

Joachim Enenkel – Areas for Discussion

This note identifies the broad subject areas which we would like to discuss. We have tried to include all documents that may assist you in answering the Inquiry's questions.

This Note is structured as follows:

- Introduction
- The Relationship between Bilfinger Germany and Bilfinger UK
- Events between late 2005 and late 2007
- 2008 (January to May)
- 2008 (May to December)
- 2009
- 2010
- Events between January and September 2011
- From September 2011 to completion of the project
- Project Management and Governance
- Final Comments

Introduction

All statements and information given in this Questionnaire are without prejudice as well such statements have been made in my best effort to support the Edinburgh Tram Inquiry. The answers provided are based on recollections out of my memories. When responding to this questionnaire and even before I had (and have) no access to any documentation related to the Edinburgh Tram project or internal documents in Bilfinger as well I had no contact with any person who was involved in the project. The answers have been provided to Bilfinger and were returned without major comment or correction. To some extent my answers given could be inaccurate in timing and blurry in content.

1. By way of introduction:

- a) What was your experience in major infrastructure projects, including tram and light rail systems, prior to your involvement with the Edinburgh Trams Project?

I am Civil Engineer with domestic (Germany/Europe) and international experience implementing similar scope and scale projects. See below data. Before Bilfinger I was working for over 15 years in the German/European Construction Industry employed with various medium sized Construction or Consulting firms. Since end 2015 I am President and CEO of a medium sized Construction Group in the Philippines.

Bilfinger Manager and Executive from 1996 to 2015

- 2010 – 2015 COO and Member of the Group Executive Board of Bilfinger SE
- 2006 – 2010 CEO and Member of the Executive Management of Bilfinger's Construction Subgroup
- 2003 – 2006 Member of the Executive Management of Bilfinger's Construction Subgroup
- 2002 – 2003 Project Director for a large cable-stayed bridge crossing the Panama Canal in Panama
- 2001 – 2002 Project Manager for Design / Engineering of Taiwan High Speed Rail Project C260 and C270 in Taiwan

- 1999 – 2001 Joint Managing Director of Julius Berger Nigeria PLC in Abuja
- 1996 – 1999 Managing Director for the region Malaysia – Vietnam – Philippines in Manila

b) Between what dates did you have responsibilities in relation to the Edinburgh Trams Project? What was your job title during that period? What were your main duties and responsibilities?

First phase of the project including the tender period, contract award, mobilization and project start-up.

- 2003 – 2006 Member of the Executive Management of Bilfinger's Construction Subgroup
- 2006 – 2010 CEO and Member of the Executive Management of Bilfinger's Construction Subgroup
- 2010 – 2015 COO and Member of the Group Executive Board of Bilfinger SE

c) Who reported to you? To whom did you report?

During Tender:

Reporting to me: Tender Manager/Director (Scott McFadzen) and Managing Director Bilfinger UK Ltd. (Richard Walker)

I was reporting to: Executive Management of Bilfinger Civil Subgroup and to the Bilfinger Group Executive Management

During Construction – until end 2008:

Reporting to me: Project Director (Scott McFadzen than Colin Brady than Martin Foerder) and Managing Director Bilfinger UK Ltd. (Richard Walker)

I was reporting to: Executive Management of Bilfinger Civil Subgroup and to the Bilfinger Group Executive Management

During Construction – starting 2009:

Reporting to me: Member of Executive Management of Bilfinger Civil Subgroup (Dr. Jochen Keysberg) who was then in charge overseeing the project

I was reporting to: Group Executive Board of Bilfinger SE

d) When and why did you cease to have responsibilities in relation to the Edinburgh Trams Project?

Reshuffling of regional responsibilities within Bilfinger Civil Subgroup Executive Board (Germany) end of 2008. Dr. Jochen Keysberg took over from me and continued to report to the Subgroup Executive Board of Bilfinger Civil, which was chaired by me.

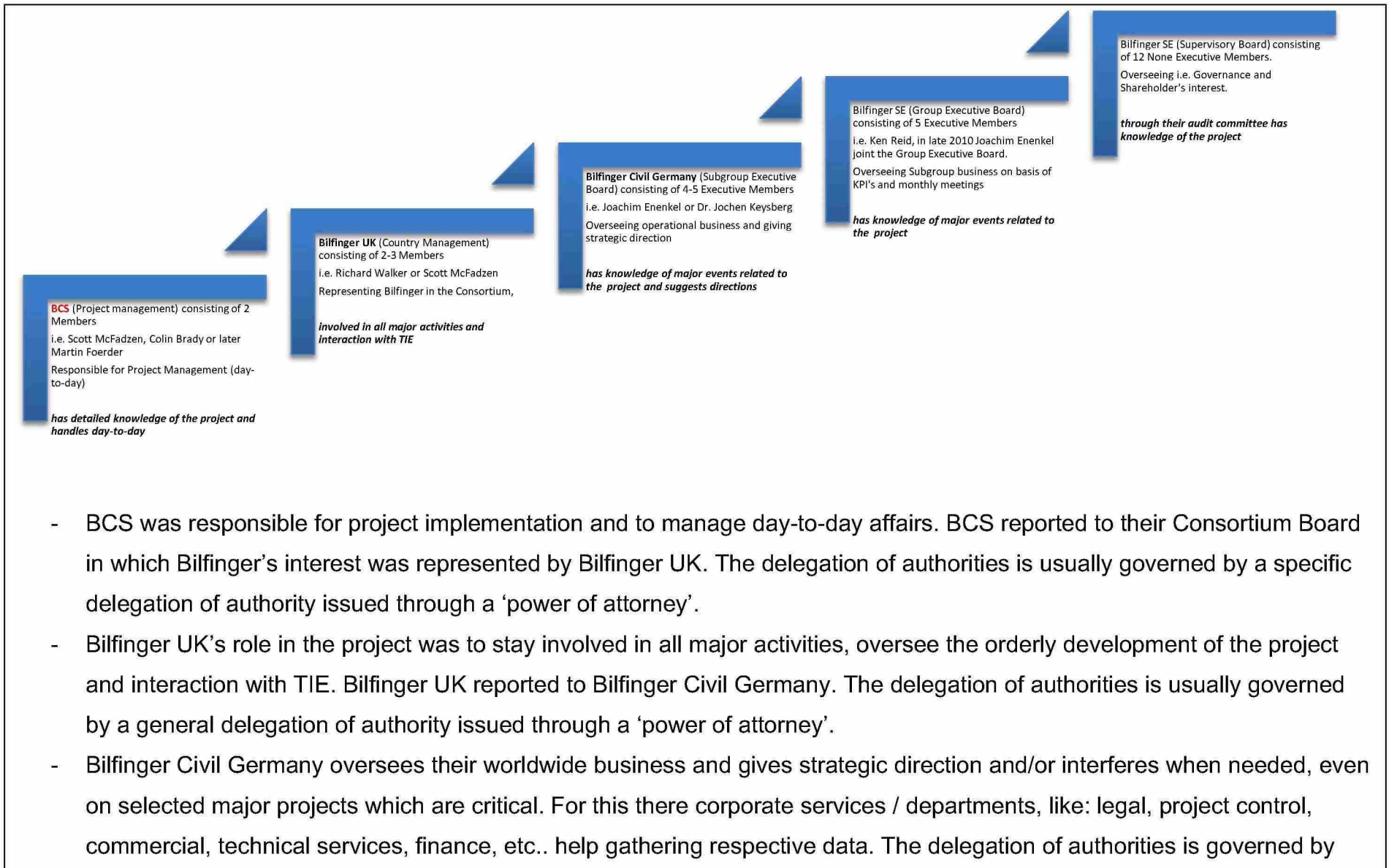
The Relationship between Bilfinger Germany and Bilfinger UK

2. As regards the relationship between Bilfinger Germany and Bilfinger UK:

a) It would be helpful if you could explain the structure of Bilfinger Germany including how and by whom decisions were made?

We understand, for example, that there was an Executive Board. Was the Executive Board the main decision making body?

Which individuals, and with what titles, sat on the Executive Board?



'internal regulations'.

- Bilfinger Germany reported to the Bilfinger SE Group Executive Board. The Group Executive Board oversees Bilfinger Civil's business through frequent reporting and quarterly review meetings. Beyond that project data (P&L, Legal, Project Controls, etc.) are being collected and consolidated. The delegation of authorities is governed by 'internal regulations' as well by particular laws valid for publicly listed companies.
- The Bilfinger SE Group Executive Board reports regularly to their Supervisory Board directly in quarterly meetings regarding ongoing business or in more detail monthly to particular Committees, like Audit Committee incl. Project Controls.

The project was well known in Bilfinger. The day-to-day business was responsibly executed in UK, strategic direction on bottle necks, showstopper, major disputes were developed and agreed with 'Germany' through their Service Departments (Legal, Commercial, Technical Services, etc.) and usually confirmed by the Subgroup Executive Management. Depending on the gravity the Bilfinger Group Executive Board was informed and involved developing strategic direction.

Bilfinger followed the principle of empowering their on-site Project Managers or Directors by giving significant authority, especially on all project related day-to-day. Issues which had the tendency impacting the success of the project or the business had to be elevated and direction had to be sought. The Project Managers were supported by Bilfinger's Service Departments, like Legal, Commercial, Technical Services, etc. and checked in their handling by Bilfinger Group's Project Control and Audit, etc.

b) How did BB Germany exercise control over BB UK?

Frequent (monthly) meeting schedule and ad-hoc meetings as and if required. Further through continuous involvement of their Service Departments.

c) How did BB Germany delegate powers to Bilfinger UK? Were powers formally delegated? We note, for example, that a Power of Attorney dated 3 May 2007 was granted by yourself and Thomas Stiegler in favour of Richard Walker, Gary Dalton and Scott McFadzen to represent BB AG Civil with regard to submission of BSC's Tender but that the Power of Attorney expired after three months (**CEC01707000**). Was any other document executed formally delegating powers from BB Germany to BB UK in respect of the trams project?

See item a) above. I do recall we issued a power of attorney when needed. Otherwise the Mgmt. of BB UK had their authorities granted within BB UK.

d) What type of matters required to be reported to BB Germany for decision making and/or for approval?

