Edinburgh Tram Inquiry Office Use Only
Witness Name: Martin Foerder
Dated:

The Edinburgh Tram Inquiry

Witness Statement of Martin Foerder

My full name is Martin Heinz Foerder. I am aged 54, my date of birth being [redacted]. My contact details are known to the Inquiry. I have previously provided a statement dated 10 December 2015 to the Inquiry and this statement should be read in conjunction with that statement.

My current occupation is Member of Management Global Projects, and I am employed by Implenia Construction GmbH. My role in the Edinburgh Trams Project ("ETP") was Project Director, employed with Bilfinger Construction UK ("BCUK") between 1 March 2009 and 31 May 2014. My main duties and responsibilities concerned the overall management of the work that BCUK were involved in with the Project.

Statement:

Introduction

Experience

1. Prior to March 2015, I was employed by Bilfinger for almost 28 years:

- I started with Bilfinger in 1987 in the Head Office in Wiesbaden.
- From 1992 until 1997 I was Site Manager for the Metro Project Chungho Line in Taipei, Taiwan.
- In 1997 I was transferred as a Site Manager/Construction Manager to the Metro Project Chalaem in Bangkok, Thailand and became the Project Director in 2000. I successfully completed this Project which was handed over and went into operation in 2004.
- From 2005 until February 2009 I was the responsible Project Director for Malmö City Tunnel in Sweden.

2. The challenges constructing an underground metro are similar to those constructing an over-ground rail network. The former is even more complex, due to it being underground. In both cases, it is necessary to deal with the stakeholders around the construction site, and there are public utilities which must be altered within the construction area.

Joining Project

3. I was requested by my superior in December 2008 to take over the Project Director role in Edinburgh, due to the contractual and commercial difficulties the Project was facing. It was felt that additional resources were required to help address some of these issues.

4. Colin Brady, who had previously been the Project Director, remained as my deputy and Technical Manager. I was also supported by a Contract Manager, Kevin Russell and a Commercial Manager, David Gough. We had a large team of additional commercial and technical support.

5. In late January 2009, I visited Edinburgh for three days to get a briefing about the Project by Colin Brady and Richard Walker, at that time the incumbent Managing Director of BCUK. I was then on holiday for the month of February 2009. I was, in general terms, aware about the contractual difficulties which had arisen – but not the specifics.

6. I was told that BCUK were in a consortium with Siemens plc ("Siemens") and Construcctiones Y Auxiliar de Ferrocarriles S.A ("CAF") to build the Edinburgh tram network. BCUK would carry out the civil engineering works. Siemens were the system designers and system providers. CAF were building and providing the trams. Collectively we were known as Infraco. The original consortium and tendering party had been BCUK and Siemens ("BBS"). At the request of our client, Transport Initiatives Edinburgh ("TIE"), CAF had been novated to the consortium ("BSC") at the same time as the Infraco Contract (**CEC00036952**) was signed on 14 May 2008 ("the Infraco Contract").

7. I formally joined the Project in March 2009. As Project Director, I managed the whole Project on behalf of my Company. Colin remained as my deputy, with the new title of Technical Manager. Due to the number of commercial issues being raised, it was agreed that I would focus on these and Colin would concentrate on technical issues. Colin left the Project in 2010.

Reporting Lines

8. Siemens did not report directly to BCUK – they were a partner. Partners typically exchange views and look to establish common ground. We had a lot of meetings to ensure coordination. The meetings involved people from the management of our partners.

9. I was never employed by BCUK. I was a German employee of the parent company seconded to BCUK for my spell as Project Director on the ETP. As Project Director, I had to report to our Regional Manager, Richard Walker. I also reported to our Managing Director in Germany, Mr Enenkel. The management team in Wiesbaden were concerned about this Project, and I reported back to them through Richard Walker. We were reporting directly to Joachim Enenkel, who was the Managing Director of the Bilfinger Construction GmbH. When Mr Enenkel moved to a new position within Bilfinger SE, we then reported to Dr Keysberg in relation to key issues arising on the Project.

10. This was a large project for BCUK to be involved in, and management had to sign-off on entering into the Infraco Contract (**CEC00036952**) in the first place. The Bilfinger SE board in Mannheim would have provided the final sign-off.

