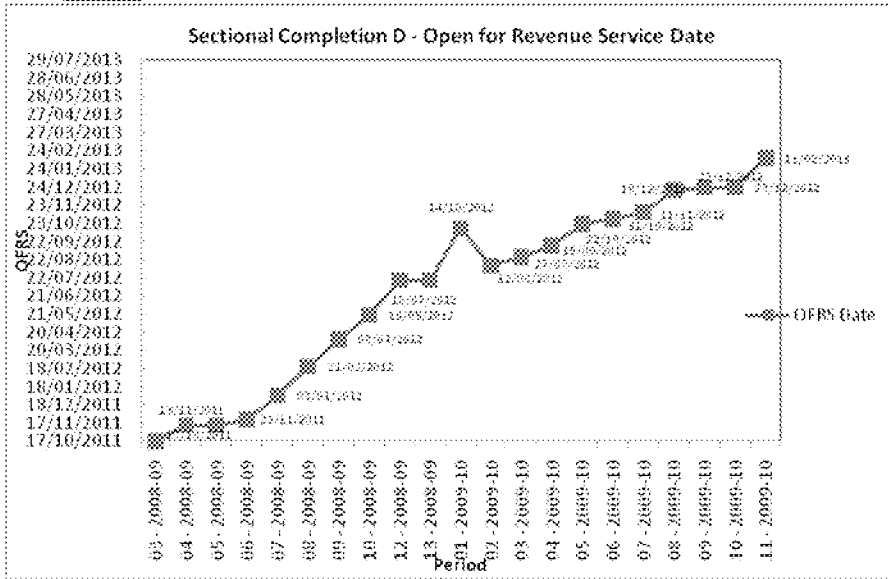


Period Programme Forecasts

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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 overleaf:



- The reasons for delay as established by **tietie** 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.

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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 **tietie** Change (INTC) on 25/11/08 (some 6 months after contract award) and the time element of this was agreed by **tietie** on 17/12/08 with an EOT of 38 business days awarded by **tietie** on 18/03/09. There is no further dispute about this slippage.

Comment [s36]: Checked and correct

Comment [S37]: Susan to check

Revision 2

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In response to the ongoing slippage mentioned above ~~ti~~ 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 2 programme on 20/05/09. During June 2009 ~~ti~~ 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 ~~ti~~ 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; and
- 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. ~~ti~~ had made an assessment of the impact of utility delays 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 to get BSC working with ~~ti~~ in accordance with their obligations in the Infraco contract, ~~ti~~ offered BSC a 9 month EOT (relief from LDs) with 6 months of costs, subject to TPB approval. This was also subject to evidence by BSC that they were working with ~~ti~~ 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 primarily in relation to physical construction progress. The list of evidence expected and progress at January 2010 is listed below:

Progress on site

- Delivery of Princes Street for 28/29 November – Achieved although quality of works very inconsistent and BSC management involvement too limited visibility and drive inadequate.
- Work starting at Haymarket Viaduct in Mid November – Started very slowly at end November

Comment [MSOffice38]: confirm
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Comment [S39]: Visibility and drive inadequate.

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- Drainage and Earthworks starting Edinburgh Park – Guided Bus way – started late February 2010 but promised November 2009.
- Depot Drainage next phase seamless progress - OK
- Commencement at A8 Underpass – Piling started 4/1/10
- Work Starting in section 2A (Haymarket - Russell Road) – very slow and affected by trackform discussion
- Track Laying starting now on Guided Bus way – Started but progress has been slow, including defective piling requiring replacement
- Commencement of Building Fixings work – Planned for January 10 but did not start until February

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 but did not acknowledge tietie requirements
- 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 in process but significant stumbling blocks including difference of opinion on mitigation

This “9/6” offer was made on the basis of tietie’s assessment of the liability it had in respect of the MUDFA delays at that time (not only to MUDFA Rev 8) and hence was not regarded as a material concession by tietie.

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

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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 were 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 as 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, **tietie** has been assessing the Revision 3 programme to identify the level of mitigation incorporated, the relative programme durations and the particular details of 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 <u>Oct 2013*</u>	

* This date was correct at 5th March 2010. On 8th March 2010, BSC submitted a revised proposed programme showing an open for revenue service date of January 2014.

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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. **tietie** believe there is a shallower construction which would save time and money;
- All current contract embargo periods;
- Delays to date associated with agreeing Estimates and for BDDI – IFC alleged changes; and
- 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.

4.3.2 Evidence for **tietie**’s view on the current situation

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The Clause 104 audit on programme has already been described in Section 4.1 of this report. The results of this indicate that BSC appear not to be complying with 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
- 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.

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

tietie – Employer Delay Events

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

BSC – Contractor Delay Events

BSC has failed in their analysis of delay by not taking into account any delay for which they are responsible. To date they assume that any delays associated with agreeing changes are to tietie’s account. Clearly, this is not the view of tietie and does not allow for BSC’s erroneous interpretation of Clause 80 whereby they insist on not starting work until changes are agreed or put into dispute.

Assessment of Programme Liability and EOT

It is important that tietie understands its liability for delays and is able to quantify what this 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

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- Production of concurrency charts to identify all delays and attribute liability to **tietie** 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, **tietie** have captured a large amount of delay information which has informed the assessment of **tietie** liability. However, the lack of substantiation by BSC in relation to delay has frustrated **tietie**'s ability to administer this aspect of the contract and make a robust assessment of BSC's entitlement to any extension of time. Notwithstanding this, **tietie** has appointed delay and disruption specialists Acutus to assist with this assessment using the information that **tietie** has been recording. Acutus Acutus have been working on 3 workstreams as follows:

- 1) Delay attribution and concurrency – identifying causes of delay and evidence to attribute this delay to **tietie** or BSC. The route has been split into 80 locations for this purpose and evidence collected for each location on a prioritised basis. The output from this is then summarised into an output to identify the maximum and minimum exposure to **tietie**.
- 2) An analysis of the movements in programme between Rev 1 – Rev 3 to identify changes in critical path, logic, number of activities, durations and float. This is aimed evidencing any manipulation of the programme through each proposed revision.
- 3) A review of Acutus's view of what a realistic Rev 3 programme could delivery in terms of an OFRS date.

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Whilst the Acutus review used the BSC Revision 3 programme structure, logic and assumptions as the baseline and worked back from this, another external advisor (Tony Rush) carried out an unconstrained analysis based on critical work activities and durations. These 2 exercises gave us a range of achievable programme dates from June 2012 – December 2012. These dates are predicated on utility diversions being completed as currently forecast and BSC behaving in a manner which is conducive to progress.

assessment. The latest summary of this is: **tietie** January

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Insert narrative from Acutus assessment

Comment [MSOffice40]: need to assimilate this feedback quickly

Comment [S41]: Agreed

This is based on a comparison of the Revision 1/Revision 3 programmes as they stand stood at 5 March 2010. On 8th March 2010 a revised programme was received by BSC. 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 3 delays.

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4.3.4 What are the implications?

The Edinburgh Tram Project programme is an extremely complex programme and the analysis of overall delay culpability in respect of the Edinburgh Tram Project is particularly complex and onerous.

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This is likely to be an area of continued tension between the parties and a continual area of risk in terms of cost to ~~tietie~~ and BSC. It is unlikely that both parties will be able to reach agreement quickly on EOT and costs given the current opposing views of the parties in terms of administration of the contract and management of programme. Whilst ~~tietie~~ have attempted to be reasonable in offering an EOT despite this not being fully substantiated by BSC, they appear to have dismissed this offer (advising Richard Jeffrey in a meeting on 2 March 2010 that they have not accepted this offer) and opted to take the matter back to DRP.

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 to justify additional payment from the project beyond the level which ~~tietie~~ would accept, mainly arising from utility diversion delays. 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 Infraco Contract, which further undermines hopes of a swift resolution to this aspect of the dispute.

Legal advice provided suggests that there may be an argument available to ~~tietie~~ that the effect of the words in the Infraco Contract can be construed to mean that where there is a delay which is truly concurrently caused by Infraco risk events and non-Infraco risk, then no extension of time falls to be awarded. However, this argument is likely to be difficult to sustain.

4.3.5 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 understandably being generated in relation to stakeholder concerns over 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 open for operational service by March 2013. This could lead to an incremental delivery approach. January Check Acutus assessment of improvements that could be made to this?

Comment [MSOffice42]: as above
Comment [S43]: Susan and I can look at it tomorrow

Address programme aspects of re-phasing

4.3.6 BSC Position

BSC believe:

- The key driver to delays in the critical path is MUDFA (~~tietie~~ would not disagree that MUDFA delays are a significant cause of delay);

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- That EOT/relief to LD's should be made on this basis alone and without proper substantiation as required under the contract;
- That substantiation of Compensation Events against the current programme is difficult and therefore they are not undertaking this at an individual level;
- The assessment of the impact of ~~tietie~~ Changes and Notified Departures is too difficult at an individual level and is ~~therefortherefore~~ subsumed within their assessment of Rev 3;
-
- Mitigation should be at no cost to BSC and they have mitigated in revisions to the programme; and
- Do not recognise any delays for which they are culpable.

4.4 On Street Supplemental Agreement

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4.4.1 Historic Evolution of the Current Situation

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In February 2009, Infraco refused to commence the construction works as planned on Princes Street, despite the clear access and extensive traffic diversions arranged by ~~tietie~~ and CEC. The background is described in Section 2.

This precipitated a dispute over whether Infraco were obliged to undertake the works in the absence of agreements over Estimates for contingency traffic arrangements and restrictions in areas as a result of incomplete utility works at The Mound.

The revised terms allowed for modification of the way costs of items which would have been ~~tietie~~'s responsibility were evaluated and paid, retaining the basic liability and risks, but ensuring no artificial delay in agreeing Estimates for Changes or Compensation Events. The Programme impact of the Princes Street Supplemental Agreement (PSSA) was designed to allow any entitlement to relief/extension to flow through the main Infraco arrangements and be addressed in any subsequent amendment of the Programme.

The scope of works for the PSSA related specifically to civil engineering works, and is primarily associated with excavation and construction up to the underside of the track construction box.

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There were a number of obstructions either known or suspected which would have been addressed as either Compensation Events or **tietie** Changes under the usual contract mechanism as a **tietie** liability.

The only on-street works performed to date have been the 1,010m section on Princes Street during the period of 9 months between March and November 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 On-Street Supplemental Agreement.

Since June 2009 negotiations on the details have been ongoing between **tietie** 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.

Comment [MSOffice44]: define value within Infraco price
Comment [S45]: Will demonstrate at 0830 meeting with Stewart and Dennis.

The pricing assumptions leave certain risks under the Agreement as the responsibility of the Client, **tietie**, 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 latest proposal BSC offer a credit to **tietie** for the on-street section of works from their fixed lump sum construction works price of £37M (which represents XX% of the BB element). However, this would be offset by the additional costs which BSC would claim via the cost plus approach.

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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 states that under procurement law **tietie** would be exposed to a challenge.
- 2) The **tietie** 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 proposed 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, 30th June 2010 or December 2010.

In summary, the OSSA proposed by BSC contains open-ended cost risk for **tietie** and no legally committed completion date.