Matters of significance / importance impacting the business planning, P&L and changing the risk profile of the UK business.

e) How (and by whom) was that done?

All three members in BB UK, Richard Walker, Gary Dalton and Scott McFadzen. The main focal point though was Richard Walker. It is worthwhile to note, that Bilfinger as a contractor was driven by Risk Management and consequent mitigation. As such all members of Management, be it in Germany, UK or elsewhere were guided by the understanding, that risk should be only taken which is reasonable and can be clearly identified, addressed, managed, quantified, priced and consequently embedded in the Delivery Scope of Services and the Contract itself.

Events between late 2005 and late 2007

3. A Prior Information Notice was published by TIE on 6 October 2005 (**CEC01792891**) and a Contract Notice was published on 31 January 2006 (**CEC00208568**).

A Memorandum of Information and Pre-Qualification Questionnaire was produced by TIE on 6 March 2006 (**CEC01781572**).

We understand that in March 2006 Bilfinger Berger pre-qualified as a civil works contractor and were asked to pre-qualify again, this time as part of a joint venture with Siemens plc.

We further understand that Bilfinger Berger and Siemens duly formed an alliance or consortium (BSC) and pre-qualified as partners in July 2006.

By letter dated 3 October 2006 (**CEC01794929**) Andie Harper, Tram Project Director, TIE, issued the Invitation to Negotiate (ITN). The date for submission of tenders was 9 January 2007.

By letter dated 13 October 2006 (**CEC01795260**) Richard Walker advised TIE that BSC had a number of significant issues with the ITN (as listed in his subsequent letter dated 16 October, **CEC01795314**) which would preclude BSC from submitting a compliant tender and requested a three month extension to the period for submitting a tender return.

By e-mail dated 25 October 2006 (**CEC01795913**) BSC returned a mark-up of the Infracore Contract and Schedules and a document (**CEC01795948**) highlighting the key issues for BSC arising from the ITN documents.

a) Which individual(s) led for Bilfinger in these matters?

Predominantly Richard Walker and Scott McFadzen.

b) Why did Bilfinger decide to tender for the contract?

Project within its core competence and general interest in the UK market.

c) Did you have any views on forming a consortium with Siemens? Was it common for Bilfinger to join a consortium with other companies to bid for contracts? Did you have any views on the advantages and disadvantages of working with another company or companies in a consortium?

JV or Consortium for such bids are common in the industry and usually appreciated to share the scope of works and allocate respective risk profile. We felt a Consortium with Siemens, due to suitable their track record and Balance Sheet, was a win-win.

d) Did you have any views on TIE's procurement strategy i.e. whereby design and utility works were to be carried out in advance of the infrastructure works, with possible novation of the design contract to the infrastructure contractor?

The procurement strategy of TIE (phased approach) is a common approach including early investigation / relocation of utilities and the like. The development of concept design with subsequent novation is practice too, however, the ownership of the design always remains with the client, meaning design responsibility up to the transition point shall remain with TIE. Only at the point of novation the 'commercial' responsibility for further design development may transfer to the Contractor. This very point became later an issue, as the design of TIE's designer was incomplete lacking sufficient detail. At that time the indicated / communicated strategy of TIE was:

1. Identify and relocate utilities within the ROW (right of way) -> utilities are all identified and relocated before works start
2. Complete the Concept / Basic Design on the basis of 1. -> Concept / Basic Design is completed
3. Based on 1. and 2. award the Infracore

As 1. and 2. was not completed the project struggled from the beginning. All subsequent activities were hampered and caused the challenges the project experienced.

e) Did you have any views at that time on whether TIE's procurement programme was realistic and achievable?

It was ambiguous but achievable. Red flags were seen when considering construction in an old city like Edinburgh with design still to be developed, however, they have been openly communicated and addressed. As such particular focus was given to the process related to unforeseen changes in scope and design. TIE always appeared to have understood the complexity and gravity of the issue.

f) What were Bilfinger's main concerns during this period?

Potential changes in scope due to unforeseen or unpredictable circumstances and in particular the incomplete design.

g) How were these concerns addressed?

By continuous open communication as well later the context was embedded in the contract. Potential changes are to be carried out if scope, price and time have been agreed **beforehand** (!!!!!). This was to avoid the Contractor goes ahead and at a later point in time differences arise due to interpretation what was owed, etc.

h) Do you have any other comments on events during this period?

During tender we found the communication open, fair and straight forward. After award, however, we noticed increasingly legal language, which meant that due to lack of leadership (or clear direction) in the project lawyers took control by trying to defend traditional contractual understanding which was not reflected in the contract.

4. We understand that Proposals were submitted by BSC on 12 January 2007 (**CEC01533655**).

In January 2007 TIE issued a Supplemental Instructions to Tenderers document (**CEC01824070**).

We understand that on 8 May 2007 BSC submitted Consolidated Proposals (**CEC01656123**).

We understand that BSC submitted its Tender in July 2007 and made a further submission on 7 August 2007 with a Schedule of Clarifications (**CEC01604676** and **CEC01491869**).

On 22 October 2007 TIE and BSC entered into an agreement relating to the Selection for Appointment as Preferred Bidder (**CEC01497399**).

a) Which individual(s) led for Bilfinger in these matters?

For BBUK it was Richard Walker and Scott McFadzen, organizationally (reporting line) reporting to me.

b) Again, to what extent were you involved in these matters?

BBUK organizationally and therefore frequently reporting to me.

c) Did you have any views at that time on whether TIE's procurement programme was realistic and achievable?

It was ambiguous but achievable. Red flags were indicated when considering construction in an old city like Edinburgh, however, I felt such issues have been addressed. The incomplete design increasingly was an issue and openly communicated -> TIE was fully aware.

d) What were Bilfinger's main concerns during this period?

Potential changes in scope due to unforeseen or unpredictable circumstances and the incomplete design, which was still developed by TIE's designer (to be novated).

8 May
2007
should be
8 May
2006

7 August
2007
should be
7 August
2006

e) How were these concerns addressed?

By continuous open communication as well later on embedded in a contractual procedure. Potential changes are just to be carried out if scope, price and time have been agreed beforehand. This was to avoid the Contractor goes ahead and at a later point there might be differences in view, etc.

f) Do you have any other comments on events during this period?

It is worthwhile to note, that Bilfinger was a contractor always driven by Risk Management and its consequent mitigation. As such all members of Management, be it in Germany, UK or elsewhere were guided by the understanding, that only risk should be taken which can be clearly identified and addressed, can be quantified, priced and therefore consequently embedded in the Delivery Scope of Services and Contract.

5. We understand that further discussions and negotiations took place after BSC had been appointed Preferred Bidder in October 2007. By way of overview:

a) Which individual(s) led for Bilfinger in these discussions and negotiations?

For BBUK it was Richard Walker and Scott McFadzen, organizationally (reporting line) reporting to me.

b) To what extent were you involved in these discussions and negotiations?

BBUK frequently reporting to me.

c) What were Bilfinger's main concerns?

Potential changes in scope due to unforeseen or unpredictable circumstances and the incomplete design, which was still developed by TIE's designer (to be novated).

d) How were they addressed?

By continuous open communication as well later on embedded in a contractual procedure. Potential changes are just to be carried out if scope, price and time have been agreed beforehand. This was to avoid the Contractor goes ahead and at a later point there might be differences in view, etc.

e) Do you have any other general comments in relation to events after BSC were appointed Preferred Bidder?

I felt BSC was well represented and always tried to help TIE to resolve their struggles. To my understanding TIE was made fully aware of all issues, challenges and hindrances. I am though very disturbed by the fact you raised under item 32 as it demonstrates to me that TIE had clearly understood and tried to find ways to push their responsibilities as well as their deficiencies over to BSC, which more and more turned out to be the 'culprit' of the situation.... -> *On 13 May 2008 the Council's Policy and Strategy Committee considered a report by the Council's Chief Executive (CEC01246115). The report advised that the estimated capital cost for phase 1a was now £512.2 million. The report stated that "Offsetting the increase in cost is a range of negotiated improvements in favour of TIE and the Council in order to reduce the risk of programme delays and minimise exposure to additional cost pressures, as well as better contractual positions".*

6. By letter dated 11 December 2007 (**CEC01481843**) Willie Gallagher wrote to Richard Walker.

Mr Gallagher stated, "*Your news today that BSC are unable to achieve the pricing objectives we set you is extremely disappointing*". The letter noted TIE's "*critical milestone*" on 20 December where the full Council finally accept the project business case and the Infracore and Tramco deals, which would pave the way to achieve financial close on 28 January 2008.

Mr Gallagher advised that unless the following matters could be agreed by the end of a proposed meeting in Germany on Thursday 14 December, then TIE would not attend and would require to revisit the entire preferred bidder programme.

The matters in respect of which agreement was required were:

- a) *Price confidence: we ask you to consider fixing your price, save for a very few notable exceptions where for example the design itself is absent.*
- b) *Price level: we ask that ... your price level and VE savings are confirmed at a level that enables our project business case target to be met.*
- c) *Programme confidence: ... we ask that you confirm that you can achieve the programme opening dates i.e. revenue service commencing 11 February 2011 for Line 1a ...*
- d) *Contracts closure: ... your team appear to have become entrenched in respect of finalising the positions on a number of important legal/commercial issues ... We need your definitive responses on each and conclusion of these issues tomorrow.*
- e) *Employer's Requirements: we need your team's provisional agreement on the compliance matrix and confirmation of alignment with your proposal*".

Mr Walker replied to Mr Gallagher by letter dated 12 December 2007 (**CEC00547788**). In his letter Mr Walker advised, in relation to Price Confidence, "*we have considered fixing our price on the information provided and believe that we are able to do this in all areas where the design is available. See attached schedule*".

The schedule attached to Mr Walker's letter listed certain items that had been marked "Provisional" in BSC's August submission

(and in respect of which the price could be fixed by adding specified further sums totalling £8.2m).