Involvement of Germany

11. Bilfinger Construction UK Ltd are an independent legal entity within the UK. When it came to the day-to-day business everything was passed through me. In turn I reported back to Richard Walker when it was necessary. In 2009

there was very little involvement from Germany. However, I did provide monthly reports back to Germany. This was normal procedure for all on-going projects Bilfinger were involved in. At that time there was certainly no influence from Germany.

12. At the start of the Project none of the decisions I was making had to be reported back to head office in Germany for approval. However, when the Project became more critical in 2010/11 I had to report back. I did not receive instructions from Germany, but I was provided with guidance as to how things should progress. This did not cause any difficulties to me or any delays to the Project.

13. Richard Walker was also reporting to the German management team. All lines of communication were open at all times, and on occasion I would also report directly to Germany as I was on a direct secondment. We had regular monthly reporting back to Germany, but our discussions with the management team were much more regular than this, particularly at certain critical stages of the Project. The management team in Germany were aware of and took part in the decisions which were made on the Project.

14. We could not and did not operate independently from Head Office. They became more heavily involved where they thought it necessary, and there was quite a bit of management and guidance from senior management at the critical stages of the Project. Dr Keysberg, in particular, engaged in direct communication with David Mackay. I was pleased to have Dr Keysberg's support in relation to the many issues which arose, but at times this was clearly not appreciated by TIE.

15. In addition, the Bilfinger in-house legal team in Germany were very much involved in the Project. They worked closely with our lawyers in Edinburgh, Pinsent Masons. After the Mediation which took place in March 2011, the Project was considered to be back-on-track and management were much more 'hands-off' in terms of their day to day involvement.

TIE's Role

16. TIE was a limited company set up and wholly owned by the City of Edinburgh Council ("CEC"). Its purpose was to deliver projects, of which the ETP was one. CEC were guarantors of the Project, but Infraco had no direct contractual relationship with them.

17. When I joined the Project, TIE's interim Chairman was David Mackay. He had replaced the previous Chairman, Willie Gallagher, who had resigned in November 2008. Shortly after I joined, Richard Jeffrey took up the post of Chairman. He resigned in 2011. From the point I joined until the point of Mediation, the Project Director was Steven Bell. He was supported by Frank McFadden as Construction Director, and Susan Clark as Deputy Project Director.

18. The design for the Project had been procured by TIE directly from the Systems Design Services Provider ("SDS"). The SDS was made up of a number of engineering firms led by Parsons Brinckerhoff ("PB"). The original TIE programme provided that the SDS design was to be finished by the time that the Infraco Contract was awarded. It was not complete, and I understood that there had been concerns at the lack of design detail at the stage of tendering. SDS was novated to Infraco – which would complete the design and carry out construction of the ETP. There were various pricing assumptions which related to the status of the design at the time that SDS was novated. I discuss these further below and in my original witness statement.

19. TIE separately contracted with Carillion plc (previously known as Alfred McAlpine plc) to carry out what was known as the Multi Utility Diversion Framework Agreement Works ("MUDFA"). These works were also to have been completed prior to the Infraco Works commencing. They were not, which was a major issue for us.

Infraco

20. As I understood it, BCUK had experienced problems from almost the first day of the Project. There seemed to be a complete misalignment between BCUK and TIE as to the meaning and operation of certain key aspects of the Infraco Contract which the parties had entered into.

Uncertainties

21. As it was explained to me – and as I subsequently came to understand – the Infraco Contract contained provisions which had been required due to the remaining uncertainties at the time of tendering. Most of these risks were contained in Schedule Part 4 of the Infraco Contract (**USB00000032**) entitled 'Pricing'. Within it, certain assumptions were made for the purposes of arriving at a Contract Price, even though it was known that these assumptions were incorrect. For example, it assumed that all the preceding MUDFA Works would be completed before the Infraco was due to commence its works. It also assumed that the design would be substantially complete, even though it was known during tendering that this was not the case. Schedule Part 4 took precedence over other parts of the Infraco Contract. Clause 4.3 provided that, *"Nothing in this Agreement shall prejudice the Infraco's right to claim additional relief or payment pursuant to Schedule Part 4 (Pricing)"*. This is an unusual clause, because in a design and build contract the primary obligation is usually to build to the Employer's Requirements.

22. There were further uncertainties, such as the design not having been integrated with the BCUK and Siemens proposal, third party approvals not having been obtained, and concerns about the ground conditions in various locations. These are just some of the issues which I understood had concerned the BCUK team involved in the tender.