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

- 1) The current OSSA proposed by BSC is not acceptable in the current form for the reasons outlined above.
- 2) It is essential to retain the fixed price or 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 in an acceptable time-frame 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 necessary and consistent with quality and safety standards in order to reduce the direct costs and the time cost of undertaking the works.

4.4.3 What are the implications

Until now BSC have intimated that work will not commence on street until **tietie** sign an OSSA. However, they have on 5th March 2010 submitted a permit to start work at Haymarket on 9th March 2010. This did not start on the basis that BSC were not ready to start – no executed sub-contracts in place. 2010.

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4.4.4 How would the argument be best taken forward?

A revised on street agreement requires to comply with EU procurement regulations – this has been communicated to BSC.

4.4.5 BSC Position

Until now the BSC position has been clear (and stated in writing) – no more on street works will commence until **tietie** signs a new OSSA which is based on a cost plus payment mechanism. Their basis for this position is regarded as commercially driven and particular attention is being focussed by **tietie** on the operation of clause 80, set out in more detail in section 4.5.

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4.5 Contractual Mechanisms

4.5.1 ~~4.4.1~~ Historic Evolution of the Current Situation and key areas of legal focus

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 4.4. This was coupled with continued slow progress on the ground - 14% of physical works completion to date compared to a planned completion of 75%.

Section 2.4 outlines the progress made with the DRP process which by end-December 2009 hadn't clarified the issues surrounding the Pricing Assumptions contained in Schedule Part 4 of the Infraco Contract and had not prompted BSC achievement of progress.

As a result, ~~tietie~~ reported to the TPB in December 2009 that it intended to adopt a considerably more assertive approach to enforcement of contractual rights and obligations and had secured the services of Tony Rush, a construction contract specialist to work with ~~tietie~~ to assist in enforcing the full range of commercial mechanisms contained within the contract.

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In January and February 2010, a number of important contractual letters have been sent to BSC addressing :

- Design management
- Programme
- Change responsibility and process
- Obligations under clauses 6 & 7 of the Infraco contract
- OSSA
- Confidentiality
- Compensation events
- Milestone payment reductions for Preliminaries

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

- 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; and
- offering practical but contractually enforceable means of resolving disputes

In fact the contractual levers available to **tietie** have been created by Infraco themselves:

- refusal to comply with Clause 80 – (Estimates and failure to carry out work prior to agreement of the Estimates);
- refusal to comply with Clause 60.1 (Progress);
- failure to comply with Clause 60.2 (Programme);
- failure to comply with Clause 28 (Key-subcontracts);
- failure to exercise Clause 7 (Duty of Care) in complying with Clause 11.3 (SDS obligations).

It is evident that when negotiating the terms of the Infraco Contract (especially at Close) the intentions of the parties were in some areas opposed. The representatives of **tietie** were seeking to transfer all material risk to Infraco which could reasonably be transferred in return for a cost; whereas representatives of Infraco were largely seeking to avoid risk. The Infraco Contract is an entire agreement (Clause 106) and the degree to which a party may have succeeded in their intentions is dependent on the obligations Infraco have accepted and how they have performed those obligations.

An overriding obligation for Infraco to co-operate is clearly established under Clause 6.3. Clause 7.1 places Infraco under obligation to carry out and complete the Infraco Works fully and faithfully in

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accordance with the Agreement. Under Clause 7.2 Infraco undertakes to exercise a duty of care and Clause 7.3 requires Infraco to assist **tietie** in complying with their obligations to other parties.

tietie believes that Infraco have not complied with their obligations and can be shown to be materially delinquent in the manner in which they have refused to progress the Infraco Works. However, delays to completion of utility diversions have given rise to Infraco being entitled to compensation for extension of time, loss and expense and re-sequencing Infraco Works. In the absence of any properly substantiated claims **tietie** have offered an initial extension of nine months and confirmed that six months loss and expense will be paid. This was de facto accepted by Infraco in their letter dated 3 February 2010 and it is a matter of established Law that an extension once granted cannot be rescinded unless there are exceptional circumstances. Infraco have more recently attempted to rescind that acceptance.

Subject to further investigation it would appear that allowing for Infraco changing the sequence of their programme and taking measures in mitigation, the nine months extension may still be reasonable. However, Infraco may well be entitled, subject to their culpability, to additional loss and expense and compensation for the out of sequence working and mitigation measures.

Infraco have a duty to assist **tietie** in complying with their Best Value obligations. Whatever option is decided upon for the future **tietie** must consider obtaining Best Value.

There has been great emphasis placed on the meaning of Schedule Part 4, especially Pricing Assumption 1 (PA1). Despite it being the documented intention that the Infraco Contract Price was a fixed price it is a matter of fact that **tietie** has instructed some changes to the Employer's Requirements and accepted responsibility for some additional costs arising from "design development" (however defined). Analysis of the progress made by SDS in completing the design shows that the extension of time granted and offered is adequate to compensate Infraco if it is shown that they are entitled to compensation. However, if it can be shown that Infraco have been negligent or have caused the delay it may well prove that they have some culpability for delay which would be recognised in any ascertainment of loss and expense.

A series of three meetings took place in the week beginning 1st March, which have relevance to the conclusions to be reached.

tietie insisted on a meeting between the senior representatives of the consortium as entitled under Clause 6.5 of the Infraco Contract. Responses from BSC to the **tietie** contractual letters were received just in advance of the meeting and suggested that BSC had recognised the change in stance by **tietie**. The following is an extract from one such letter:

*"In this regard we would also record what we see as a marked shift in **tietie**'s approach since the beginning of this year. We have been required to respond to a large number of allegations of breach of contract which have been developed now for the first time, including in relation to our management of*

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SDS, Best Value, as well as very general accusations of breach of clause 6, 7 and 73, all of which are entirely lacking in any detail. We remain confident of the veracity of our position in response to all these spurious accusations and respond to some of them below and in separate correspondence sent today. This exceptionally aggressive approach by tietie, no doubt designed specifically to place Infracore under pressure, is accordingly both transparent and entirely baseless.”

A proposal for re-phased construction was tabled by the consortium. However as this had pre-conditions attached tietie advised BSC that it was not acceptable. There was no appreciable change in attitude detected in the behaviour of BB but there were evident tensions between the consortium parties at the meeting. The meeting closed without any conclusions being reached. The re-phasing option was followed up by 2 letters to tietie arriving on the same day, which were slightly at odds with the other.

A meeting was held with Siemens senior UK manager Gordon Wakeford (at tietie’s request) on 3rd March 2010. The general view was that Siemens felt that something had to be done and that they were very aware of their joint and several liability with BB in the consortium. When pressed, they indicated that they would consider proceeding without BB but this was not an easy option for them as indicated previously. The meeting left tietie with the impression that they are very keen to get the area from Airport – Edinburgh Park underway before having to demobilise resources within the next 3 weeks. The 25 INTC’s which are preventing progress in this stretch have been discussed between both parties to understand what is required to agree them.

Finally, a senior meeting between David Mackay of tietie and TEL and Kenneth Reid, the Executive Board Director of BilfingerBerger Berger AG responsible for Civils, was held on 5th March at Reid’s request. This was the highest level to date of active engagement from BB and it would be reasonable to conclude that the timing immediately before the TPB meeting to review tietie and CEC’s options is not coincidental. The meeting was cordial, but contained no material new proposals from BB to resolve the dispute. Reid indicated that BB were willing to look at any option and suggested putting the “6 key issues” to an independent expert for decision (on a without prejudice basis). tietie agreed to consider this.

Later that day a detailed letter was received from Reid, which was clearly pre-prepared under legal advice and probably with the knowledge and consent of the Consortium partners. The letter was heavily slanted in favour of BB’s previously stated view of the issues and contained no new arguments which may have weakened tietie’s position. The principal arguments remain around design changes and utility diversions.

tietie believes a critical weakness in BB’s position is their refusal to execute works when instructed under Clause 80. Reid’s letter makes no comment on their claimed right to refuse instruction, which may reflect concern on their part about the real strength of their argument.

The letter contained a clear statement that the existing contract was capable of being followed and would produce the tram system, in sharp contrast to previous comments about the inoperability of

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the contract by BB senior UK management, which **tietie** had never accepted contesting that failure by BB to execute the contract was the critical weakness.

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Reid proposed a series of options with no acknowledgement of the procurement regulation implications and the letter does not explicitly refer to the “6 key issues”. His main proposal revolved around implementation of an OSSA arrangement. Although focused on the OSSA, the general option 2 in Reid’s letter is consistent with **tietie**’s preferred option, as explained in detail in sections 5 and 6, which would involve addressing the disputes and potentially agreeing amendments to the existing contract which are acceptable to both parties and which don’t create an unmanageable procurement risk.

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The penultimate section of the letter contains a pointed series of warnings to **tietie** about the consequences of pursuing termination, all of which were predictable. It is possible that the weight of material included in this section by Reid (and his lawyers) may evidence a less confident actual position.

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Reid’s letter is the clearest documented statement of BB’s position and it is clear that the approach adopted by **tietie** in early January 2010 has significantly heightened the profile of the dispute within BB. How to exploit this is addressed in section 6.

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4.5.2 How do the Technical/commercial arguments interface with the Legal and Financial arguments?

To support the approach being adopted by **tietie** in early 2010, McGrigors LLP were tasked with creating an overarching report which would address the legal aspects of the key matters in dispute and suggest the approach which might be deployed by **tietie** and CEC. The following is the Executive Summary of the McGrigors’ Report, which incorporates the opinion received by Richard Keen QC on these matters.

The main areas addressed are are:

- Price – particularly the operation of PA1 in relation to evolution of design
- Progress – particularly **tietie**’s ability to instruct that construction progress continues notwithstanding that matters are the subject of change processes or in dispute
- Time – the issues surrounding causes of delay and their effect on EOT claims
- Breach – the grounds on which **tietie** and Infracore may reasonably rely in pursuing termination through breach
- DRPs – approach to further formal process on key issues and the need to consider potential appeal deadlines

McGrigors Report

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1 Executive Summary

Price

- 1.1 Infraco claim to be entitled to recover the cost and time consequences associated with changes in the design between BDDI and IFC as Notified Departures. That claim is based on a literal interpretation of the wording in Pricing Assumption No.1, and in particular that **tietie** bears the risk of all changes of "design principle, shape and form and outline specification". These words on the face of it appear to narrow substantially the scope or content of what would otherwise form part of normal design development, for which Infraco would bear the risk.
- 1.2 There is a stateable argument that something has gone wrong with the words of Pricing Assumption No.1, in that their literal interpretation produces a result which a reasonable person would conclude cannot have been intended by **tietie** and Infraco when they entered into the contract, because that result is absurd, irrational or arbitrary. Though not fatal, the argument will have less force if **tietie** were the proferens of the exclusionary words referred to above. The forensic investigation carried out has not so far revealed whether the words were proffered by **tietie** or Infraco.
- 1.3 There are two categories of design change where it would produce an irrational or absurd result if Infraco were to be entitled to recover cost and time:
- (a) Where a change is driven by Infraco, for example to improve the buildability of the project;
 - (b) Where something is required by the Employer's Requirements, but not shown on the BDDI.
- 1.4 Beyond this, could it properly be said that the words should be interpreted, and revised, in such a way as to mean that Infraco bears the risk of all design development other than substantial or material changes? It is considered that there are difficulties with such a submission.
- 1.5 Whilst there is a stateable argument that something has gone wrong with the wording, this meets only part of the required test. What is also required is to determine the result which must rationally have been intended, and to propose the wording that would achieve that result. Whilst that may appear straightforward, it is an extremely difficult exercise. That exercise is not assisted by the factual background which has presented in relation to the execution of the Wiesbaden Agreement. This issue is still under consideration by McGrigors LLP in conjunction with Richard Keen QC.