The schedule also stated certain assumptions that had been made by BSC including that, in relation to Design:

- *“In those locations where the design is absent, we are not able to fix our price. Typically these include: Picardy Place, St. Andrews Square, London Road, York Place, Forth Ports Area etc.”*
- *“In areas where design is partial, we have made reasonable assumptions based upon our experience and the existing design information provided. Notwithstanding material design changes we have a high level of confidence in our pricing e.g. Track Slab, Roads and Pavements, Drainage connections, all as identified in our initial main submission”.*
- *“ ... Design must be delivered by SDS in line with our construction delivery programme previously submitted”.*

Mr Gallagher responded by letter dated 13 December 2007 (**CEC00547779**).

- a) What discussion was there within Bilfinger around that time on these matters (and between whom)? What was your involvement in any such discussions?

Continuous discussions, especially with Bilfinger’s Service Departments (Legal, Technical Services, Commercial, Project Controls, etc.) as they would always take place if a major project is being tendered, negotiated and to be awarded. I was involved overseeing, but not in all detail. I personally joint one meeting in Wiesbaden / Germany (see item 7), however, don’t have detailed memories anymore.

- b) What were your views on these matters?

I believe all issues addressed were reasonable and communicated to TIE openly through BCS.

7. We understand that a meeting between BSC and TIE took place at BB's headquarters at Wiesbaden, Germany, between Monday 17 and Thursday 20 December 2007, following which an agreement ('the Wiesbaden agreement') (**CEC01502881**) was signed. By way of overview:

a) What was your involvement in this meeting?

I recall that I personally joined one meeting in Wiesbaden / Germany, however, don't have detailed memories of the particular content anymore.

b) Who was present at the meeting, what was discussed and what was agreed?

Aside of Willie Gallagher with TIE staff (I don't remember who it was) from Bilfinger's side it was Richard Walker, Scott McFadzen as well Bilfinger Civil's head lawyer Christian Korf and myself.

c) Who led for Bilfinger during these discussions? Who led for TIE?

Willie Galagher for TIE and Richard Walker for Bilfinger.

d) Why did the meeting take place at Bilfinger's German headquarters?

I don't exactly know the particulars, but the meeting surely contributed to TIE's confidence building to the extent that (a) Bilfinger in Germany was fully supporting its UK business as well (b) Bilfinger was a substantial and well established major Contractor with vast experience of similar projects.

8. An internal TIE e-mail dated 18 December 2007 (10.45 am) by Geoff Gilbert (**CEC00547723**) attached the latest position on the draft deal. The attachment was a draft of the Wiesbaden agreement dated 14 December 2007 (**CEC00547724**), which stated that it *“sets out the agreement reached between BBS and tie on 14 December 2007 in respect of the price for the delivery of Phase 1A”*.

a) What was your understanding in relation to whether an agreement in relation to price been reached on 14 December 2007?

I don't have a particular recollection of the agreement, however, believe it should have reflected on the content. Bilfinger's lawyer would have made sure.

b) What were the main outstanding matters that required to be discussed during TIE's visit to Wiesbaden between 17 and 20 December 2007?

As much as I can recall that there were some issues related to alignment (ROW and utility relocation) and completeness of design, which were discussed. TIE attempted to firm up the delivery scope on loose ends as much as possible whereas we Bilfinger would only agree to what could be reasonably seen, priced and responsibly assumed.

9. In an e-mail dated 20 December 2007 (at 6.07 am) Mr Walker advised Mr Gilbert that, *“We still have issues with accepting design risk. We have not priced this contract on a design and build basis always believing until very recently that design would be complete upon novation. With the exception of the items marked provisional which we have now fixed by way of the 8 million we cannot accept more drain [sic] development other than minor tweaking around detail. Your current wording is too onerous. Trust we can find a solution”* (**CEC00547740**).

a) What was your understanding of these matters?

I guess Richard Walker openly addressed issues related to possession of site, challenges related to utility relocation,

incompleteness of design and that Bilfinger could not guarantee a price (absence of quantities, construction methods, etc.) for items not known or seen/identified yet. It was always assumed TIE will complete the design (consequently assumes related risks) and provide full pricing detail to BSC. The detailing of the design would then have become scope of Bilfinger.

10. It appears that a meeting was arranged for Thursday 20 December 2007 (see the agenda set out in **CEC00547737**) following which an agreement ('the Wiesbaden agreement') (**CEC01502881**) was signed the same day. The agreement noted a construction price of £218,262,426, subject to certain exclusions, provisional sums, assumptions and conditions.

a) What was your understanding of events over the course of 20 December 2007? To what extent were you involved in the discussions and negotiations that day? Who reported to you and how?

I don't have a clear recollection, others than Richard Walker was reporting to me on how open ends should be tied up. Our continuous concern was a design which might be incomplete as well as unforeseen conditions on site and the construction within an old city with potential of surprises.

b) What was your understanding of the extent to which the price in the Wiesbaden agreement of £218,262,426 was fixed and firm (and the extent to which that price was subject to exclusions, provisional sums, assumptions and conditions)?

I don't have a particular recollection. During such a stage all relevant departments (Major Projects, Legal, Technical Services, Commercial, Project Control, etc.) and therefore the important specialist of Bilfinger were involved advising the negotiation team, namely Richard Walker and Scott McFadzen.

c) What was your understanding of the following wording in clause 3.3, namely, “*normal development and completion of designs means the evolution of design through the stages of preliminary to construction phase and excludes changes of design principle, shape and form and outline specification*”?

I believe this is a basic understanding of a fair D&C approach.

1. By detailing design (development) within its concept the accuracy of quantities, materials and methods becomes firm.
2. If principles, shape and form would change the ‘product’ will change entirely and may have to be adjusted +/- in time and price.

11. In a subsequent e-mail dated 10 September 2009 (**CEC00784192**), Stewart McGarrity, TIE’s Finance Director, set out his understanding of how approximately £50m of prices said to be provisional (on the basis of insufficient design information) in BSC’s August 2007 bid became firm sums in the Wiesbaden agreement.

- a) Do you have any comments on that analysis (including, in particular, the suggestion that the provisional sum of approximately £50m previously allowed for incomplete design became a fixed sum following the Wiesbaden agreement)?

I can’t fully recollect as I was not directly involved anymore, however, I though believe TIE wanted to settle long outstanding disputes between BSC and them.

2008 (January to May)

12. Discussions and negotiations continued between TIE and BSC between January and May 2008. By way of overview:

- a) Which individual(s) led for Bilfinger in these discussions and negotiations?

As far as I recall it was Richard Walker and Colin Brady (Project Manager) for Bilfinger and some Siemens representatives for SIEMENS.

b) To what extent were you involved in these discussions and negotiations?

Receiving status reports for major items how set/stated limits are being observed, otherwise no direct involvement. The defence of set limits were observed by Bilfinger's Service Departments.

c) What were Bilfinger's main concerns?

I believe the increasing open and unresolved items (notified departures). I remember such notified departures increased over time to more than 600 changes. The incomplete design (SDS) continued to be a concern as well the related delays providing the design.

d) How were these concerns addressed?

Open communication. I believe the parties wanted to wrap-up, agree and go on to continue works.

e) Do you have any other general comments in relation to events during this period?

None.

13. Discussions regarding novation of the SDS contract to BSC took place in late 2007 and early 2008.

a) What was your understanding of, and views on, that issue?

As I recall design was still incomplete and partially not addressing the site conditions. It would have been an uncontrollable (not manageable) risk to assume responsibility as is. BSC had to clarify for what they can be or not be responsible.

b) What were BSC's concerns in that regard?

Completeness of design, possession of site, ROW (right of way), existing utilities and related risk transfer.

c) Was there any discussion within Bilfinger (and, if so, between whom) about the state and quality of the design and the performance of the SDS Provider?

There surely were, but not on design / construction details rather on principles.

14. Various price increases were sought by BSC, and agreed, between January and May 2008.

By way of overview:

a) It would be helpful if you could explain what price increases were sought and agreed, when and why?

I don't have a particular recollection or memory. But usually if scope, methods and quantities are changing the price will change, too. A price can only be firmed up if the design is clear.

15. By e-mail dated 1 February 2008 Richard Walker advised Geoff Gilbert that:

*"Bilfinger Berger's business model does not permit the liability for risks that do not belong in our Industry or risks which are unable to be assessed and quantified. The pricing assumptions have been based on the information given that tie would deliver the Design in accordance with their Procurement Strategy i.e. Complete at Novation. (See Willie Gallagher presentation to Senior BB&S Executives on 15th. November 2007 – ie. Post Preferred Bidder [see slides **TIE00087334**].) Tie has not delivered the Issued for Construction Detailed Design in accordance with the Procurement Strategy and therefore the Risk Profile has changed for BSC, Tramco and SDS. It is this which is giving rise to the current difficulties and apparent shifting of position" (CEC01489538).*

a) To what extent were these matters discussed within Bilfinger (and between whom)?

The statement of Richard Walker is accurate, true and reflected common understanding in Bilfinger.

There surely were discussions but more on principles. More detailed discussions certainly took place with involved Service Departments or specialists of Bilfinger (Legal, Major Projects, Commercial, Technical Services, etc.).

b) What were your views on these matters?

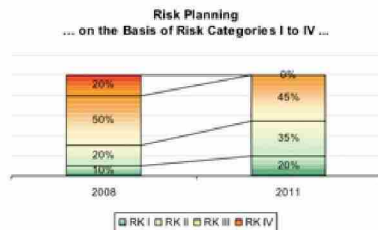
Same than stated.

c) It would be helpful if you could explain the reference by Mr Walker to Bilfinger's "business model"?

It is the business model of an experienced Contractor (see graphic) to categorize risks and further only assume risks already which can be identified, managed, assessed, quantified and priced. Unmanageable risks are unbearable and by no means are to be taken. Projects were usually classified during the bidding period and approval to bid was sought. Such an approval would only be given by confirming the respective risk class (1, 2 or 3). In case a project would develop into a different risk profile (i.e. during tender into a higher risk category) than another approval based on updated facts became mandatory. The Edinburgh Tram project was clearly in Risk Category III with tendency to Category IV, which would have meant Bilfinger will drop out.

Reduction of Risk

Risk Category I	Risk Category II	Risk Category III	Risk Category IV
NO cost and/or quantity risk	REASONABLE cost and/or quantity risk	FULL cost and/or quantity risk	not quantifiable / bearable risks
0% - central risk charge	1% - central risk charge	2% - central risk charge	⇒ NO tender submission and avoidance of risk transfer



Reduction of Risk - 5 February

Slide 11

d) Were you present at Mr Gallagher's presentation to BSC's senior executives on 15 November 2007? If so, do you have any recollection or record of that presentation?