Pricing Assumptions

23. The problem that this had posed for the team at tender stage was how to arrive at a price. This led to the pricing assumptions which were included in

Schedule Part 4. I had understood that, notwithstanding the uncertainties that continued to exist, TIE were insistent that the contract be signed when it was. This was certainly earlier than I would have recommended given these on-going uncertainties. However, I understood that the Infraco tender team had reassured themselves that the risk allocation and the protection in Schedule Part 4 allowed Infraco to enter into the Infraco Contract at that time.

24. Once the Infraco Contract had been signed, if the facts and circumstances differed from what had been assumed then the intention was that this would entitle the Infraco to more time and money. This is explained in the body of Schedule Part 4 itself at 3.2.1.

25. There were 43 Pricing Assumptions in total, covering a wide variety of uncertainties. The key pricing assumptions concerned design and completion of the MUDFA Works: for pricing purposes it was 'assumed' that these matters were completed when, in reality, the parties knew that they were not. The key Pricing Assumptions were set out at 3.4.

26. The operative clause in Schedule Part 4 is clause 3.5 which provides that: *"The Contract Price has been fixed on the basis of inter alia the Base Case Assumptions noted herein. If now or at any time the facts and circumstances differ in any way from the Base Case Assumptions (or any part of them) such Notified Departure will be deemed to be a Mandatory tie Change requiring a change to the Employer's Requirements and/or the Infraco Proposals or otherwise requiring the Infraco to take account of the Notified Departure in the Contract Price and/or Programme in respect of which tie will be deemed to have issued a tie Notice of Change on the date that such Notified Departure is notified by either Party to the other. For the avoidance of doubt tie shall pay to the Infraco, to the extent not taken into account in the Estimate provided pursuant to Clause 80.24.1, any additional loss and expense incurred by the Infraco as a consequence of the delay between the notification of the Notified Departure and the actual date (not the deemed date) that tie issues a tie Change Order, such additional loss and expense*

pursuant to Clause 65 (Compensation Event) as if the delay was itself a Compensation Event".

Base Date Design Information ("BDDI")

27. The BDDI was defined as the design as it stood and had been issued to Infraco at 25 November 2007. The Base Tram Information was really concerned with CAF, and was not so relevant from a BCUK perspective. Clause 3.3 of Schedule Part 4 contained 'Specified Exclusions', being other things which were specifically excluded from the Contract Price (the Construction Works Price) including utility diversions (other than a small amount which Infraco had undertaken to carry out) and ground conditions which could not reasonably have been foreseen from ground conditions reports available pre-tender.

28. Notified Departures were defined as being, "*where now or at any time the facts and* circumstances *differ in any way from the Base Case Assumptions save to the extent caused by a breach of contract by the Infraco, an Infraco Change or a Change in Law*". So, as clause 3.2.1 envisaged, the price was based on a statement of a factual position (the Base Case Assumptions) which did not reflect the actual facts and circumstances which the parties knew of. In these circumstances, a Notified Departure would occur and this was deemed to be a Mandatory TIE Change, to be dealt with via Clause 80 of the Contract and requiring TIE to issue a Change Order (once the cost and time impact of each Notified Departure had been agreed).

Alleged BSC refusal to carry out works

29. Clause 80.13 of the contract made it clear that Infraco was not permitted to commence work prior to a TIE Change Order being issued as part of the Infraco Contract. Therefore, there is no truth to any suggestion that BSC unreasonably refused to commence works involving a variation until a price had been agreed for the varied work.

30. BSC carried out On-Street Works when a proper instruction from TIE was issued in compliance with the contractual requirements. BSC also carried out certain goodwill works, even when an instruction was not received. The main issue was that many of the on-street areas still required the utilities work to be undertaken. I was informed that this was the case in 2008, and it was still an issue when I took up my post in 2009. TIE could not provide what the Infraco Contract stipulated and that was why the on-street work we could do was limited. An example of this was Leith Walk, where we had tried to commence work in an area where the utilities were still present. We were stopped by TIE as they had not fulfilled their obligations under the MUDFA contract. They latterly realised that it was too difficult for us to work around the utilities contractor in a piecemeal and inefficient manner. On 6 March 2009, TIE realised this and asked us to stop work on this area. I deal with this in more detail at paragraph 5.21.5 of my original witness statement.