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1.6 Richard Keen QC has reviewed the sections of the report which deal with Pricing Assumption No. 1, and he concurs with the views expressed.

Progress

1.7 Infraco have relied on clause 80 to the effect that where there is a dispute about whether a Notified Departure has occurred (for example because of a change in design between BDDI and IFC), Infraco are entitled to refuse to progress the work in question. Infraco assert that the only circumstances where ~~tietie~~ are entitled to instruct Infraco to proceed in this context is where an Estimate in relation to the Notified Departure has been referred to DRP.

1.8 There is a strong argument available to ~~tietie~~ that they are entitled to instruct Infraco to progress work, even when there is a dispute about who should bear the risk of that work.

1.9 Where ~~tietie~~ consider that no Notified Departure has occurred, the provisions of clause 80 ought80 ought not to apply. This is because the deeming provisions in clause 3.5 of Schedule Part 4 in relation to the existence of a Mandatory ~~tietie~~ Change and the issue of a ~~tietie~~ Notice of Change (which lead to clause 80) do not arise where there has not been a Notified Departure.

1.10 In those circumstances, the provisions of clauses 34.1 and 80.13 taken together demonstrate a clear contractual ability to instruct work to proceed, ---notwithstanding the existence of a dispute about the existence of a Notified Departure.

1.11 An interpretation which entitles ~~tietie~~ to instruct work to ~~proceed--carries~~proceed carries the force of avoiding the outcome that Infraco contend for, which is that they are entitled to hold up progress of the work, particularly where the scope and nature of the work is clear, and the only issue between the parties is either who should bear the cost consequences, or what the quantum of those costs consequences should be.

1.12 Richard Keen QC has reviewed the sections of the report which deal with clauses 80 and 34.1, and he concurs with the views expressed.

Time

1.13 Clearly there has been a substantial time overrun and what is at issue is whether completion has been delayed as a consequence of matters which fall within Infraco's risk or ~~tietie's~~ risk. Where matters are within ~~tietie's~~ risk, Infraco will be entitled to an extension of time and thereby be relieved from the payment of liquidated damages.

1.14 In each case, there will be a two stage test:

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- (a) Has an event occurred which is a Relief Event, a Compensation Event or a **tietie** Change (including a Notified Departure)?
- (b) Has that event caused a delay in achieving the relevant contractual dates?
- 1.15 Where there is more than one event which has caused delay, one which is an Infraco risk and one which is a **tietie** risk, it will be necessary to determine which event is the *dominant* or *effective cause* of delay. If the dominant cause is an event which is a **tietie** risk, then Infraco will be entitled to an extension of time in relation to that event.
- 1.16 In very rare circumstances, there may be delay which is truly concurrent. Concurrent delay occurs where two events, one which is an Infraco risk, and one which is a **tietie** risk, impact on the critical path of the works at the same time and produce a common period of delay. In these limited circumstances, Infraco may be entitled to an extension of time
- 1.17 Issues of causation and concurrency can only be properly determined by a detailed analysis of the critical path, underpinned by factual and forensic analysis.
- 1.18 The consequences of delay to Infraco caused by the Utilities Works constitute both a Compensation Event and a Notified Departure, and Infraco are entitled to pursue recovery under either of these routes.
- 1.19 It is accepted by **tietie** that some delay has been sustained by Infraco as a consequence of the Utilities Works. The second extension of time of 9 months was offered in the context of discussions in relation to this issue. It is not clear how much of this extension was allocated by **tietie** to Utilities Works; that may require to be unravelled in the event of future DRPs in relation to time.
- 1.20 Infraco's argument that they are entitled to insist on *all* Utilities Works being completed in a physical section of the work, before they commence their own work, is vulnerable to attack on a number of grounds.
- 1.21 The relevant issue in each case will be the extent to which the detailed critical path analysis demonstrates that the Utilities Works were the cause (and where relevant, the *dominant cause*) of delay.
- 1.22 In relation to delay caused by the SDS Services (and in particular, the late issue of design), Infraco's obligations to manage the SDS Provider must be considered in the context of Infraco's entitlement to a Compensation Event or Notified Departure in certain circumstances where the SDS Provider is late in the issue of design, or is in material breach of its obligations.

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1.23 Delay caused by the SDS Provider will be at Infraco's risk only if it can be established that it was Infraco's failure to manage the SDS Provider which caused the delay. However, if:

- (a) Infraco's failure to manage the SDS Provider did not have any impact on the critical path of the work, or was not a cause (or dominant cause) of delay; or
- (b) Infraco's fulfilled their obligations to manage the SDS Provider, but despite that, the design was still late or defective.

Then Infraco may still be entitled to an extension of time.

1.24 Where Infraco have failed to comply with the provisions of the contract in relation to programming information to be provided by them, that is unlikely to be fatal to their entitlement to an extension of time as a matter of principle; however, to the extent that their claims fail to address issues such as causation, concurrency, their own culpable delay and mitigation they are likely to be jeopardising their case, and the length of any extension which might be awarded to them.

1.25 Compliance with the notice provisions of clause 65 may be a condition precedent to Infraco's entitlement to make recovery of cost or time as a result of Compensation Events, however the position is far from clear (in particular, in relation to time). However, a relatively high level of compliance is likely to be sufficient to enable that condition to be satisfied, and the degree of detail of information required is unlikely to be extensive.

Other breaches

1.26 The provisions of clause 6 and 7 in relation to partnering, co-operation, mitigation and the exercise of reasonable skill and care are unlikely to constitute a valid basis for freestanding claims against Infraco.

1.27 Those clauses are essentially parasitic and inform the way in which Infraco are required to carry out their other, substantive, obligations under the contract. This view is supported by previous advice to tietie from Calum MacNeill QC.

Bringing the contract to an end

1.28 For present purposes, the relevant means for bringing the contract to an end lawfully are for termination by tietie on the grounds of Infraco Default, or by Infraco on the grounds of tietie Default.

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- 1.29 Termination for Infraco Default is likely to be possible only on the grounds that Infraco breach which has had a material and adverse impact on the execution of the Infraco Works. There may also be a ground in relation to material breach leading to four Underperformance Warning Notices in any one year, although that argument is likely to be more difficult to sustain.
- 1.30 Of the issues identified in this report, it is likely that only breach of an instruction to proceed under clauses 34.1 or 84.13 is capable of constituting such a breach, and even then only on the basis that (i) it is established that those clauses may be validly relied upon, as referred to at paragraphs 1.7 to [1.13] above; and (ii) that there is a sufficient materiality to warrant termination.
- 1.31 Infraco may be entitled to terminate in circumstances where ~~tietie~~ are 30 Business Days late in making payment of certified sums in excess of £250k or where ~~tietie~~ frustrate Infraco's performance for more than 45 Business Days.
- 1.32 Where ~~tietie~~ terminate, they will be entitled to recover from Infraco (after the Infraco Works are substantially complete) the additional costs associated with employing others to complete the Infraco Works and perform the Maintenance Services, less payment to Infraco for work already carried out
- 1.33 Where Infraco terminate for ~~tietie~~ Default, ~~tietie~~ will not be entitled to recover these sums, and will be obliged to make payment to Infraco for work carried out, as well expenses arising from termination, and profit at 10% on civils and 17% on track and systems.
- 1.34 In each case, claims which arose pre-termination will survive the termination: Infraco's claims to be entitled to additional payment will still require to be resolved in the event of termination.
- 1.35 Where ~~tietie~~ or Infraco purport to terminate on grounds which transpire not to be valid, then that may well constitute grounds for the other party to terminate. On one view, it might even entitle the "innocent" party to compensatory damages.

DRPs

- 1.36 It would be open to ~~tietie~~ to take some of the issues referred to in this report to DRP:
 - (a) The proper interpretation to be given to Pricing Assumption No. 1 in relation to how the risk in relation to changes in design from BDDI to IFC is to be allocated;
 - (b) Infraco's obligation to comply with instructions issued by ~~tietie~~ pursuant to clause 34.1 and 80.13 where those instructions arise from a disputed Notified Departure or failure by Infraco to provide an Estimate in relation to an agreed Notified Departure.

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- 1.37 In relation to the proper interpretation to be given to Pricing Assumption No. 1, there is a risk that the conclusions reached by Mr Wilson in his adjudication decision are binding until the Dispute is finally determined by legal proceedings (or agreement).
- 1.38 Although the provisions of Schedule Part 9 are not straightforward, on one interpretation those legal proceedings must be raised and served by 14 April 2010, otherwise the entitlement to bring them might be irretrievably lost. In these circumstances, the safest, no risk, course of action is to proceed on the basis that this time limit is critical. This matter warrants further discussion with senior counsel.
- 1.39 In relation to the interpretation of clauses 34.1 and 80.13, the mechanisms in Schedule Part 9 would require to be followed, namely the Internal Resolution Procedure, Mediation and Adjudication, unless agreement could be reached with Infraco at an earlier stage that the issue should be referred to the court.

1 Executive Summary

Price

- 1.1 Infraco claim to be entitled to recover the cost and time consequences associated with changes in the design between BDDI and IFC as Notified Departures. That claim is based on a literal interpretation of the wording in Pricing Assumption No.1, and in particular that tieltie bears the risk of all changes of "design principle, shape and form and outline specification". These words on the face of it appear to narrow substantially the scope or content of what would otherwise form part of normal design development, for which Infraco would bear the risk.
- 1.2 There is a stateable argument that something has gone wrong with the words of Pricing Assumption No.1, in that their literal interpretation produces a result which a reasonable person would conclude cannot have been intended by tieltie and Infraco when they entered into the contract, because that result is absurd, irrational or arbitrary. Though not fatal, the argument will have less force if tieltie were the proferens of the exclusionary words referred to above. The forensic investigation carried out has not so far revealed whether the words were proffered by tieltie or Infraco.
- 1.3 There are two categories of design change where it would produce an irrational or absurd result if Infraco were to be entitled to recover cost and time:
 - (a) Where a change is driven by Infraco, for example to improve the buildability of the project;
 - (b) Where something is required by the Employer's Requirements, but not shown on the BDDI.

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1.4 Beyond this, could it properly be said that the words should be interpreted, and revised, in such a way as to mean that Infraco bears the risk of all design development other than substantial or material changes? It is considered that there are difficulties with such a submission.

1.5 Whilst there is a stateable argument that something has gone wrong with the wording, this meets only part of the required test. What is also required is to determine the result which must rationally have been intended, and to propose the wording that would achieve that result. Whilst that may appear straightforward, it is an extremely difficult exercise. That exercise is not assisted by the factual background which has presented in relation to the execution of the Wiesbaden Agreement. This issue is still under consideration by McGrigers LLP in conjunction with Richard Keen QC.