I don't recall and I don't think so.

16. By e-mail dated 4 February 2008 Scott McFadzen sent TIE a Schedule 4 Pricing Assumptions document (**CEC02084854**).

a) To what extent had these Pricing Assumptions been discussed within Bilfinger (and between whom)?

I don't recall the detail of this Pricing Assumptions.

b) What was your understanding of the need for, purpose and effect of, the Schedule 4 Pricing Assumptions?

I can only guess it was in connection to the incomplete design with arising difficulties (see item a).

17. Parties entered into the “Rutland Square” Agreement on 7 February 2008 (**CEC01284179**).

The agreement noted a construction price of £222,062,426, subject to certain exclusions, provisional sums, assumptions and conditions.

a) What was your understanding of the need for and purpose of that agreement?

I don't have a particular recollection but assume the parties saw the need to clarify contractual and scope detail.

b) What was your understanding of the extent to which the price in the agreement of £222,062,426 was fixed and firm (and the extent to which that price was subject to exclusions, provisional sums, assumptions and conditions)?

I believe the contract was clear to what is included and what was not part of the scope and therefore subject to adjustment in time and price.

c) What was your understanding of clause 2 of that agreement (including clauses 2.1 and 2.2)?

I can't review and reconstruct.

d) What was your understanding of the need for and purpose of the Schedule to this agreement (including, in particular, paragraph 2.5 of the Schedule)?

I can't review and reconstruct.

e) In relation to the document attached to the agreement (at p26) “SDS Novation – RODs”, what was your understanding of (i) the purpose of that agreement and (ii) the words: “*Design Growth: The design information which provided the basis for BSC’s price will be a pricing assumption under Schedule 4. The risk of design ‘creep’ accordingly lies with tie*”?

I don’t have access to this agreement. My understanding is, and this was always communicated or firmed up in the contract is, that what was shown in the design and could be clearly identified, described (specs and quantities) as well reasonably anticipated was part of BSC’s scope and price. Further design growth (beyond what was anticipated) remains in TIE’s liability. I can only guess that the word ‘creep’ refers to further growth in scope and quantities.

18. By e-mail dated 13 February 2008 Willie Gallagher noted his concern “*about the level of energy and ... urgency ... to conclude the deal*” (CEC01444007). In the same e-mail chain you advised that you would hold a review meeting with your team “*in order to get a detailed overview of the current progress/negotiation status*” before reverting further to Mr Gallagher.

By e-mail dated 27 February 2008 Mr Gallagher again expressed his “*deepest concern on the apparent lack of progress in bringing the contract negotiations to a close*” (CEC01463219).

a) Why was there a delay in concluding the contract?

As far as I can recollect it was the issue of incomplete design and onerous one-sided contractual conditions proposed by TIE.

b) What was discussed at the review meeting with your team? What was the outcome?

I can’t reconstruct, but usually relevant details would have been presented by the Tender Team as well UK Management and Bilfinger Specialists (Legal, Major Projects, Technical Services, Commercial, etc.) and directions and limits would have been given.

c) Did you revert to Mr Gallagher (and, if so, in what terms)?

I can't recall, but usually I would have indirectly responded (in this case via Richard Walker) to avoid direct contact which potentially leads to triangle discussions and confusion. I guess Richard Walker conveyed the outcome of the review.

19. On 18 February 2008 BSC produced a Design Due Diligence Summary Report, based on design information received by BSC by 14 December 2007 (**DLA00006338**). That document raised various concerns about design, including that "*more than 40% of the detailed design information*" had not been issued to BSC.

a) To what extent was that report discussed within BSC (and between whom)?

I guess the Project / Tender Team in detail and with Executive Management more on the principle.

b) What were your views on the matters in the Executive Summary of the report?

I can't review and reconstruct. ...but surely I would not have accepted design which is incomplete if the contract does not clearly address it.

c) What concerns did BSC have in relation to design and how were these concerns addressed?

I can't review and reconstruct.incomplete design usually creates confusion of scope and responsibility. Surely BSC has tried to clarify and allocate risks to what can be accepted and what not.

20. An internal Weekly Report by Steve Reynolds, Parsons Brinckerhoff, dated 29 February 2008 (**PBH00035854**, page 3), noted that *“in separate discussions with Richard Walker he has mused that if TIE understood the likely true cost of building the scheme then it would be cancelled. This is not idle chat – it is Richard’s view of the strategy he has adopted to retain as much flexibility pre-contract with a view to securing substantial variations post-contract. On a related note, Richard has also informed me that he and his manager (from Wiesbaden) have seriously discussed withdrawing from the bid”*.

a) To what extent were these matters discussed within Bilfinger (and between whom)?

Certainly discussions would have taken place on the principle. At times we (Bilfinger Civil Executive Board) considered withdrawing if the project would not get back into an acceptable / manageable risk profile.

b) What was your understanding of, and views on, these matters?

In full support. Bilfinger would not have accepted unmanageable risks.

c) What discussion(s), if any, did you have with Mr Walker around that time in relation to BSC’s strategy concerning the negotiation of the Infracore contract? Did BSC intend to seek substantial variations post contract? If so, were TIE made aware of that (and, if so, when and how)?

It was made clear, in particular contractually, that any change from the scope should just be executed if time, liability and cost impact to be agreed before execution.

Note: within a short period of time the project accumulated more than 600 of such changes.

d) Did BB consider withdrawing from the bid and, if so, why? Why did BB decide not to withdraw?

See item a). With the contractual agreement negotiated we felt the issues were reasonable addressed.

21. An internal TIE e-mail dated 10 March 2008 from Steven Bell (**CEC01489952**) noted that an agreement had been reached on 7 March (between Mr Walker, Michael Flynn, Steven Bell and Jim McEwan) that the contract price would be increased by £8.6m to cover certain matters.

a) What discussion of that was there within Bilfinger (and between whom) in relation that price increase?

Surely in Bilfinger UK including some Bilfinger experts in respective detail, but I was just involved in general and not in detail.

b) What was your awareness of the price increase, including the items the price increase covered?

I recall I was made aware, that a kind of provisional sum of 8.6m was agreed. More detail I can't recall.

22. By e-mail dated 2 April 2008 Mr Gallagher advised that he was extremely concerned that negotiations were stalling, that "*The lack of empowered Directors to agree final positions is costing us all money and time*" and he asked for a meeting (**CEC01501505**).

a) What were the reasons for the delay in concluding the contract?

I can only guess but believe aside others governance / practice of Bilfinger insisted, that all concerned departments within Bilfinger (legal, project control, commercial, technical services, etc.) must be satisfied, etc..

b) Who was principally conducting negotiations on behalf of BSC? What authority did they have to take decisions?

Richard Walker, within his 'General Power of Attorney'.

c) Did you meet or discuss matters with Mr Gallagher after that e-mail (and, if so, when did you meet, what was discussed what was the outcome)?

I don't recall, but usually I would not have met to discuss detail, except I was there coincidentally or out of courtesy. I fully trusted Richard Walker as well our experts on the detail as he / they were experienced.

23. An e-mail dated 30 April 2008 from Mr Gallagher noted that he had met with you and Stefan Hofsaess, Siemens, in Edinburgh on 14 April 2008 when a deal was negotiated and agreed (**CEC01274958**).

a) Did a meeting take place in Edinburgh on 14 April 2008?

I can't honestly recall.

b) If so, who was present and what was discussed and agreed?

I don't recall but if I was there surely with Richard Walker. Towards the content of such meeting I don't have recollection.

24. In his internal Weekly Report dated 18 April 2008 (**PBH00018333**, paragraph 1.3), Steve Reynolds, PB, noted:

"Richard Walker indicated to me on Friday that he has concerns over the presentation of the Infraco Contract deal to Council. Some weeks ago I had expressed my concerns that the price on the table from BSC did not align with the programme contained in the offer. For example, the price assumes that value engineering savings will be made whereas the programme has no allowance for the design and approvals time which would be required. I had suggested that tie would have to be careful in the form of presentation so as not to mislead CEC. Richard is now expressing (to me) similar concerns and has suggested that he will take this up with tie separately. To a large extent the current position is one of BSC's making where the offer is dependent upon a set of pricing assumptions which can be interpreted by the informed reader as a basis for price increase and

programme prolongation. It may be that Richard is belatedly expressing worries which have more to do with his concern over working with tie as a client or may even be due to friction between Bilfinger Berger and Siemens. Whatever the reason I detect an air of uncertainty and last minute concern over whether BSC should be taking the job”.

a) Did Mr Walker discuss these matters with you (and, if so what was discussed and agreed)?

I don't recall, but at that time the issues were always the same, like incomplete design, design approval time with CEC, utility relocation, ROW and possession of site, increasing contractual departure notices.

b) What were your views on these matters?

I can't reconstruct, but surely insisted that whatever there was all must be openly addressed.

25. By e-mail dated 30 April 2008 (**CEC01274958**) Willie Gallagher noted that Mr Walker had advised that Bilfinger required an additional £12m to conclude the deal, despite a deal having been negotiated and agreed by all parties on 14 April.

In a letter to you dated 2 May 2008 (CEC02084189) Mr Gallagher noted that a meeting would take place on Monday and stated *“I now have real reservations about whether Bilfinger Berger wants to be part of this project and could work within a consortium in anything other than an adversarial manner”*. The letter also referred to a proposed discussion on Monday.

a) Why did Bilfinger seek a further £12m to conclude the deal?

I don't recall the detail but in general I remember, that it had to do with further design developments (design was still incomplete) and we would always insist, that before a contract is signed all known items (increase of cost) must be openly communicated and put at the table.

b) Why had the matter not been raised earlier? Should it have been?

It surely had to do with further design developments (design was still incomplete) and only when design becomes progresses it can be quantified and priced. This was a principle TIE continuously failed to understand as well that BSC could not be the 'owner' of the project, especially when it comes to basic obligations of a responsible owner of a project.