31. It was an inner-city project, and it was impractical to commence work when utilities were still present. If you had a five-metre area free, by the time you reached six metres you would encounter more utilities. The utility provider would have to be called in and through MUDFA it would have to be relocated. It was a very stop-start operation.

32. In response to TIE's assertion that BSC delayed Off-Street Works, I would say that they always had an agenda. This was not just directed at our company, but also at showing us in a bad light with the public. Progress was not hindered by any reluctance on our part to undertake work.

Allegation that BSC failed to mitigate delays and other accusations

33. I would also refute the statement that BSC failed to take reasonable steps to mitigate delays. TIE had a different view from ours as to what mitigation meant. We mitigated where we could. TIE believed that BSC should spend our own money to mitigate, and introduce extra resources to avoid any delays. This is actually acceleration, and has to be paid through the contract mechanism as the delays were not our fault. The Infraco Contract provided

that we should be able to undertake our work in areas which are ready for us. It was not incumbent on us to spend more money to make it work.

34. BSC did not fail to manage and progress the design process after SDS novation. We managed the SDS team, but design did not cause the majority of the delay. The continued presence of the utilities and the fact that design had not been completed were the issues. The design should have been more-or-less completed at the time of novation. This was clearly not the case. The difficulty arose from TIE's failure and refusal to acknowledge that certain design changes were a Notified Departure with reference to the first Pricing Assumption at clause 3.4 of Schedule Part 4 and thereafter to instruct the changes. They would not do so.

35. Richard Jeffrey sent an email dated 19 January 2010 **(CEC00587959)**. Steven Bell sent a letter dated 19 February 2010 **(CEC00574090)** and a spread sheet, dated 12 March 2010 **(CEC00590422)**. These documents suggest that BSC delayed the provision of Estimates for most of the Infraco Notification of TIE Changes ("INTCs"). I refute this suggestion. There was a procedure in place in relation to how INTCs are dealt with. I deal with this in detail at paragraph 11.7 of my original witness statement where I discuss the problems caused by the sheer number of changes which we had to deal with. Each INTC required an extensive amount of work to produce an Estimate. Once this is submitted it may still require correspondence back and forth before agreement is reached. The high number of Estimates we had to provide in response to the INTCs may have given the impression that we were the cause of the delays. In reality, to deal with such a large number of INTCs requires a lot of resources to prepare them and provide the Estimate. It was impossible to deal with all the requests within the required timeframes. At a later stage we tried to encompass a number of the INTCs in one overarching submission where all the issues were covered. We were permitted under the Infraco Contract to ask for extra time for submitting Estimates but TIE would generally never accept any delay.

36. There was inflexibility on the part of TIE to fulfil their obligations in respect of the Infraco Contract. The other side of this was that they attempted to demonstrate failures on the part of BSC.

Allegation that BSC Estimates were excessive

37. Regarding whether Estimates submitted by BSC were excessive, I would say that was not the case. BSC's Estimate for INTC 1, Design delivery programme, was just over £7 million. Agreement was reached at around £3.5 million **(CEC00590422)**. In BSC's opening statement by Richard Walker, at the Mar Hall Mediation process in March 2011, the example of the Russell Road Retaining Wall was provided **(TIE00670846)**. It details that Infraco submitted an Estimate of £4.5 million, which BSC reduced by £2.5 million, and then again by £180k. The adjudicator then awarded £1.46 million. There were various adjudication decisions, where the sums sought by BSC were reduced by the adjudicator. This has been misunderstood by someone and was misreported by TIE as I explain below.

38. TIE lost the Russell Road adjudication on an important point of principle. Rather than accept that they had lost, they went to the press and sought to misrepresent what had happened. The issue of the Russell Road Retaining Wall was first put forward to TIE in October 2008. In his opening statement at Mar Hall, Richard was explaining this as part of his presentation. In October 2008 it was clear that there were changes to the original anticipated design. In May 2009 we submitted an Estimate of £4.5 million. This basically identified the changes to the original BDDI design. It detailed the additional work required. There was a requirement to construct foundations on large piles. It was now a retaining wall system. This was a considerable change to the original proposition (the design as contained in the BDDI). The original Estimate referred to all components. When it was referred to dispute, the soil contamination part of the Estimate was removed as TIE accepted this was their responsibility. The amount of the Estimate put forward to adjudication was therefore £1.84 million not £4.5 million. The resulting adjudication clearly ruled in our favour with an award of £1.46 million. That was a considerable

degree of success. When you compare this with the submitted figure of £1.84 million there is not a great deal of a difference. In addition all the costs of the adjudication were to be borne by TIE which shows that it was a clear win for BSC.