1.6 Richard Keen QC has reviewed the sections of the report which deal with Pricing Assumption No. 1, and he concurs with the views expressed.

Progress

1.7 Infraco have relied on clause 80 to the effect that where there is a dispute about whether a Notified Departure has occurred (for example because of a change in design between BDDI and IFC), Infraco are entitled to refuse to progress the work in question. Infraco assert that the only circumstances where tietie are entitled to instruct Infraco to proceed in this context is where an Estimate in relation to the Notified Departure has been referred to DRP.

1.8 There is a stateable argument that the provisions of clause 80 cannot apply in a situation where the existence of a Notified Departure is disputed. This is because the deeming provisions in clause 3.5 of Schedule Part 4 in relation to the existence of a Mandatory tietie Change and the issue of a tietie Notice of Change (which lead to clause 80) do not arise.

1.9 On this premise, there is a reasonable argument that tietie are entitled to issue instructions to Infraco to proceed with the work in question in terms of clause 34.1, notwithstanding the existence of a dispute about the existence of a Notified Departure. Infraco's legitimate entitlements are protected by clause 34.3, which provides that Infraco will be entitled to recover the cost and time consequences of proceeding with the work where it subsequently transpires that they do have an entitlement to a Mandatory tietie Change.

1.10 There is an alternative argument available to tietie that the final words of clause 80.13 entitle them to instruct Infraco to proceed at any time, whether in circumstances where the existence of a Notified Departure is disputed, or where it is accepted that there is a Notified Departure, but Infraco have failed to provide an Estimate.

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1.11 Both of these arguments carry the force of avoiding the outcome that Infraco contend for, which is that they are entitled to hold up progress of the work, particularly where the scope and nature of the work is clear, and the only issue between the parties is either who should bear the cost consequences, or what the quantum of those costs consequences should be.

1.12 Richard Keen QC has reviewed the sections of the report which deal with clauses 80 and 34.1, and he concurs with the views expressed.

Time

1.13 Clearly there has been a substantial time overrun and what is at issue is whether completion has been delayed as a consequence of matters which fall within Infraco's risk or tietie's risk. Where matters are within tietie's risk, Infraco will be entitled to an extension of time and thereby be relieved from the payment of liquidated damages.

1.14 In each case, there will be a two stage test:

- (a) Has an event occurred which is a Relief Event, a Compensation Event or a tietie Change (including a Notified Departure)?
- (b) Has that event caused a delay in achieving the relevant contractual dates?

1.15 Where there is more than one event which has caused delay, one which is an Infraco risk and one which is a tietie risk, it will be necessary to determine which event is the *dominant* or effective cause of delay. If the dominant cause is an event which is a tietie risk, then Infraco will be entitled to an extension of time in relation to that event.

1.16 In very rare circumstances, there may be delay which is truly concurrent. Concurrent delay occurs where two events, one which is an Infraco risk, and one which is a tietie risk, impact on the critical path of the works at the same time and produce a common period of delay. In these limited circumstances, Infraco may be entitled to an extension of time

1.17 Issues of causation and concurrency can only be properly determined by a detailed analysis of the critical path, underpinned by factual and forensic analysis.

1.18 The consequences of delay to Infraco caused by the Utilities Works constitute both a Compensation Event and a Notified Departure, and Infraco are entitled to pursue recovery under either of these routes.

1.19 It is accepted by tietie that some delay has been sustained by Infraco as a consequence of the Utilities Works. The second extension of time of 9 months was offered in the context of discussions in relation to this issue. It is not clear how much of this extension was allocated by tietie to Utilities Works; that may require to be unravelled in the event of future DRPs in relation to time.

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~~1.20 Infraco's argument that they are entitled to insist on all Utilities Works being completed in a physical section of the work, before they commence their own work, is vulnerable to attack on a number of grounds.~~

~~1.21 The relevant issue in each case will be the extent to which the detailed critical path analysis demonstrates that the Utilities Works were the cause (and where relevant, the dominant cause) of delay.~~

~~1.22 In relation to delay caused by the SDS Services (and in particular, the late issue of design), Infraco's obligations to manage the SDS Provider must be considered in the context of Infraco's entitlement to a Compensation Event or Notified Departure in certain circumstances where the SDS Provider is late in the issue of design, or is in material breach of its obligations.~~

~~1.23 Delay caused by the SDS Provider will be at Infraco's risk only if it can be established that it was Infraco's failure to manage the SDS Provider which caused the delay. However, if:~~

~~(a) Infraco's failure to manage the SDS Provider did not have any impact on the critical path of the work, or was not a cause (or dominant cause) of delay; or~~

~~(b) Infraco's fulfilled their obligations to manage the SDS Provider, but despite that, the design was still late or defective.~~

~~Then Infraco may still be entitled to an extension of time.~~

~~1.24 Where Infraco have failed to comply with the provisions of the contract in relation to programming information to be provided by them, that is unlikely to be fatal to their entitlement to an extension of time as a matter of principle; however, to the extent that their claims fail to address issues such as causation, concurrency, their own culpable delay and mitigation they are likely to be jeopardising their case, and the length of any extension which might be awarded to them.~~

~~1.25 Compliance with the notice provisions of clause 65 may be a condition precedent to Infraco's entitlement to make recovery of cost or time as a result of Compensation Events, however the position is far from clear (in particular, in relation to time). However, a relatively high level of compliance is likely to be sufficient to enable that condition to be satisfied, and the degree of detail of information required is unlikely to be extensive.~~

Other breaches

~~1.26 The provisions of clause 6 and 7 in relation to partnering, co-operation, mitigation and the exercise of reasonable skill and care are unlikely to constitute a valid basis for freestanding claims against Infraco.~~

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1.27 Those clauses are essentially parasitic and inform the way in which Infraco are required to carry out their other, substantive, obligations under the contract. This view is supported by previous advice to tietie from Calum MacNeill QC.

Bringing the contract to an end

1.28 For present purposes, the relevant means for bringing the contract to an end lawfully are for termination by tietie on the grounds of Infraco Default, or by Infraco on the grounds of tietie Default.

1.29 Termination for Infraco Default is likely to be possible only on the grounds that Infraco breach which has had a material and adverse impact on the execution of the Infraco Works. There may also be a ground in relation to material breach leading to four Underperformance Warning Notices in any one year, although that argument is likely to be more difficult to sustain.

1.30 Of the issues identified in this report, it is likely that only breach of an instruction to proceed under clauses 34.1 or 84.13 is capable of constituting such a breach, and even then only on the basis that (i) it is established that those clauses may be validly relied upon, as referred to at paragraphs 1.7 to 1.12 above; and (ii) that there is a sufficient materiality to warrant termination.

1.31 Infraco may be entitled to terminate in circumstances where tietie are 30 Business Days late in making payment of certified sums in excess of £250k, or where tietie frustrate Infraco's performance for more than 45 Business Days.

1.32 Where tietie terminate, they will be entitled to recover from Infraco (after the Infraco Works are substantially complete) the *additional* costs associated with employing others to complete the Infraco Works and perform the Maintenance Services, less payment to Infraco for work already carried out

1.33 Where Infraco terminate for tietie Default, tietie will not be entitled to recover these sums, and will be obliged to make payment to Infraco for work carried out, as well expenses arising from termination, and profit at 10% on civils and 17% on track and systems.

1.34 In each case, claims which arose pre-termination will survive the termination: Infraco's claims to be entitled to additional payment will still require to be resolved in the event of termination.

1.35 Where tietie or Infraco purport to terminate on grounds which transpire not to be valid, then that may well constitute grounds for the other party to terminate. On one view, it might even entitle the "innocent" party to compensatory damages.

DRPs

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- 1.36 It would be open to ~~tielie~~ to take some of the issues referred to in this report to DRP:
- (a) ~~The proper interpretation to be given to Pricing Assumption No. 1 in relation to how the risk in relation to changes in design from BDDI to IFC is to be allocated;~~
 - (b) ~~Infraco's obligation to comply with instructions issued by ~~tielie~~ pursuant to clause 34.1 and 80.13 where those instructions arise from a disputed Notified Departure or failure by Infraco to provide an Estimate in relation to an agreed Notified Departure.~~
- 1.37 ~~In relation to the proper interpretation to be given to Pricing Assumption No. 1, there is a risk that the conclusions reached by Mr Wilson in his adjudication decision are binding until the Dispute is finally determined by legal proceedings (or agreement).~~
- 1.38 ~~Although the provisions of Schedule Part 9 are not straightforward, on one interpretation those legal proceedings must be raised and served by 14 April 2010, otherwise the entitlement to bring them might be irretrievably lost. In these circumstances, the safest, no risk, course of action is to proceed on the basis that this time limit is critical. This matter warrants further discussion with senior counsel.~~
- 1.39 ~~In relation to the interpretation of clauses 34.1 and 80.13, the mechanisms in Schedule Part 9 would require to be followed, namely the Internal Resolution Procedure, Mediation and Adjudication, unless agreement could be reached with Infraco at an earlier stage that the issue should be referred to the court.~~

End of extract from McGrigors' Report

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4.6 Financial Analysis

The following Overleaf is a side by side tabulation of the Options 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	Option 1		Option 2B2		Option 3A		Option 3C		
	Termination / Cancellation		Civils tie step-in On-street		Carry-on No new agreement		Carry-on Settled BSC		
	N/A		Dec-12		Oct-13		Oct-12		
Spend Jan 10	To Go	Total	To Go	Total	To Go	Total	To Go	Total	
BSC Contract	90.4	(10.4)	80.0	105.7	196.1	154.6	245.0	154.6	245.0
New Civils Procurement				58.9	58.9				
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	35.9	97.5	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	226.1	554.7	218.6	547.2	212.6	541.2
Existing BSC Risks/Uncertainties:									
Design Development				12.6	12.6	12.6	12.6	12.6	12.6
Ground Conditions				5.6	5.6	5.6	5.6	5.6	5.6
Princes Street SA				9.0	9.0	9.0	9.0	9.0	9.0
On Street - Scope changes				11.6	11.6	9.9	9.9	9.9	9.9
On Street - Delay/Disrup/Accel				8.2	8.2	8.2	8.2	8.2	8.2
Risk associated with credit				0.0	0.0	3.0	3.0	3.0	3.0
Client & Other Changes				9.0	9.0	9.0	9.0	9.0	9.0
Prolongation, Delay & Disruption									
- Core Allowance (9mths)				21.0	21.0	21.0	21.0	21.0	21.0
- Remaining on-street				(6.3)	(6.3)	0.0	0.0	0.0	0.0
- On-street 4 mth start delay				4.0	4.0	4.0	4.0	4.0	4.0
- Further Allowance				8.5	8.5	27.7	27.7	12.1	12.1
VE Deliverability				4.3	4.3	4.3	4.3	4.3	4.3
				87.5	87.5	114.3	114.3	98.7	98.7
Civils Reprocore Risk/Uncertainties									
Siemens & CAF Premia				3.0	3.0				
BB Demobilisation and Premia				0.0	0.0				
Direct Reprocorement 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	338.6	667.2	332.9	661.5	311.3	639.9

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Status of Analysis

The figures in the table above are all anchored off the financial evaluation of Option 3B - "As is" option - completed in December 2009. There have been no significant changes in the Base Cost estimates or quantified risks since that estimate was produced. The assessment is focussed on the risks and incremental costs under each option currently under review.