As design was still under development some of the items could not be priced earlier. The pricing is not only supply of materials but in particular how to construct using what equipment with what construction methods and labor as well over what period of time (day, night, sun, rain, etc.).

c) What was your involvement? Did you attend a meeting to discuss the increase (and, if so, what was discussed and agreed)?

I am not sure and don't recall detail, but if so I would surely have insisted to give full transparency to the client and their advisors involved.

26. In his internal Weekly Report dated 2 May 2008 (**PBH00018873**) (page 1) Steve Reynolds, PB, noted:

"Two observations are that:-

- tie has sponsored a paper which was materially incorrect at the time when it was presented to CEC.*
- The price increase proposed by BSC would result in an overall price of £520m in comparison with the overall funding limit of £545m. This is without any allowance for costs to cover changes to scope and programme necessary to bring about alignment of the BSC Offer and the SDS Design."*

a) Was there any discussion within Bilfinger in respect of these matters (and, if so, between whom)?

I don't recall. At that time though we believed the works could be done within the budget if the project won't experience material changes in scope or design as well as implementation period. Discussions took place in BCS, UK and more general w/ Germany

b) What are your views on these matters?

Given the attitude of TIE and its consultants I became increasingly concerned whether the budget was sufficient.

27. We understand that you met with Mr Gallagher on 5 May 2008. By e-mail dated 5 May 2008 you proposed that in the event that Phase 1b did not proceed TIE would pay Bilfinger £3.3 million under the contract for Phase 1b (**CEC01337607**).

See also your clarification e-mail dated 6 May 2008 (**CEC01274976**).

a) What was discussed and agreed at your meeting(s) with Mr Gallagher on 5 May 2008?

As I recall the 3.3m was somehow related to the subsequent phase as some of the scope dealt already with the first phase.

b) Why did you make the proposal noted in your e-mail dated 5 May?

I can't reconstruct the detail, but I believe it had to do that Willie Gallagher needed to lower our price.

c) What was the purpose and effect of that proposal?

Purpose was to be paid (even delayed) for work being done in Phase 1A which was related to Phase 1B.

d) What did the sum of £3.3 million relate to? How had it been quantified?

See item a)

e) What was Mr Gallagher's response? (see e.g. Mr Gallagher's e-mail dated 6 May, **TIE00036508**)?

I don't remember.

28. By e-mail dated 6 May 2008 you noted that if there was agreement on the “Phase 1b transfer” BSC were prepared to reduce the additional sum sought from £12 million to £6 million (**CEC01274974**).

a) Why were BSC prepared to reduce the additional sum sought from £12 million to £6 million? What was the additional sum of £6 million for?

I can't reconstruct the detail but I believe by reducing we certainly have consequently reduced scope / quantities, too.

b) It would be helpful if, for the avoidance of doubt, you could explain the other matters mentioned in your e-mail?

Can't explain, please provide me this email.

29. By letter dated 6 May 2008 Mr Gallagher wrote to you noting his concerns in relation to BSC's “last minute” demand for an additional £12 million and listed a number of conditions on which BSC would retain its position as preferred bidder (**CEC01284033**). You sent Mr Gallagher an e-mail on 7 May and he replied the same day (**CEC01275063**). There were further e-mails on 7 May 2008 (**CEC01352118**). An e-mail dated 8 May 2008 sent on behalf of Mr Gallagher (**CEC01275190** attached a revised list of conditions (**CEC01275191**) following extensive recent discussions that had taken place between Richard Walker, Scott McFadzen and Michael Flynn. Richard Walker responded by e-mail dated 9 May 2008 (**CEC01294681**).

30. Mr Gallagher sent you an e-mail dated 9 May 2008 (**CEC01338102**).

a) Condition 2 attached to Mr Gallagher's letter dated 6 May (CEC01284033) stated that TIE would pay BSC an “incentivisation bonus” of £3 million. What was that sum for? How had it been quantified?

I don't recall detail and context but I believe it was related to the £6 million reduction and that scope could not be reduced respectively so BSC needed a sort of compensation for it. In order for the contract to finally materialize BSC was prepared to take

the £3 million 'at risk' as an incentive.

b) In your e-mail dated 7 May 2008 (**CEC01275063**) you stated, *"We all have engaged in the project on a very different level, to have a 100% design (means quantities and scope certainty) by the end of last year"* and that *"The scope and design is yours and we are responding to the task"*. What did you mean by these comments?

I meant, that the design was still incomplete. This was actually the very basic difference between TIE and BSC. Please as well see my related answers above.

The principle always is, that:

- project is owned by the owner
- the delivery scope is described by the design and specifications, which become embedded in the contract
- the contractor executes the delivery scope, which is designed, specified, described and can be reasonably quantified on the basis of what was provided at the time
- what is not specified and designed can't be priced and therefore is not part of the contract.

c) In his e-mail dated 7 May 2008 (**CEC01275063**) Mr Gallagher stated, *"We cannot be seen to have signed contracts and then be doing nothing for a few months. There is nothing new here. Richard, Scott and the team put together the BB Construction Programme which is an integral part of the contract. If we ask you to move away from that unreasonably, then it is a tie notified departure from your pricing assumptions"*. What did you understand Mr Gallagher to mean by that statement?

I believe he indicated that if BSC is asked for tasks outside their scope they'd be compensated in time and cost.

d) What agreement was eventually reached in respect of the price increase?

I don't recall detail.

31. On 13 May 2008 parties signed the Kingdom agreement (**WED0000023**).

a) It would be helpful if you could explain your understanding of the need for, purpose and effect of that agreement?

I don't recall and I can only guess that BSC was trying to tidy up loose ends.

32. On 13 May 2008 the Council's Policy and Strategy Committee considered a report by the Council's Chief Executive (**CEC01246115**). The report advised that the estimated capital cost for phase 1a was now £512.2 million. The report stated that *"Offsetting the increase in cost is a range of negotiated improvements in favour of TIE and the Council in order to reduce the risk of programme delays and minimise exposure to additional cost pressures, as well as better contractual positions"*.

a) What are your views on the statement noted above? Do you agree with it?

If it is true, it is disappointing to realize after and I guess it illustrates the basic differences in approach. BSC tried to be as open and transparent as possible whereas TIE seemed to have developed comfort at 'the account' of BSC. Furthermore, I can only guess the CEO of TIE was under 'heat' not implementing and wanted to demonstrate to have upper hand on the project. This however is speculation only.

33. Infraco contract close took place on 14 and 15 May 2008, as part of which a number of contracts were signed, including novation of the SDS contract to BSC.

a) What was your understanding of the extent to which the Construction Works Price of £238,607,664 was a fixed price (and the extent to which that price was subject to exclusions, provisional sums, assumptions and conditions)?

The contract price was developed from what was known and agreed. Any deviation or change (notified departure) was to be agreed in time and price before implementation / execution. To this extend provisional sums have been developed. Otherwise the contract was 'detailed sufficiently' to what BSC contractually owed and what not.

34. The contract price assumed that a number of Value Engineering savings would be made.

a) What were your views before contract close on whether these savings were likely to be made?

To my understanding we should have achieved a certain percentage of it, if given the opportunity. As I recollect to some extent regulations, procedures and circumstances (involved parties, etc.) hindered the generation of value engineering. Some value engineering, however, took place. I can't recall the percentage of success.

b) Was the likelihood of achieving the Value Engineering savings discussed with TIE before contract close (and, if so, with whom and when)?

See a), however, I don't recall the detail of the V.E. items as they were surely very project specific.

35. In relation to the Pricing Assumptions contained in Schedule 4 of the Infraco contract (**USB00000032**). Prior to contract close:

a) To what extent were the Pricing Assumptions and the terms of Schedule 4 discussed with you?

Such pricing assumptions were surely discussed within Bilfinger's specialist departments (tender team, cost control, technical services, projects control, legal, commercial, etc.) and should be confirmed to be reasonable to the Executive Management. On such basis I would have concluded and accepted. By the way, it would have been very unusual for me to involve in the pricing detail as I have no personal knowledge of Scottish market prices.

b) What was your understanding of the purpose of the various Pricing Assumptions in Schedule 4?

I can't recollect and remember.

c) Did you have any views on the likely number and total value of the Notified Departures and changes?

Not that I can remember.

d) Are you aware whether the likely number and total value of the Notified Departures were discussed with any TIE employee (and, if so, with whom and when)?

Not that I can remember.

2008 (May to December)

36. After Infracore contract close, it would be helpful if, by way of overview, you could provide your views on the following matters:

- a) What were the main difficulties experienced by BSC in carrying out the works? What difficulties, for example, were caused by incomplete utilities works and incomplete design?

I can only in general recollect that TIE has taken a piecemeal approach in resolving the delay issues contradicting the timely delivery of the project. When design is not complete no work planning can take place and the site would stop or stutter inefficiently.

- b) What steps were taken by BSC after novation of the SDS contract in May 2008 to manage and progress the design?

Can't recall in detail, however, the organisation of BSC was adjusted accordingly (Design Management, etc.) and where possible support was offered to SDS.

- c) What difficulties were experienced by BSC in that regard? What difficulties were experienced in completing the design?

The only thing I recall was that SDS claimed for an additional fee to provide detail they owed under their original scope. BSC was more or less being pushed into a disadvantageous position by the none-cooperative Designer.

- d) Did you have any concerns, at any time, in relation to the performance of the SDS Provider (and, if so, what were these concerns and how, and when were they addressed)?

As I recall the concerns were continuously and openly addressed from the beginning of the project and continuously thereafter. TIE though more and more separated themselves from their responsibilities.

37. Following contract close in May 2008 a major dispute arose between TIE and BSC in relation to the interpretation of the infrastructure contract.

a) When (and how) did you first become aware of that dispute?

Early and due to the frequent reporting of Richard Walker as well Bilfinger's legal department, which had engaged Pinsent Masen from the very beginning.

b) What discussion took place within Bilfinger (including when and between whom) in relation to Bilfinger's position or strategy in relation to the dispute? Who ultimately decided on Bilfinger's position in relation to the dispute (and when)?

Timing:

- Day-to-day on project level with UK Management
- Within BSC by UK Management during frequent meetings
- If needed Bilfinger Civil Executive Level monthly or in urgency ad-hoc.