Comparison of Options

The following table compares each of the options other than Option 1 - termination.

Item	Option 3A	Option 2B2	Option 3C
Programme	Current submitted programme from BSC with Oct 2013 OFRS	On street works are on the critical path. Remainder of 2010 to negotiate BB exit from on-street civils and reprocurement – 2 year construction and commissioning programme	the best view of the achievable programme with mitigation and acceleration.
BSC Contract	Represents tendered sum plus subsequent approved changes	As for 3A with assessed value in the price of remaining on-street civils £49m deducted	As for 3A
New Civils Procurement	N/A	Assessed value of new civils contracts £58.9m – based on known rates and prices from BSC subs and on a like for like basis with BSC scope (ie i.e. no change built in). Allows for prelims of new contractors and inflation for new programme	N/A
Civils Reprocurement Risk and	N/A	Civils/Systems interface during construction (disruption to Siemens work) and	N/A

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Uncertainty		engineering integration risk - new tie risk. Estimated represents approx 6 months full prelims for Siemens but <u>very uncertain</u> until negotiation with Siemens complete.	
Item	Option 3A	Option 2B2	Option 3C
Project Costs	Current assessment for a Feb 2012 completion £87.5m plus assessed £0.5m per month for later completion date.	As for 3A plus 25% uplift in Project Costs for the 24 mths of managing on-street civils and attendant risk.	As for 3A
Other Base Costs	Current budgets plus risk allowances.	As for 3A	As for 3A
Design Development and Ground Conditions	Current assessment of direct cost of these changes – informed by legal, technical and DRP outcomes.	As for 3A – all off street.	As for 3A – all off street.
Princes St SA	Subject to final agreement – but essentially spent	As for 3A	As for 3A
On Street scope changes and delay/disruption	Assessed scope changes and disruption experienced on Princes St as assessed /extrapolated for remainder of on – street.	As for 3A but with benefit of cap on full road reconstruction in certain areas. In practice as much of the scope change as could be defined in advance would be included in the scope of the new civils packages.	As for 2B2

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Prolongation and delay disruption – core allowance	£21m allows for 9 months full prelims for BB and S (on basis of EOT1 settlement) plus £3m for CAF/other. Core liability for existing Utilities and some Design delays to tietie account.	As for 3A but with the proportion attributable to the re-procured on street works (£6.3m) deducted.	As for 3A
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Item	Option 3A	Option 2B2	Option 3C
Prolongation – current delay on-street and further allowances	4 month delay to on-street start is shared 50% £4m 12 mths prolongation of full prelims at 50% to our account plus 6mths full cost of disruption £27.7m Significantly uncertain till new programme agreed.	4 month delay to on-street start is shared 50% £4m Siemens disruption on street – 12mths full-prelims at 50% to our account £8.5m. Significantly uncertain till new programme agreed.	4 month delay to on-street start is shared 50% £4m 6 months full prelims to our account £12.1m Significantly uncertain till new programme agreed.

Red Risks

The assessment of prolongation costs above is the principal differentiator between the options. With Option 3C there is a lower overall assessment of the liability (as a function of the shorter programme) and assume it will be in a world where delay driven by commercial dispute has been all but eliminated and ~~tietie~~ has much greater control and/or influence over the programme for execution the remaining on-street works. In these circumstances not only is the absolute value of the risk lower – it would be risk lower – we would have greater confidence in the outcome.

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Ranging of estimates

Based upon an assessment of confidence in the base costs and risks comprising the outturn costs in each of the above base estimates an assessment of the range of possible outcomes is as follows:

	Option 2B22 “Exit BB”	Option 3 “As is”	Option 3C4 “Enforced adherence”
Base Estimate (as above)	£667.2m	£661.5m	£639.9m
High Estimate (Higher Confidence)	£685.7m	£676.4m	£649.8m
Low Estimate (Lower Confidence)	£635.4m	£630.2m	£611.3m

Option 1 – Termination / Cancellation

- 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 ~~ti~~ 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 ~~ti~~ – 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 e.g. 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

Comment [MSOffice47]: To consider whether this should be included given very early stage of work done.

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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.

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Cost drivers

Relative to the 2007 Business Case cost budget, which was finalised at £512m at Close, the main drivers of increased cost have been:

- Increased allowance for delay and disruption, including impact of utility diversion delays
- Allowance for design development costs falling to tie
- Project management costs over longer construction period
- Increased utility diversion costs
- Allowance for potential revised risk position for on-street works (including depth of road reconstruction)

Overview and affordability

As is explained in detail in section 5, the termination option assumes cessation of the project for the foreseeable future. It is possible that full re-procurement of the infrastructure could be executed, but there are material uncertainties about funding availability to support this approach, timescales, market appetite and therefore costs. These variables make it difficult to flesh out a full re-procurement option with any degree of reliability.

Sustainable asset value is restricted to the utility work executed in the absence of a continuing project, representing £60m out of a total estimated at £388m, the balance of which would represent dead investment.

The currently approved funding availability is £545m. Each of the continuing options carries estimated cost materially in excess of this. Within each estimate there are significant variables which will only be determined by further legal and commercial negotiation. In addition, preliminary discussion has taken place with BSC about re-phasing the project to move from West to North-East in stages, which would support a phased delivery model within the funding envelope. Further work would be required to assess the rephasing options, including their operational and financial viability.

The extent of public funding already invested and the low prospect of achieving sustainable value from that investment in the event of contract termination combine to justify continuation of construction works and the efforts to resolve the contractual disputes. The fall-back position is the

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likelihood that a valuable tram system asset can be delivered even if short of the original full scope of Phase 1A. tie

tie and its stakeholders require to keep this area under close consideration as the dispute resolution process proceeds.

4.7 BB Corporate Position

Background

Bilfinger Berger AG have~~has~~ been the most difficult of the Consortium partners to deal with. This may be ~~partly~~ partly because the weight of work to date has been BB's responsibility, but the strong view of the ~~tie~~ tie project team is that BB have not engaged constructively nor adopted a partnerial approach to project delivery. The support for these views is set out in sections 2,3 and 4 where BB's actual performance is analysed. One of the options examined in section 5 is the reduction or elimination of BB's role in the project, but an analysis of BB's position is needed to support the assessment of each option.

Accordingly, the purpose of this section is :

1. To assess BB's wider business strategy in relation to civils business

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2. To summarise the key elements of the above and their application to the tram project dispute resolution.

Process leading to financial close on 14th May 2008

A report for CEC was prepared by ~~tietie~~ in May 2008 to support a recommendation in favour of completing the Infraco contract and which provided CEC with a detailed view of the events in the lead up to Financial Close. The report – entitled “The Financial close Process and record of recent events” dated 12th May 2008 – explained the nature of the negotiations which took place after the award of preferred bidder status to BSC and which were finally enshrined in the Contract.

Although it is hardly uncommon that terms established at preferred bidder stage can come under pressure from bidders, it is the view of the experienced professionals in the ~~tietie~~ project team that BB’s approach was at an towards the extreme end of the scale. It is also worth noting that a period of more than 6 months elapsed between preferred bidder award and Close, with intensive work done by all parties, which could reasonably have been expected to minimise the scope for post-close dispute as to the terms and meaning of the Contract.

Ultimately, the recommendation from ~~tietie~~ to the TPB and to CEC to proceed with the final form of the Contract was approved, after considerable detailed review of terms and discussion among all the key parties. The ~~report also addressed in detail~~ report also addressed in details the alternatives available to ~~tietie~~ / CEC and concluded that the Infraco contract represented the best approach. The threat of challenge by Tramlines, the under-bidder, was assessed including final cost comparison, and it was concluded that there was no basis for a serious challenge.

The Close Report submitted by ~~tietie~~ to CEC provided a comprehensive appraisal of the Infraco contract suite, including a ~~R~~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 ~~tietie~~ 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 ~~tietie~~ has acted in post-close negotiations with Infraco and especially BB. In other words, the basis on which ~~tietie~~ believed it had entered the contract is the benchmark for ~~tietie~~’s position on all disputes which have arisen since.

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~~extension)

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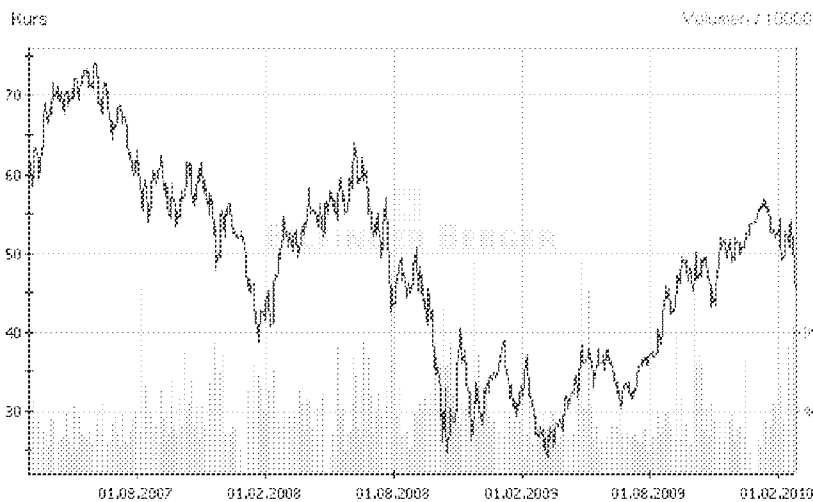
Comment [s48]: Dennis and Steven both agree with this statement

Comment [MSOffice49]: Team to confirm this



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).



Source : Biffinger Berger website

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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.

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

Group results in recent years have been stable at around the €250m - €300m range, but the Civils business has been a consistent problem area. The 2008 results reflected the need to record a loss on the Norwegian E18 motorway project of €65m (in addition to €25m provided without specific disclosure in 2007) and the group also recorded a €45m provision for unspecified further losses, a provision which was recorded 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.

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 BB's regular public reports.

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Possibly as a consequence of these issues, BB began to adopt a much more restrictive approach to Civils and construction business. Their 2008 Annual Report, published in early 2008, 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 kilometerskilometres. 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.”*

BB sold its Civils business in France in Q3 2008. Their 2008 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.”

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

In February 2010, BB announced the proposed disposal of their Australian subsidiary, 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 Groupwide civils business by a third.

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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 reviewed are broadly supportive. 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 overall tone, 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."

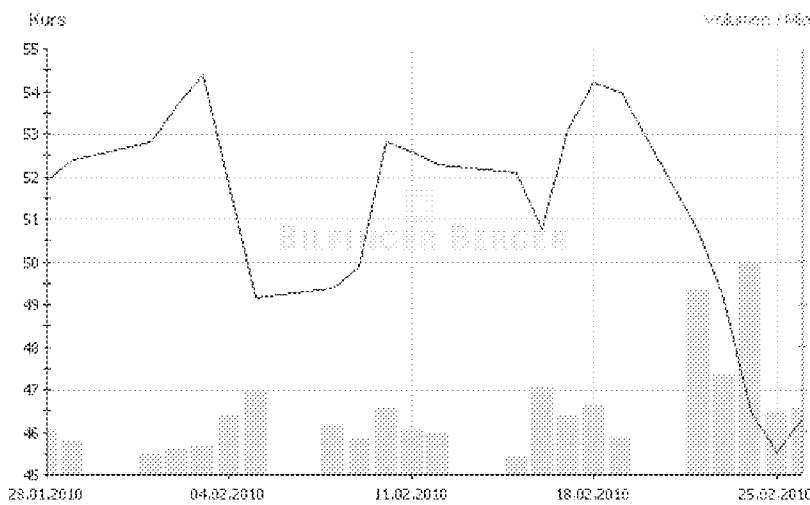
They expect to break even on the contract and do not expect any major provisioning to emerge from the investigations into other projects.

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Although the analysts' questioning was reasonably benign, there are signs of some 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.



Source : Bilfinger Berger website

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, apparently 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. By 5th March the price had moved slightly upwards to €47 on a weekly volume of c2.6m.

BB's share price may be partly protected by their stated objective of exiting civils business, otherwise analysts and investors may consider downgrading price expectations more significantly. It remains to be seen whether Herr Bodner's confidence that Cologne and the other projects under investigation will not lead to further financial risks is borne out.

Summary

In summary, it appears that :

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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 high profile 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 early 2008, and they are now in the process of exiting Civils.
3. The margins generated by Civils are very precarious
4. Taken together, there has been a substantial change in the approach BB Group are taking to their Civils business since preferred bidder status was awarded.
5. The range and seriousness of the disputes BB have encountered could 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. The scope of the Tram project is highly material to their Group published results
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.

Comment [MSOffice50]: To be verified

Comment [S51]: Well resourced from mid 2008.

It therefore seems possible that BB from the Board down now have a powerful damage limitation attitude to the tram project. The visit to Edinburgh by Kenneth Reid further reinforces the profile of the project within BB. 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 ~~tietie~~ and CEC. If BB were able to walk away or reduce their scope with a financially acceptable outcome, they could present that as successful risk management. This could be their rationale, to be executed either by forcing ~~tietie~~ and CEC into an unpalatable financial settlement ; or by inducing ~~tietie~~ and CEC into termination, following which BB may feel they can achieve an acceptable result through commercial litigation. This line of argument is picked up in section 5 where the options are set out and section 6 which draws together conclusions and the tactics to be deployed.

5.0 How the options were analysed

In early January 2010, ~~tietie~~ considered a range of possible courses of action and subsequently distilled these into the 5 core options detailed below. ~~tietie~~ also considered what options may be available to BSC. There are many more options than the five identified, but it is considered that all the other options would be considered as a variant to one of the five settled 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. Each option was given a working title for identification purposes, but should not be taken literally. Some sub-options were addressed under the five key options.

The five main options are:

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1. Terminate the infraco contract
2. Negotiate the full or partial exit of BB
3. Administer the current contract
4. Accept BB's interpretation of the contract
5. BB accept ~~tietie~~'s interpretation of the contract

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 ~~tietie~~
4. Administer the current contract
5. Accept ~~tietie~~'s interpretation
6. ~~tietie~~ accepts BB's interpretation

For each of ~~tietie~~'s options ~~tietie~~ then considered:

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

There are Aa number of sub-options to Options 2 & 3 which are identified belowoverleaf:

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	Description
Option 1	This is a straight termination by tietie of the Infraco contract between tietie and BSC
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
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>tietie 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.</p> <p>On street works are let on an incremental geographic basis.</p>
2B2	<p>Step-in 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>tietie 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	As is : Continue Infraco contract without an OSSA of the form proposed by BB
3B	BB OSSA : Continue Infraco contract but with an OSSA of the form proposed by BB
3C	Settled revision : negotiated settlement on disputes, revisions to Infraco contract as

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	necessary and without creating procurement risk
Option 4	Blank Cheque
Option 5	BSC conform

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.

It was important that a robust decision making process was in place. This requires a combination of a semi-formal weighted criteria assessment, but balanced with an appraisal of the complex legal, financial and commercial judgements involved.

The following criteria were chosen to support the assessment :

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

This is explained in more detail at section 5.6.

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5.1.1 Option 1A – Initial Analysis

Option 1 is a group of options called ‘termination’, 1A is “with just cause” and 1B is “without just cause”. We have considered both options and only 1B is subject to the final analysis. This decision was made based on the analysis to date and the legal opinions provided by both DLA and McGrigors (see in particular Clause 1.30 of the McGrigors summary in section 4.5) in relation to termination for Infraco Default – this opinion is based on an analysis of the evidence to date from the audits and other analysis undertaken and concludes that there does not yet appear to be enough evidence of an Infraco default upon which to base a “with just cause” Termination by ~~tie~~tie. However, the option is open to terminate “without just cause” and this is why this option 1B goes through to the final option appraisal. It will have been noted from section 4.5 that there may be grounds for a just cause termination and these legal arguments are being pursued.

The table below identifies the risks and benefits of option 1A & 1B.

Options 1A & 1B Risks	Option 1A & 1B Benefits
<u>Project cancellation, very limited sustainable asset value from works done (utility diversion works)</u>	<u>Poor performing consortia removed</u>
<u>TS ask CEC for return of full grant</u>	<u>Lower cash spend than other options if project not recommenced</u>
<u>Cancellation Costs</u>	<u>Reduced disruption to the City</u>
<u>Unquantifiable litigation costs and timescales</u>	<u>Stakeholder Acceptability (short-term)</u>
<u>Severe damage to reputation of City of Edinburgh</u>	<u>*If termination is with ‘just cause’ then costs could be recoverable</u>
<u>Title for assets mixed and not all assets would transfer to CEC upon termination – particularly the Trams</u>	
<u>Abandoned assets - requirement to re-instate under the Tram Act</u>	
<u>Sites would need to be made safe by tie/CEC</u>	
<u>Tram powers expire. All works must commence by 2021 for Line 1 and 2026 for Line 2.</u>	

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TRO powers expire within 2 years of being made.
Traffic Management removal required

Options 1A & 1B Risks	Option 1A & 1B Benefits
Project cancellation, very limited sustainable asset value from works done (utility diversion works)	Poor performing consortia removed
Unquantifiable litigation costs and timescales	Reduced disruption to the City
Cancellation Costs	Lower cash spend than other options if project not recommended
Abandoned assets – requirement to re-instate under the Tram Act	
Traffic Management removal required	
Sites would need to be made safe by <u>tietie</u> /CEC	
TS ask CEC for return of full grant	
Severe damage to reputation of City of Edinburgh	
Tram powers expire. All works must commence by 2021 for Line 1 and 2026 for Line 2.	
TRO powers expire within 2 years of being made.	
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 – Initial Analysis

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. Phasing options could be considered as part of this option but this is not considered here. The benefit to tietie would be that a poor performing part of the consortium plays no visible, active role in the ongoing works, with tietie relying on a better performance from the other main construction Partner, Siemens.

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

Options 2A Risks	Option 2A Benefits
Potential legal challenge in respect of EU procurement legislation	On-street works can be phased according to affordability constraints
Siemens have indicated they are not currently at all enthusiastic about taking over the BB elements of work which include civils, design and overall management.	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.
Lack of cost and programme certainty due to Siemens unwillingness	Poor performing consortia removed
Complex back to back negotiation to handle – tie / BSC and BB / Siemens / CAF / SDS	
Despite becoming a 'sleeping partner', BB could create disharmony within the consortium and between the consortium and tie.	

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Options 2A Risks	Option 2A Benefits
Siemens have indicated they are not currently at all enthusiastic about taking over the BB elements of work which include civils, design and overall management.	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 in respect of EU procurement legislation	On-street works can be phased according to affordability constraints
Despite becoming a 'sleeping partner', BB could create disharmony within the consortium and between the consortium and tie.	Difficult partner neutered
Any phased opening could be met with opposition from stakeholders.	
Complex back to back negotiation to handle – tie / BSC and BB / Siemens / CAF / SDS	
Lack of cost and programme certainty due to Siemens unwillingness	
No guarantee of financially better outcome	

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~~Options 2A and 2B1 were not included in the final analysis as legal advice received has confirmed tie would be in breach of EU procurement rules and subject to a potential legal challenge. Additionally, under option 2A, Siemens have already indicated they would be unenthusiastic about taking on the wider role, which at a minimum is an attitude which will drive a cost expectation on their part if they did take over the role.~~

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5.2.2 Option 2B1 – Initial Analysis

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 spilt to be agreed with Siemens. On street works are let on an incremental geographic basis.

Options 2B1 Risks	Option 2B1 Benefits
<u>Potential legal challenge in respect of EU procurement legislation</u>	<u>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.</u>
<u>Retention of BB for off-street could perpetuate same behaviours – lack of trust</u>	<u>AIR-HYM commences first and provides tangible benefits</u>
<u>Transfer of risk to public sector</u>	<u>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.</u>
<u>The issue regarding Pricing Assumption 1 - BDDI-IFC remains</u>	<u>tie PI insurance could be extended to additional public sector risks</u>
<u>Programme dispute and cost of time – risk of protracted dispute over EOT and costs</u>	<u>Improved relationship with remaining consortium members during on-street works</u>
<u>Clause 80 – failure to commence the works until estimate agreed continues</u>	<u>Exposure caused by late utility diversions is reduced due to renegotiated sectional completion dates</u>

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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
Stakeholders have already voiced concerns over opening to Haymarket	AIR-HYM commences first and provides tangible benefits
Open to EU procurement challenge	

Options 2A and 2B1 were not included in the final analysis as legal advice received has confirmed **tietie** would be in breach of EU procurement rules and subject to a potential legal challenge. Additionally, under option 2A, Siemens have already indicated they would be unenthusiastic about taking on the wider role, which at a minimum is an attitude which will drive a cost expectation on their part if they did take over the role.

5.2.3 Option 2B2 – Initial Analysis

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.

tietie then 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

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contract – exact spilt to be agreed with Siemens. On street works could be let on an incremental geographic basis.