Escalation:

- 1st level: usually taken on Project level,
- 2nd level: UK Management level
- 3rd level: within BSC
- 4th level: if unresolved on Executive Management Level of Bilfinger Civil, usually based on legal advise given internally and externally as well within Bilfinger Standard.

c) For the avoidance of doubt, what was Bilfinger's position or strategy in relation to the dispute?

Firstly and foremost to avoid dispute; but if unavoidable the chances to succeed should be more likely than not and on major disputes external legal advice was to be sought, ultimately and depending on gravity provided by an experienced external legal advisor or even Queens Counsellor.

As a publicly listed company the understanding of Bilfinger was that by no means items which are duly owed to Bilfinger (more likely than not) can be forgone, except Executive Management (in Germany) accepts to drop. This implicitly meant that disputes will have to be pushed through all levels (negotiation, mitigation, arbitration) and if not successful to be pursued in Court.

38. We understand that approximately 738 Infracore Notified TIE Changes (INTCs) were intimated by BSC between contract close in May 2008 and the Mar Hall mediation in March 2011. We further understand that there were also various TIE Change Notices during that period.

a) What was your understanding of, and views on, the main reasons for the Notified Departures and changes?

As indicated earlier unforeseen circumstances and incomplete design / design growth.

b) How does the number of changes in the contract for the Edinburgh Trams Project compare with the number of changes in other major infrastructure contracts you have worked on i.e. were there more changes in the Edinburgh Trams Project, less or about the same when compared with other projects?

Extensive when comparing with other projects. It was though assumed, that the SDS design had addressed such issues, however, as BSC had to find out during the course of the project the task was unfortunately not completed.

39. During the dispute TIE made a number of allegations against BSC. For completeness, it would be helpful if you could provide your views on the following assertions by TIE:

a) BSC failed to mobilise timeously (see e.g. **CEC00355114**, **DLA00001673**, **DLA00001672**).

To my memory there was no work package justifying significant mobilization. However, wherever BSC was able to work related mobilization took place and work was started reasonably. TIE wanted to pressure BCS contractually.

b) BSC unreasonably refused to commence works involving a variation until a price had been agreed for the works as varied. This process was clearly contractually agreed and might be the very difference which caused delay, rather than resolving obvious project challenges TIE decided to stall and argue.

c) BSC carried out very little on-street works under the Infracore contract with very few exceptions (e.g. Princes Street, in respect of which a supplementary agreement, on a demonstrable cost basis, had been agreed).

I don't recollect the detail, but remember that the situation was very challenging / unforeseen circumstances. TIE refused to accept, that only works are owed which have been specified and designed, if not this was a notified departure.

d) BSC stopped all work in a section if not all utility diversion works in that section had been completed (c.f. undertaking works in those parts of the section in which utility diversion works had been completed, see e.g. (i) letter dated 6 October 2008 from Steven Bell to Colin Brady, **CEC01205274** and (ii) adjudication decision dated 26 July 2010 by Robert Howie QC, **CEC00407650**).

I can't comment on detail, however, recall that there were number of incidences where BSC was asked to mobilize i.e. without ROW cleared. As far as I remember it was contractually clear that an entire section must be cleared before BCS moves in.

e) BSC delayed in carrying out the off-street works (in relation to which utility diversions were, presumably, less of a problem).

Can't comment as I presume this was discussed in detail within the project team and their lawyers during execution.

f) BSC failed in its duty to take all reasonable steps to mitigate delay to the Infracore works.

Can't comment as I presume this was discussed in detail within the project team and their lawyers during execution.

g) BSC failed to properly manage and progress the design process after SDS novation (design being incomplete, and necessary approvals and consents being outstanding, years after contract close).

Can't comment as I presume this was discussed in detail within the project team and their lawyers during execution.

h) BSC intimated an unreasonably high number of INTCs.

Can't comment as I presume this was discussed in detail within the project team and their lawyers during execution.

i) BSC delayed in providing Estimates for the INTCs (see e.g. (i) letter dated 19 February 2010 by Steven Bell, **CEC00574090** and (ii) spread sheet, dated 12 March 2010, **CEC00590422**, in which a number of Estimates were noted to be outstanding).

Can't comment as I presume this was discussed in detail within the project team and their lawyers during execution. As indicated above there have been more than 600 changes to be designed and estimated considering the contract, etc... It was a tedious task which I recall TIE never fully appreciated the detail, complexity and related responsibility connected with it.

- j) When Estimates were provided, they were lacking in specification and/or failed to demonstrate how Infraco would minimise any increase in costs and ensure that the change would be implemented in the most cost effective manner etc (per clause 80.7 of the Infraco contract, **CEC00036952**).

See item above

- k) The amounts in the Estimates were often excessive (see e.g. (i) BSC's Estimate for INTC 1, Design delivery programme, was just over £7m c.f. agreement appears to have been reached at around £3.5m – see **CEC00590422**, (ii) the example of the Russell Road Retaining Wall given by Richard Walker in BSC's opening statement at the Mar Hall mediation noted below (**TIE00670846** at para 16.4) in which he noted that Infraco submitted an estimate of £4.5m, which was reduced by BSC by £2.5m, and then again by £180k, and that the adjudicator awarded £1.46m and (iii) the various adjudication decisions, where the sums sought by BSC were, on a number of occasions, significantly reduced by the adjudicator).

Unfortunately this demonstrates the chemistry in the relationship. It often was a political playground towards TIE's superiors and the issues were often exaggerated. The opposite cases, usually many more of them, were unfortunately not mentioned in such reports.

I) The estimates produced by BSC during settlement discussions in 2010 and 2011 for building a line from the Airport to St Andrew Square were excessive (see e.g. (i) e-mail dated 1 March 2011 by Brandon Nolan (**BFB00094574**) which sought more detailed information in relation to Siemens' Project Phoenix Proposal (PPP) price, noting that Siemens' PPP price of over £136m was double Siemens' original price of c. £68m for the Airport to Haymarket (see also Mr Nolan's e-mail dated 2 March, **BFB00094589**, in which he explained how he had arrived at the sum of £68m) and (ii) report dated 19 August 2011 by Faithful and Gould (**CEC01727000**) which, in the Executive Summary, stated that current costs for the on-street works for Siemens were "*extremely high and not value for money*" and that the cost of the other on-street works was "*grossly inflated*").

I can't comment as I lack detailed knowledge of the related issue.

40. By letter dated 13 October 2008 (**DLA00001671**) Richard Walker suggested a structured approach to progressing matters.

Mr Gallagher replied by letter dated 14 October (**DLA00001672**). In his letter Mr Gallagher stated, "*We ... feel it will be important to recognise that normal design development from the base date design was provided for in the price agreed at contract close*".

There appears to have been a conference call on 14 October 2008 which discussed establishing three parallel streams of activity, namely, establish the programme position in terms of delay and progress at discrete intervals, sort out an emergency instruction process that provided for recognition of cash flow and increase in contract value for emergency changes and a task force for the unblocking of approvals, access problems and encumbrances etc to focus on the current top 10 problem items (as set out in an e-mail dated 15 October 2008 from Michael Flynn, **CEC00605556**).

a) What discussion of these matters was there within Bilfinger (and between whom)?

As I recall there was general agreement as this was seen to go into the 'right' direction moving the project forward.

b) What was your involvement? What were your views?

See above. General overview and acceptance of approach.

41. BSC's Period Report to 8 November 2008 (**CEC01169379**, page 3) stated:

"Construction works are in progress in sections 1B, 2A, 5A, 5B, 5C and 7, but are all impacted by external issues which require resolution through the change process. In Leith Walk, un-diverted utilities in the first work site are severely hampering progress. On Edinburgh Park viaduct, significant changes to foundation works are required due to unsuitable ground conditions ... The overall volume of changes, and in some cases requirement for design work to produce change estimates is overloading available management resources and introducing severe delay. Disagreement over liability for change, for example between Base Date information and IFC drawings when produced, exacerbating the delays in agreement of changes".

See also TIE's response in **CEC00417427** at page 12.

a) Were you sent BSC's period reports?

No, but they were reviewed by Bilfinger's specialist department and summaries were provided to Executive Management.

b) What was your awareness of and views on the matters noted above?

General awareness but no particularities. When I occasionally visited the site I was updated, but left it to BSC to resolve.

42. An internal TIE e-mail dated 25 January 2010 by Stewart McGarrity noted that at a meeting with Mr Gallagher in November 2008 you had introduced Dr Keysberg (**CEC00605561**).

a) Who was Dr Keysberg and why was he introduced at the meeting with Mr Gallagher in November 2008?

Dr. Keysberg was my colleague in Bilfinger Civil Subgroup Executive Board. As mentioned earlier we reshuffled regional responsibilities in Bilfinger Civil Subgroup and Dr. Keysberg became responsible for UK.

b) What was the purpose of the meeting, what was discussed and what was the outcome?

I don't recall the very detail of the meeting but surely introducing Dr. Keysberg and expressing general concerns over the development of the project and progress on resolving pending issues.

43. BSC's Period Report to 6 December 2008 (**CEC01121557**, page 3) noted:

"Minimal progress has been made on issue of civil IFC design packages particularly those required for trackwork in sections 1 and 7. Efforts to resolve outstanding issues in technical meetings have not been successful, since the issues are largely commercial".

"Limited construction works have been progressed in sections 1B, 2A, 5A, 5B, 5C and 7, but are all impacted by external issues which require resolution through the change process. Discussions are in progress to agree an interim change mechanism to permit works to proceed whilst the full change process is followed. Until this is in place, BSC will not progress any further changed works prior to agreement on costs".

See also TIE's response in **CEC00423799** at p13.

a) What was your awareness of and views on these matters?

I recall I was made aware of the general situation but my views were that I became increasingly concerned over the many

changes to be resolved contractually (notified departures).