Options 2B2 Risks	Option 2B2 Benefits
<u>Potential legal challenge in respect of EU procurement legislation</u>	<u>AIR-HYM commences first whilst further on-street works are re-procured and provides tangible benefits</u>
<u>Retention of BB for off-street could perpetuate same behaviours – lack of trust</u>	<u>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.</u>
<u>New roles and responsibilities may take time to embed</u>	<u>On street works can be managed and controlled directly by tie which will provide greater cost and programme certainty</u>
<u>The issue regarding Pricing Assumption 1 - BDDI-IFC remains</u>	<u>tie PI insurance could be extended to additional public sector risks</u>
<u>Programme dispute and cost of time – risk of protracted dispute over EOT and costs</u>	<u>tie able to negotiate directly with civil contractors for on-street works to deliver best value for cost and programme</u>
<u>Clause 80 – failure to commence the works until estimate agreed continues</u>	<u>Improved relationship with remaining consortium members during on-street works</u>
	<u>Exposure caused by late utility diversions is reduced due to renegotiated sectional completion dates</u>

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Options-2B2-Risks	Option-2B2-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
Passing of contractual risks to the public sector.	AIR-HYM commences first whilst further on-street works are re-procured and provides tangible benefits
Stakeholders have already voiced concerns over phased opening	On-street works can be managed and controlled directly by tietie which will provide greater cost and programme certainty
New roles and responsibilities may take time to embed	tietie PI insurance could be extended to additional public sector risks
	tietie able to negotiate directly with civil contractors for on-street works to deliver best value for cost and programme
	Improved relationship with remaining consortium members during on-street works
	Exposure caused by late utility diversions is reduced due to renegotiated sectional completion dates

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5.3.1 Option 3A Initial Analysis

This is effectively carrying on with the status quo. ~~ti~~tie 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 to get work started
- try to get BSC to work on-street without a revised on-street supplemental agreement
- operate the Infraco contract which remains intact as does the consortium

This is the default option. The risks and benefits associated with this approach are as follows:

Option 3A Risks	Option 3A Benefits
Continued lack of trust	No breach of EU procurement rules
The issue regarding Pricing Assumption 1 - BDDI-IFC remains	Contract is in place and further DRP's could be launched to get BSC to comply with the contract
Programme dispute and cost of time – risk of protracted dispute over EOT and costs	BSC continue to be forced to address assertive client expecting and demanding good value.
Clause 80 – failure to commence the works until estimate agreed continues	
Failure to deliver best value	
Frustration of tie employees leads to exodus of project management resources	
Legal and commercial costs of disputes	
Compensation events and notified departures continue	
Continued failure to mitigate all delays	
Continued failure to manage design	
Supply-chain mismanagement	
Failure to integrate leading to rework	
Additional 3 rd party/CEC costs	

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<u>Lack of control over sequencing on-street works</u>
<u>Unknown utilities and obstructions</u>
<u>Non-delivery of VE</u>
<u>Logistics costs</u>

Option 3A Risks	Option 3A Benefits
BDDI-IFC continues	No breach of EU procurement rules
Programme dispute and cost of time – risk of protracted dispute over EOT and costs	Contract is in place and further DRP's could be launched to get BSC to comply with the contract
Programme uncertain as BSC unwilling to establish a robust programme and current on-street philosophy is to construct full-depth roads	BSC continue to be forced to address assertive client expecting and demanding good value.
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	
Unknown utilities and obstructions	
Continued abuse of Clause 80	

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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 the BSC proposed On Street Supplemental Agreement. The risks and benefits are similar except where shown in blue below. This option was not subject to final analysis as both legally and commercially, it is unacceptable to ~~tie~~.

Option 3B Risks	Option 3B Benefits
<u>OSSA –breach of EU procurement regulations. Not acceptable to tie.</u>	<u>BSC would commence working on-street</u>
<u>Continued lack of trust although not as severe as 3A</u>	<u>For off street the existing contract remains intact and can be challenged through the DRP process</u>
<u>The issue regarding Pricing Assumption 1 - BDDI-IFC remains</u>	<u>At face value, BSC will focus on delivery rather than commercial recovery.</u>
<u>Programme dispute and cost of time – risk of protracted dispute over EOT and costs</u>	
<u>Programme – current OSSA proposal has programme risk with tie and assumes full depth road reconstruction</u>	
<u>Clause 80 – failure to commence the works until estimate agreed continues</u>	
<u>Failure to deliver best value</u>	
<u>Frustration of tie employees leads to exodus of project management resources</u>	
<u>Legal and commercial costs of disputes</u>	
<u>Non-delivery of VE</u>	
<u>Compensation events and notified departures continue</u>	
<u>Continued failure to mitigate all delays</u>	
<u>Continued failure to manage design</u>	
<u>Failure to integrate leading to rework</u>	
<u>Additional 3rd party/CEC costs</u>	

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<u>Lack of control over sequencing on-street works</u>
<u>Unknown utilities and obstructions</u>
<u>Logistics costs</u>

Option 3B Risks	Option 3B Benefits
BDDI-IFC continues	BSC would commence working on street
Programme dispute and cost of time – risk of protracted dispute over EOT and costs	For off street the existing contract remains intact and can be challenged through the DRP process
Programme uncertain as BSC unwilling to establish a robust programme and current on-street philosophy is to construct full depth roads	At face value, BSC will focus on delivery rather than commercial recovery.
Programme – current QSSA proposal has all programme risk with tietie	
tietie 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 – breach of EU procurement regulations. Not acceptable to tietie .	
Unknown utilities and obstructions	
Continued abuse of Clause 80	

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Continued failure to mitigate all delays	
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	

Fundamentally, ~~this~~ option 3B is not deliverable because it would has potential to infringe procurement regulation, mandating re-procurement or carrying a risk of challenge and litigation.

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5.3.3 Option 3C– Initial Analysis

This option is again similar to 3A except that **tie** continues to implement an assertive application of the Infraco Contract in its present form but seeks active means in the short term to resolve the disputes, accepts some contract revision to accommodate BSc concerns and seeks a new way of working with BSC, especially BB, which avoids the conflicts which have arisen in the past.

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Option 3C Risks	Option 3C Benefits
The issue regarding Pricing Assumption 1 - BDDI-IFC remains	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 control costs to a greater extent as it would have control over procurement and direct management of sub-contractors thereby providing greater certainty on cost outturn.
Clause 80 – failure to commence the works until estimate agreed continues	Small possibility of BSC project management cost savings
Legal and commercial costs of disputes (but not as severe as 3A)	tie could attempt to control programme and phasing of on-street works
No certainty that BB would allow tie full visibility of all commercial information	Opportunity to incorporate changing key stakeholder requirements with less impact on cost and programme
Continued lack of trust but lower than 3A and 3B	Lower risk of continued failure to mitigate all delays as tie would be in control of on-street works
Continued failure to manage design	Lower supply-chain mismanagement risk as tie would be in control of on- street works
Non-delivery of VE	Lower risk of failure of integration leading to rework
tie costs	Lower volume of compensation events and notified departures - would be less as tie in control for on street civils
Additional 3 rd party/CEC costs	

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<u>Logistics costs</u>
<u>Unknown utilities and obstructions</u>

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Option 3C Risks	Option 3C 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 tietie in control of sub-contractors and can try to limit this	tietie 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	tietie could attempt to control programme and phasing of on-street works
Programme – current OSSA proposal has all programme risk with tietie and this would need to be discussed in detail in terms of who take the programme risk	Small possibility of BSC project management cost savings
tietie costs	Lack of control over phasing reduced
Cost of disputes	Opportunity to incorporate changing key stakeholder requirements with less impact on cost and programme
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 – would	

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be less as tietie in control for on street civils	
Continued failure to manage design	
Supply chain mismanagement ---- would be less as tietie in control for on street civils	
Failure to integrate leading to rework ---- would be less as tietie in control for on street civils	
Failure to deliver best value	
Compensation events and notified departures - would be less as tietie in control for on street civils	
Affordability ---- less impact as tietie in control of on street civils	
Dissatisfaction of tietie employees leads to exodus of project management resources	
Continued lack of trust	
No certainty that BB would allow tietie full visibility of all commercial information	
Transfer of risk to the public sector, i.e. programme risk	

~~Need to QC the risks and benefits sections to ensure complete and consistent.~~

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5.44 Option 4 – Initial Analysis

This option addressed the possibility of acceding to BB’s demands and committing to a substantially higher cost to BSC. The assessment of Option 4 noted that BSC – and specifically BB - have adopted

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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, **tietie** 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 **tietie**, the Council and the Government will be bound to meet bona fide liabilities. Accordingly, with funding 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. Therefore a simple cost settlement is not tenable.

5.5 Option 5 – Initial Analysis

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 **tietie** 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.

5.6 Option Selection

Of the original options identified, 4 were regarded as being credible and taken forward for detailed analysis and re-numbered as follows:

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Option	Original Option no	Description
1	1B	Termination - without cause
2	2B2	BB exit - Infraco Contract remains intact with BB full or partial exit
3	3A	As is - Continued application of the Infraco Contract in its present form with the present players
4	3C	Enforced adherence - Assertive application of the Infraco Contract in its present form but with disputes settled in the short term and a negotiated new way of working

As mentioned above, one aspect of the evaluation involved a risk-based assessment of each option. It was agreed that in order to compare the options equally, the Option 1B (termination) could not be considered on the same criteria as the other options as this option and its consequences are too dissimilar to the other three options. This option was still scrutinised but in a different manner.

The matrix below ~~overleaf~~ illustrates the ranking of each option against the seven criteria.

The option which would rank highest against the particular criteria is coloured green, the second highest is orange and the lowest ranked is red.

~~Susan – I mentioned the criteria etc in the document I sent you. Maybe this bit should be added in?~~

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	Options		
	Option 2 - BB complete AIR- HYM. tie procure remaining civils	Option 3 - Carry on using contract and commercial assertiveness	Option 4 - Continue with commercial assertiveness plus seek means to resolve disputes
Cost Delivers a System for the Best Price			
Programme Delivers the Earliest OFRS Date			
Operational Viability Delivers a System Which is Viable as an integrated transport scheme			
Legal Risk Can work within existing or legally acceptable amendment of infraco Contract			
Political Politically Acceptable			
Stakeholder Acceptability Has the Most Stakeholder and Media Support			
Deliverability Ability to Deliver With Consortium			

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6.0 — Conclusions and Recommendations

6.0

Over the past 8 weeks ~~tietie~~ has carried out extensive audit and analysis of a substantial number of areas of concern across the relationship with BSC. Additionally, expert opinion has been sought including QC opinion. This analysis and expert opinion has been brought together and a robust decision making process employed to come to the conclusions being recommended to TPB by ~~tietie~~. This section of the report will outline:

- ~~tietie~~'s recommended course of action short and medium term.
- why this recommendation has been made
- how this will be implemented
- what the residual risks are and how they will be managed
- How success will be measured

6.1 What Next Steps

6.1.1 Short Term

In the short term, ~~tietie~~ recommends that the current Infraco contract is utilised and that the increasingly contractually assertive approach by ~~tietie~~ continues. This is clearly showing signs of impact and should continue whilst the medium term recommendation is pursued. Of the four credible options, Option 1 – termination could be executed in the short term but would carry a high risk of creating a very uncertain financial outcome with limited sustainable asset value.

6.1.2 Medium Term

In the medium term ~~tietie~~ would aim to move BSC towards a position of more co-operative working (as envisaged in the Infraco contract Clause 6) or to exit the Infraco contract once Airport – Haymarket has been delivered. It would do this by a 2 stage approach:

- Engage in a process of trying to clarify the contractual interpretation of significant areas of difference between the parties at present. This can be done through DRP or litigation or by taking such matters by agreement to an independent expert (without prejudice this must be binding on both parties) to decide on such matters. A critical part of this strategy is the determined application of the contractual levers available to ~~tietie~~, so that

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BB are in no doubt about the strength of ~~ti~~tie's position, and development and deployment of the legal argument set out in section 4.5.

- ~~By moving BB into a position where their current approach has started to be eroded, move them into a more collaborative method of working providing tie with an increased level of control in the contract and more significantly in the on-street works. The two dimensions which make this a credible outcome, in summary, are 1) tie's ability with the benefit of the analysis now completed to convince BB and BSC that alternatives to this outcome are unpalatable ; and 2) pressure from Siemens on BB.~~

- ~~By moving BB into a position where their current approach has started to be eroded, move them into a more collaborative method of working providing tie with an increased level of control in the contract and more significantly in the on-street works. The two dimensions which make this a credible outcome, in summary, are 1) tie's ability with the benefit of the analysis now completed to convince BB and BSC that alternatives to this outcome are unpalatable ; and 2) pressure from Siemens on BB.~~

A third important aspect of this approach, is that is potentially incorporates the full or partial exit of BB, with the benefits sets out in section 5 (Option 2). There are good reasons to think that BB at a corporate level would find exit an attractive option on the right terms. Were ~~ti~~tie to progress this option the cost to ~~ti~~tie and CEC in terms of divorce settlement and risk absorption will be worse than if BB promote the option.

6.2 Why

Whatever Project Pitchfork option going forward may be thought desirable the fact remains that the parties are in contract and consequently any commercial plan has to be predicated on there being no change to that contract without mutual agreement or significant risk of procurement legal challenge.

Obtaining agreement to change contract terms commonly has to be obtained by the offering and acceptance of some consideration. The alternatives of termination or substantial concession are much less likely to produce a best value outcome than further concerted efforts to make the existing contract work.

6.3 How

The application of the contract terms will be targeted at achieving breakthrough in the following critical areas :

- Application of Clause 80
- Agreement on EoT, including reasonable allowance for the effect of utility diversions
- On Street working mechanism.

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Comment [S52]: Do we need to summarise them for ease of reference here?

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- Exposure of the risk created for BSC by their design management performance
- Resolution of the design cost risk dispute (BDDI – IFC cost evolution)
- Milestone payments
- Focus on the off-street Airport – Edinburgh Park section to support Siemens

Infraco has now responded in reasonably comprehensive fashion to a number of recent targeted letters from **tietie**. It is thought that these replies will allow **tietie** to establish Infraco’s “heads of claim”, which has previously not been possible because BSC have not hitherto provided sufficient insight into their position. Whether BSC’s position is tenable, the new information should facilitate a much more rational negotiation than has previously been possible. This, coupled with the heightened profile of the dispute at senior levels within BB and **tietie**’s ability to access those senior directors provides a more promising backdrop to the next stage of negotiation than at any time since Close.

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Comment [553]: I think we need to do more to be more convincing here

6.3.1 Clause 80

Bringing about Infraco’s recognition that pursuant to Clause 80 (in particular Clause 80.13) and Clause 34.1 they are obliged to carry out alleged changed work before the agreement of Estimates is a fundamental issue which will have to be addressed before the revised contract is finalised. On the basis that **tietie** may prejudice their position at a later date by not giving Infraco notice that they are failing to comply with these requirements **tietie** should get a settled position in this matter as early as possible in the period of this action plan. In doing so they should also illuminate for Infraco the requirements of Clause 65 and how it can be applied to settling “Compensation Events” which may have taken place or will take place – this requires BSC to carry on working despite them having come across for example soft ground or unforeseen utilities.

If BSC’s position on clause 80 can be unequivocally unequivocally settled in **tietie**’s favour, a major plank of their approach will have been removed. Legal analysis suggests this is within **tietie**’s capability. Construction progress would have less risk of being impeded and a valuable argument in the EOT dispute will be available to **tietie**.

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Whilst **tietie**’s advisors have a high level of confidence that **tietie** would succeed in establishing the correct meaning of the above contract terms, by referring it to the adjudication of a member of the legal panel, or the courts, it is likely that a favourable decision (and if unfavourable) would be subject to appeal. Commercial planning has therefore to assume that it may be many months before there is a decision which Infraco will accept. It has to be recognised that under such circumstances Infraco would more than likely not be amenable to agreeing to any change in scope which may be required for affordability purposes. This aspect will require careful monitoring.

6.3.2 Utility Diversions

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It is a matter of fact that Infraco has been substantially delayed by late completion of utility diversions. Moreover, such delays would warrant substantial extension of time without mitigation and acceleration. Agreement on this matter would facilitate the agreement of a new programme and measures required to achieve that programme. Infraco’s compensation should thereafter be based on this revised programme and the agreed measures.

6.3.3 On Street Mechanism

It is thought that **tietie** cannot agree to Infraco’s OSSA proposal because it is based on open-ended cost reimbursement and programme. Moreover, it ~~would~~ could potentially breach EU procurement Law.

Comment [S54]: Do we need to be more assertive in the statement?

An alternative approach is to agree a revised programme with BSC based on a shallower depth road reconstruction with any soft ground encountered being dealt with via the Clause 65, compensation Event route. This provides **tietie** with a more realistic programme as it will be based on a shorter more realistic duration, along with a more affordable cost estimate. Clause 65 compensates BSC for additional costs/delay they encounter over this.

A skeletal heads of terms for agreeing a Clause 65 route has been drafted by **tietie** and consideration can now be given to its deployment.

6.3.4 Infraco’s performance including SDS performance

The evidence from the audit of BSC’s management of SDS confirms **tietie**’s assessment that BSC has not fulfilled its contractual responsibilities in this area, with repercussions for BSC’s position in the disputes over design cost liability and programme. The formulation of the precise legal argument may yield further strengths and weaknesses in this line of attack, but at this stage the line is seems well worth developing.

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Comment [S55]: Is? Nothing lost if we develop anyway and review before deployment.

6.3.5 Design cost liability

The legal underpinning to this consistent problem area is now much clearer, while the commercial consequences remain uncertain. The Infraco contract language does not provide **tietie** with the unequivocal/unequivocal strength it would wish, and which **tietie** had a strong commercial expectation of achieving. However, nor does the language support BSC’s position. Cost estimates have included contingency for this matter from an early stage.

The action here will include finalisation of the legal argument and an assessment of how best to take the matter forward in negotiation. It seems now that there is little benefit in further DRP submissions around this issue, beyond those already in play (which contain additional dimensions where clarity and an outcome is sought). The matter should be susceptible to a negotiation around the legal,

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technical and commercial aspects of each main section where the design and its evolution from BDD1 is an issue.

6.3.6 Pressure on milestone payments

In November last year ~~tietie~~ offered to extend the completion dates by nine months, offering Infracore relief from LDs for that period. Infracore’s current position on this appears to be to reject that offer and ~~tietie~~’s simultaneous confirmation that ~~tietie~~ will pay for six months’ delay costs on an established formula.

BSC’s response causes them to be put at risk for increased claw-back of milestone preliminaries. The proposition has been put to BSC but not yet executed and when it is, the financial impact on BSC will be significant. The quantum and timing of this action are under detailed assessment but expect to be implemented during March 2010.

6.3.7 Focus on the off-street Airport – Edinburgh Park section to support Siemens

A proposal was made by BSC, driven by Siemens, at the Section 6.5 meeting on 2nd March in relation to a quick resolution of the matters in dispute (25 INTCs) in the most westerly-Westerly section, where Siemens have the lead role. Since part of ~~tietie~~’s strategy is to enhance Siemens influence over BB, it is appropriate to pursue this matter. However, there are some difficult matters under dispute and a quick resolution cannot be guaranteed.

6.3.84 Action plan.

The specific actions proposed to deal with these circumstances are:

<u>1. Mobilise action on Clause 80</u>
<u>2. Seek conclusion on impact of utility diversion delays and overall EOT claim, with consequent revision to a new agreed programme</u>
<u>3. Respond to OSSA and offer the Clause 65 alternative route</u>
<u>4. Refine argument over SDS management and deploy as appropriate</u>
<u>5. Omnibus approach to resolution of outstanding BDD1 – IFC disputes ; Expedite response to INTC’s (other matters)</u>
<u>6. Quantify and execute amended position on prelims</u>
<u>7. Seek to resolve the Airport – Edinburgh Park disputes</u>
<u>8. Action plan for implementing more collaborative working style</u>

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- Mobilise action on Clause 80 AF and AJR
- Seek conclusion on impact of utility diversion delays and overall EOT claim, with consequent revision to a new agreed programme AJR and SB / SC
- Respond to OSSA and offer the Clause 65 alternative route AJR
- Refine argument over SDS management and deploy as appropriate AJR and SB
- Omnibus approach to resolution of outstanding BDD / IFC disputes ; Expedite response to INTC's (other matters) SB and DM
- Quantify and execute amended position on prelims AJR and SB / DM
- Seek to resolve the Airport – Edinburgh Park disputes AJR and SB
- Action plan for implementing more collaborative working style BN

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The McGrigors Report on the Contract will be used as the common “bible” and it is proposed that any point of application of legal principle will be referred to a “panel” comprising of AF, BN and AJR for a decision.

Additional quantity surveying resource will be appointed to assist with expediting the response to INTC's. More senior quantity surveying resource is being sought to respond to the OSSA and draft the alternative route.

6.45 Remaining risks

Even if breakthrough is achieved in the areas set out above, there will not be a guarantee of further difficulty with BSC. However, a successful outcome in those areas will leave BSC with considerably less scope for misbehaviour, with a further reinforcement that BSC will be well aware of the strength of argument brought to bear by ~~tietie~~ and its advisers, coupled with a diminished expectation that stakeholder pressure will improve BSC's position.

6.56 Success measures

It is unlikely that there will be a simple series of measurements which can be used to indicate success from this strategy. However, each of the elements in the action plan is capable of being deployed

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quickly and an outline of the time required to assess impact can be established. Progress may not be quantifiable in minute detail, but the direction of travel should ~~be come~~become increasingly clear over the next 3 months, in advance of a further decision gateway in June 2010. Progress will be reported regularly during that period.

As progress becomes clearer, the concern about affordability will also come into sharper relief and a parallel workstream to assess the rephasing options, and if necessary the truncation options will be executed in the same period to provide the information necessary for robust conclusions in June.

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7.0 Recommendation

The work performed in early 2010 ~~constituted~~ **constituted**:

Detailed examination of the matters in dispute and the means to resolve ~~them~~ **them**; and
 Determined application of ~~tietie's~~ **tietie's** rights under the contract coupled with rejection of undue pressure from BSC

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The approach adopted appears to have had a significant impact on BSC and the basis on which ~~tietie~~ **tietie** can seek to achieve an acceptable legal and commercial outcome is now considerably clearer.

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Accordingly, the recommendation from ~~tietie~~ **tietie** to the TPB is that ~~tietie should~~ **tietie should**:

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- Eliminate the option of continuing “As is” – Option 3 ;
- Continue to pursue ~~tietie's~~ **tietie's** rights under the existing contract with vigour and seek acceptable resolution of the main disputes ; both according to the action plan described in section 6 ;
- ~~Rigourously~~ **Rigorously** Monitor the opportunity to achieve a partial or full exit of BB from the primary contract role they currently play, on acceptable cost and risk transfer terms ;

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Comment [S56]: Passive?

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- Retain the termination option – Option 1, not as an option to be pursued currently but kept under review for serious consideration if evidence emerges which merits this ;
- Monitor/Assess affordability and rephasing options, including operational and financial viability ;
- Reach a resolution of these matters with BSC in the form of a revised version of the existing contract which remains compliant with procurement regulation ;
- Confirm a new way of working with BSC which mitigates against further dispute risk ;
- Report progress regularly to the TPB ; and
- Formally reassess the revised arrangements ~~on or before 30th June 2010~~ as soon as practical practical.

Comment [557]: Passive?

tiotie Limited

10th-12th March 2010

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