Events in 2009

44. A dispute arose in relation to the works at Princes Street due to start in February 2009. By e-mail dated 18 February 2009 BSC advised TIE that they did not consider that they were contractually obliged to start work on Princes Street (**CEC00867153**). David Mackay, Chairman, TIE, set out TIE's position in a letter dated 19 February 2009 (**CEC00942802**). An e-mail dated 19 February from BSC stated that they were prepared to commence works in Princes Street on a goodwill basis on the understanding that the works would be paid on a demonstrable costs basis (**CEC00942256**). Dr Keysberg responded to Mr Mackay by letter dated 23 February 2009 (**CEC00942804**). After discussion, including invocation of the dispute resolution procedure, the dispute was resolved by parties entering into the Princes Street Agreement (**CEC00302099**), whereby BSC would carry out the works at Princes Street on a demonstrable costs basis (we understand that an initial draft of the agreement was agreed on 20 March 2009, to allow work to commence on 23 March, and that the final version of the agreement was signed on 30 May 2009).

If you were involved in the Princes Street dispute:

a) What was your involvement in the Princes Street dispute, including the discussions to resolve the dispute?

No direct involvement, others than general discussions within Bilfinger Civil Subgroup Executive Board.

b) What was your understanding of the basis, and underlying cause(s), of the Princes Street dispute?

Can't really reconcile, I think this were ROW issues and limitations with the Christmas business.

c) What was your understanding as to whether BSC were in a position in February 2009 to start (and progress to completion) the works at Princes Street had a suitable instruction been received from TIE? (see e.g. (i) e-mail dated 15 May 2009 from David Bell of Mackenzie Construction Ltd, **BFB00058190** and (ii) briefing note dated 22 May 2009 relating to the track depth at Princes Street, **CEC00948650**)?

Can't remember detail as I did not have direct involvement anymore.

d) What is your understanding as to why it was agreed that BSC would carry out the Princes Street Works on a demonstrable cost basis (c.f. on a fixed price basis)? Did you understand that to be a departure from the pricing provisions contained in the Infracore contract? Did you consider that that was more advantageous to BSC or to TIE?

Can't remember detail as I did not have direct involvement anymore.

45. We understand that an informal mediation between TIE and BSC took place between 29 June 2009 and 3 July 2009. e-mail dated 26 June 2009 (**CEC00965765**) attached a list of issues for mediation (**CEC00965767**).

a) What involvement, if any, did you have in that mediation?

No involvement

b) If you were involved, what was discussed and what was the outcome?

No involvement

46. In an internal TIE e-mail dated 31 July 2009 Richard Jeffrey noted that he had met with Martin Foerder the previous evening and that, among other things, Mr Foerder had indicated that BSC would not start any more on-street works without a much

improved (i.e. cost plus) supplemental agreement (which Mr Jeffrey had indicated was not on the table), which would affect start dates for Shandwick Place and Leith Walk (**CEC00667242**). By e-mail dated 31 July 2009 (**TIE00031088**) Mr Foerder sent Richard Jeffrey BSC's Final Settlement Proposal (**TIE00031089**). The proposal was rejected by Mr Jeffrey's e-mail dated 4 August 2009 (**TIE00033401**). We understand that discussions continued in the second half of 2009, in particular, in relation to exploring the possibility of using the Princes Street Supplementary Agreement as the basis of a wider On-Street Supplementary Agreement. If you were involved in these matters:

a) What was your involvement in these matters?

No involvement

b) Was BSC's position that they refused to start any more on-street works without a supplemental agreement and, if so, why?

I can only guess, that since there was a contractual impasse with the many changes that a supplement agreement might have helped to overcome the impasse.

c) Was BSC's position different in relation to the off-street works (and, if so, why)?

Can't recall.

d) To what extent, if at all, were you involved in the further discussions that took place in 2009?

No involvement

47. By internal e-mail dated 9 December 2009 (**CEC00328711**), Baltazar Ochoa, Change Manager, BB, circulated a draft Memorandum of Understanding between BB and PB (**CEC00328712**).

See also (i) the minutes of a TIE/BSC meeting on 21 June 2010 (item 214) which noted that Kevin Russell had advised that there was one additional agreement in place between BSC (or individual companies within BSC) and the SDS Provider (**TIE00369812**), (ii) the discussion of the matter in Steven Bell's letter dated 30 June 2010 (**CEC00161476**), (iii) BSC's letter dated 5 July 2010 (**CEC00439115**), (iv) Mr Bell's letter dated 13 July 2010 (pages 4 and 5) (**CEC00109840**) and (v) BSC's letter dated 12 October 2010 (**TIE00372104**).

- a) What was your awareness and understanding of any agreement or memorandum of understanding between BB and PB in relation to PB providing additional design services and/or in relation to further incentives or remuneration being provided to PB?

Can't recall

- b) What was the purpose of any such agreement?

Can't neither recall nor reconstruct

- c) What discussions took place between BB and PB in relation to any such agreement?

Don't know

- d) Were Siemens a party to any such discussions and agreement?

Don't know

- e) Was such an agreement (or a similar document) ever agreed and/or signed (and, if not, why not)?

Don't know

f) If such an agreement was entered into, what was your understanding of its' main provisions?

Don't know

Events in 2010

48. By letter dated 19 February 2010 Mr Foerder sent TIE a detailed offer for a Supplemental Agreement covering the remainder of the on-street works (the letter and offer are both **CEC02084034**). By letter dated 26 February 2010 (**CEC00368373**), Richard Jeffrey rejected BSC's offer. Mr Foerder replied by letter dated 3 March 2010 (**CEC00648426**).

a) What was your involvement, if any, in these proposals and any discussions between BSC and TIE?

No direct involvement, others than overseeing Bilfinger's business

49. An internal TIE e-mail dated 6 July 2010 from Tony Rush reported on a meeting he had had with Mr Kitzman (**CEC00337344**). Mr Rush noted that Mr Kitzman considered that it would help him if you could join him so that Mr Kitzman and you could explain as a "team" the blockages that needed removing. Mr Rush also noted that *"Enenkel is [Mr Kitzman's] puppet master not Reid who has problems elsewhere"*.

See also an e-mail dated 6 July 2010 from Mr Kitzman to Mr Rush and Mr Rush's reply the same day (**CEC00438588**).

a) What were your responsibilities for the tram project at this time? What involvement did you have in the project at this time?

No direct involvement, others than overseeing Bilfinger's business.

Maybe the above is exaggerated. I remember we mobilized Mr. Kitzman to overcome potential impasses and communication bottlenecks. It was an attempt going forward. Kitzman was a trusted man in Bilfinger Civil who successfully completed difficult infrastructure projects in North America.

b) Who was Mr Kitzman, who was Mr Reid and what was their involvement? Did they report to you on their discussions with TIE?

Mr. Reid was at the time Member of the Group Executive Board of Bilfinger SE overseeing the Subgroups Concession, Civil and Power in Bilfinger SE. As he was Scottish he occasionally was referred to, however, at the time did not have a particular role in the project.

c) Who was the main decision maker in Bilfinger Germany at this time in relation to matters concerning the tram project?

As mentioned previously Dr. Keysberg at that time was the focal point in the Bilfinger Civil Subgroup Executive Board in Germany, which was chaired by me. Dr. Keysberg reported regarding progress of the UK business frequently but not in detail. Mr. Foerder, the Project Manager reported to the BSC Board but as well to Dr. Keysberg.

d) Did you become involved in the discussions between TIE and BSC around this time (and, if so, what was discussed, with whom and what was the outcome)?

No.

50. By letter dated 29 July 2010 (**TIE00885457**) Mr Foerder sent BSC's "Project Carlisle 1" proposal (**CEC00183919**) to TIE.

Under the proposal BSC offered to complete the line from the Airport to the east end of Princes Street for a Guaranteed Maximum Price of £433,290,156 and 5,829,805 euros (less the amounts previously paid), subject to a shortened list of Pricing Assumptions. BSC's proposal was rejected by TIE by letter dated 24 August 2010 (**CEC00221164**), in which TIE responded with a counter-proposal of a construction works price (to BSC) for a line from the Airport to Waverley Bridge of £216,492,216, £45,893,997 to CAF, the amount to SDS to be determined and a sum of just under £4,922,418 in respect of Infracore maintenance mobilisation, Tram maintenance mobilisation and Infracore spare parts.

a) What was your involvement, if any, in these proposals and any discussions between BSC and TIE?

No involvement.

51. By letter dated 12 August 2010 David Mackay, Chairman, TIE, wrote to you suggesting a meeting (**CEC00128646**).

You replied by letter dated 16 August 2010 (**CEC00129590**). Mr Mackay replied by letter dated 23 August 2010 (**CEC00131076**) and you, in turn, replied by letter dated 25 August 2010 (**CEC00077870**). Andreas Goss of Siemens wrote to Mr Mackay by letter dated 25 August 2010 (**CEC00077851**) and Mr Mackay replied to Mr Goss by letter (mistakenly dated 12 August) e-mailed on 26 August 2010 (**CEC00207703**) and (**CEC00207704**).

a) Did you meet with Mr Mackay around that time (and, if so, what was discussed and, if not, why not)?

I don't really recall whether I met Mr. Mackay at that time. I met him sometimes but can't reconstruct the timing.

b) Who was leading the discussions for Bilfinger at that time? Who was the main decision maker in Bilfinger at that time?

Mr. Foerder and Dr. Keysberg.

c) What were your main concerns in relation to the project around that time?

Whether the project would stall at all and about publicity it may have on Bilfinger. At the time we saw TIE contacting Bilfinger clients which was a concern.

52. Further discussions took place between Mr Rush and Mr Kitzman. Mr Mackay wrote to you by letter dated 7 September 2010 enclosing various papers that Mr Rush, Mr Kitzman and James Molyneux had been working on (**CEC00157664**). In his letter Mr Mackay expressed concern that Bilfinger and Siemens did not appear to have a joint approach to the settlement discussions and, indeed, that *“there are fundamental differences between Bilfinger Berger and Siemens which may even go as far as a desire by the two Consortium members to disengage with each other and/or change the structure of the Consortium relationships”*.

You replied by letter dated 8 September 2010 (**CEC00079208**) and Mr Mackay, in turn, replied by letter dated 9 September 2010 (**CEC00080811**).

a) What were your views on the concerns raised by Mr Mackay concerning the relationship between Bilfinger and Siemens?

I don't have the detail of that letter.

b) How was the relationship between Bilfinger and Siemens at that time?

There were some tensions but not serious.

c) What discussions took place between Bilfinger and Siemens around that time (and between which individuals) in relation to the settlement discussions?

All discussions took place on BCS-level and referred to by each company to their management. Occasionally there was a phone

call on senior executive level, but to my recollection no detail others than trying to continue to project and avoid reputational damage. I spoke to Mr. Goss (CEO Siemens UK one or two times).

d) To what extent did Bilfinger and Siemens have a joint approach to the settlement discussions? On what matters were Bilfinger and Siemens in agreement? On what matters did the two companies have different views?

I don't fully recall, but I think SIEMENS gave way for Bilfinger to resolve. SIEMENS's issues were not as substantial.

53. By letter dated 11 September 2010 (**TIE00667410**), BSC submitted its "Project Carlisle 2" proposal to TIE, in which BSC offered to complete the line from the Airport to Haymarket for a Guaranteed Maximum Price of £405,531,217 plus 5,829,805 euros, subject to the previously suggested shortened list of Pricing Assumptions. By letter dated 24 September 2010 (**CEC00129943**), TIE rejected BSC's proposal. Mr Foerder responded by letter dated 1 October 2010 (**CEC00086171**).

a) What was your involvement, if any, in these proposals and any discussions between BSC and TIE at that time?

No direct involvement

54. Between 9 August and 12 October 2010 TIE served ten Remediable Termination Notices (RTNs) and three Underperformance Warning Notices (UWNs) on BSC. In response, BSC both denied that the RTNs constituted valid notices and, in some cases, also produced Rectification Plans. The RTNs and BSC's responses are (**CEC02084518**) to (**CEC02084529**). The UWNs are (**CEC00378695**), (**CEC00167342**) and (**CEC00164758**).

a) What was your awareness of, and views on, these notices?

Can't recollect in total, but my view was that TIE wants to make or break the project.

b) To what extent were these matters discussed within Bilfinger (and between whom)?

They were discussed and precautionary measures (PR, external legal advise, etc.) was engaged and firmed up.

55. By letter dated 29 September 2010 (**TIE00409574**) Martin Foerder advised TIE that BSC were no longer prepared to carry out “goodwill” works (i.e. works which were the subject of 94 outstanding INTCs listed with the letter, in respect of which no TIE Change Order or an agreed Estimate existed, and which BSC considered that they were not required to carry out under the contract).

a) What was your involvement, if any, in BSC coming to that decision?

No direct involvement

b) Why did BSC decide to stop carrying out “goodwill” works?

No direct involvement, but I assume to stop the cash drain

Events between January and September 2011

56. On 24 February 2011 BSC provided TIE with its “Project Phoenix Proposal” (**BFB00053258**) to complete the line from the Airport to Haymarket for a total price of £449,166,366, subject to a shortened list of Pricing Assumptions.

a) What was your involvement, if any, in that proposal?

No direct involvement

57. Between 8 and 12 March 2011 mediation talks took place at Mar Hall Hotel, Glasgow. TIE prepared a mediation statement (**BFB00053300**) with exhibits (**CEC02084530**) to (**CEC02084561**). BSC also produced a mediation statement (**BFB00053260**). Sue Bruce delivered an opening statement on behalf of CEC (**CEC02084575**) and Richard Walker delivered an opening statement on behalf of BSC (**BFB00053256**) and (**TIE00670846**). A document “ETN Mediation – Without Prejudice – Mar Hall Agreed Key Points of Principle” was signed by the parties on 10 March 2011 (**CEC02084685**). The principles were incorporated into a Heads of Terms document (**CEC02084685**). Both documents were non-binding and were subject to contract. The documents set out a price of £362.5 million for the off-street works (i.e. from the Airport to Haymarket, with other ancillary works) with a target price of £39 million for the on-street works (i.e. from Haymarket to St Andrew Square). If you were involved in these events:

a) Were you present at the mediation?

No

b) What happened over the course of that week?

No involvement

c) To what extent did Bilfinger UK require to obtain approval from Bilfinger Germany for the agreement reached? How (and when) was any such approval obtained?

Can't recall, but usually a Bilfinger lawyer would have been present and a 'envelope' within they could settle would have been given

d) What was the outcome of the mediation i.e. what were the main matters agreed? Were the Heads of Terms noted above agreed at the mediation or in the following weeks or months?

No direct involvement, don't recall

e) What were your views on the outcome of the mediation?

No direct involvement, don't recall

58. On 15 September 2011 a full and final Settlement Agreement (Minute of Variation 5) (**BFB00005464**) was entered into between TIE, CEC and BSC. If you were involved in the Settlement Agreement:

a) What discussion was there within Bilfinger of the settlement agreement?

General nature as the Bilfinger Civil Executive Board was authorized to settle. At that time I was not in the Bilfinger Civil Board anymore as I was promoted as a Member to the Group Executive Board of Bilfinger SE

b) What were the main changes to the contract brought about by the settlement agreement?

No direct involvement, don't recall

c) What were your views on the settlement agreement?

No direct involvement, however, I was told we found an agreement which enabled us to deliver the agreed scope of works and the project to complete.

September 2011 until completion in 2014

59. If you continued to be involved in the tram project after September 2011, by way of overview:

a) In general, how were the on-street and off-street works progressed?

No direct involvement, don't recall

b) What were the main difficulties that arose?

No direct involvement, don't recall

c) How were these difficulties resolved?

No direct involvement, don't recall

d) What further design work was undertaken (and by whom and when)? When was design finally completed? When were all statutory approvals and consents finally obtained?

No direct involvement, don't recall

e) What further utilities diversion work was undertaken (and by whom and when)? When were the utilities diversion works finally completed?

No direct involvement, don't recall

f) How did the difficulties that arose, and how they were resolved, compare with matters prior to Mar Hall?

No direct involvement, don't recall

g) Why did works, apparently, progress in line with the new budget and programme after Mar Hall (in contrast with the position before)? What was different?

No direct involvement, don't recall

60. We understand that following the Mar Hall mediation there were approximately 352 Post Mediation Changes.

a) On the face of it, that seems a relatively large number of changes given, by that stage, the design and utility diversion works ought, presumably, to have been largely completed and given that a shorter section of line was to be built. Do you have views or comments on that suggestion?

No direct involvement, don't recall

Project Management and Governance

61. In relation to the project management and governance of the tram project:

a) Do you have any views, in general, on the project management and governance of the tram project?

At start the Project Management in TIE was composed of individually hired staff looking predominantly for their own destiny. The longer the project may take the better it is. At the time UK and especially Scotland was not a booming construction market. Further the structure and competencies were not always clear. The understanding of the contract signed was limited and advise was given from outside, so it became a project driven by so called experts and advisors. Such mixture usually won't help the economical implementation of a project. It would have been better to engage a professional and experienced Consultant overseeing the implementation of the project.

b) Do you have any views on the performance of the various organisations (including the senior personnel in these bodies) involved in the project management and governance of the tram project (including e.g. TIE, TEL, CEC and Transport Scotland)?

See item a) above, beyond I felt that some of the Individuals in the organizations mentioned were trying to resolve whereas others were tied in their political agenda. The client was heterogeneous, political and therefore difficult.

c) Did you have any concerns, at any stage, in relation to the performance of the main contactors involved in the tram project, including Bilfinger, Siemens and Parsons Brinckerhoff? If so, what were these concerns and how were they addressed?

BSC was continuously trying to go forward and pro-actively resolve. Lot's of goodwill work was advanced and done. If not so the tram project would have never been constructed and a further inflation in time and cost might have taken place.

At no time I had major concerns related to Siemens. I don't clearly recall the role of PB.

Final Comments

62. By way of final comments:

a) How did your experience of the Edinburgh Trams Project compare with other projects you have worked on, both previously and subsequently?

Very political during the first phase and lack of adequate support implementing such type of infrastructure project in a challenging environment. At the later stage and once the many changes (>600) have been fairly assessed and addressed within supplement agreements the implementation became professional.

b) The mediator at Mar Hall had, apparently, remarked in his opening statement that the tram project was a “Simple infrastructure project” (TIE00670972). To what extent do you agree with that statement? To what extent were the problems with the project caused by the difficulty of the civil engineering and construction works and to what extent did the problems arise for other reasons?

It was a simple infrastructure project in an inner-city environment with loads of unforeseen circumstances of an historical city and having with SDS a designer who simply failed to reasonably (especially timely) address the project in this context. TIE implemented a phased approach starting with ‘early works’ relocating utilities, clearing other hindrances and preparing for possession of site to be guided by an adequate design. Such design (when completed) was to provide the basis for the second phase a Design and Construct Contract. In the hindsight it is obvious, that the first phase was not properly completed.

At times TIE regarded BCS’s goodwill work as contractual weakness or even stupidity (see item 32). Just after firming up TIE started addressing seriously their true issues and deficiencies.

For similar complex projects the NEC contract model might as well have been a better model to implement such ‘simple’ project in an unpredictable inner-city environment. There are good examples in UK where NEC has been successfully utilized.

c) Do you have any views on what were the main reasons for the failure to deliver the tram project in the time, within the budget and to the extent projected?

See item b) above

d) Do you have any comments on how these failures might have been avoided?

See item b) above

e) Are there any final comments you would like to make that fall within the Inquiry's Terms of Reference and which have not already been covered in your answers to the above questions?

When BSC tendered for the project it was definitely in best faith to deliver a state of the art tram project to a city who wanted the project. Both Siemens and Bilfinger believed in the project. As it surfaced later Edinburgh unfortunately was neither prepared nor ready for the implementation of such major infrastructure. It is known today that preparatory works and design were insufficient and incomplete. Implementation cost recorded today may reflect such circumstance. It is the belief of the author that there could have been certain cost savings (especially when it comes to time), but for this preparatory works and design should have been completed and thereafter related D&C with tram supply should have been implemented without delay. Regardless one should not believe that the tram project could have been much lower in cost. In the aftermath everybody must note that design, construction and supply of a tram always has its related cost reflecting on its very unique environment of implementation, in this case the historical city of Edinburgh.

Today Edinburgh got its tram, which is obviously improving accessibility to and within the city. The tram did not only improve infrastructure and citylife but as well substantially improved the city's carbon footprint. The implementation was challenged and could have been smoother, but the effort of all involved was certainly worthwhile.