39. TIE continually used the public domain and the media to misrepresent what had really happened. It was an attempt to show themselves in a positive light. TIE presented to the public, through the media, that the Russell Road adjudication was a win for them. TIE stated that the BSC Estimate of £4.5 million had been reduced to £1.4 million. The fact was the amount taken to the adjudication was £1.8 million. TIE used the figure of £4.5 million to make the result appear to be a big win for them. So in answer to your question, we did not believe or agree that our Estimates were overstated but this was the angle that TIE took to justify the fact that they lost adjudications (i.e. that it was technically a win for them as BSC was not awarded all the money it was looking for).

Events in 2009

40. When I arrived on site, there were many Notified Departures and Infraco Notifications of TIE Change ("INTCs"), which were not acknowledged as such by TIE. For example, in relation to design changes which related to changes of "design *principle, shape, form and/or specification*", TIE refused to accept that these were Notified Departures and that the Infraco were entitled to additional payment. TIE's position seemed, in the majority of cases, to simply be that all changes were 'design development', which Infraco were obliged to carry out in any case.

41. BDDI to Issue for Construction ("IFC") changes were brought about due to the progression of the design from BDDI to IFC status. The design had been progressed in this period by SDS, and moved on from a preliminary Issued for Approval status to an IFC status. In a lot of cases, the IFC design had changed considerably from that shown in the BDDI information. Examples

include: (i) larger diameter and deeper drainage pipes due to the incorporation of third party requirements necessary for approval; (ii) different foundation details following detailed analysis of actual ground conditions; and (iii) an increase in the number or type of lighting columns.

42. The impact of this was that there were a growing number of disputes even at this early stage. When I arrived, approximately 350 INTCs had been raised. These related to changes across the entire contract site. Of those which related to design changes, early ones included Carrick Knowe and Gogarburn. These are the first matters which dealt properly with the impact of design changes which were referred to adjudication. It was TIE who referred these matters to adjudication in an attempt to undermine the position which the Infraco had adopted, and which we believed was in accordance with the Infraco Contract. TIE lost both of these adjudications.

INTCs

43. I have not experienced similar numbers of INTCs (or Variations as they would commonly be known) on any of my previous projects. The major reasons for the volume of INTCs were the continued presence of utilities and the fact that the design was incomplete. This was as a result of SDS failing to complete the design at the time of the contract award contrary to what had initially been expected. In addition, third party consents were not in place and CEC planning approvals were still outstanding.

44. My opinion is that the contract should never have been signed in the current format. It was clear that there was motivation (on the part of TIE) to get the contract signed, and that there would be considerable changes. The issues that were created were not handled in accordance with the Infraco Contract, which caused further delay.

45. The original programme which had been included in the Infraco Contract showed that the works to lay the tram tracks on Princes Street were to be carried out between January and August 2009. This time period was chosen

because it was period between the winter festivals and the Edinburgh Festival in August. The programme duration for Princes Street assumed that all MUDFA Works had been completed by this date, and did not have any allowance therein for utility diversions or impacts to the construction work due to utility conflicts.

46. The Contract Programme had slipped at the point the Infraco Contract was signed. That was because Infraco had based its price on the Design Programme version 26. However, by the time of contract execution the design programme was at version 31. Infraco was already entitled to an extension of time ("EOT") of almost two months at the point of signing the Infraco Contract.

47. TIE initially disputed Infraco's entitlement to an extension of time, which was a typical example of the way in which they approached the Infraco Contract. An EOT would be a 'bad news' story, and so their initial position had been that we could mitigate to avoid any delay. By the time I joined the Project, they had conceded this point (I believe an EOT of slightly over seven weeks was awarded in December 2008).

Princes Street

48. Although the Contract Programme slipped, the dates for Princes Street were maintained due to the importance of carrying out these works at a time that would be least disruptive for the city.

49. However, by the time that the start of these works was approaching it was clear that the MUDFA Works would not be completed on time and in advance of our works. There were also ground condition issues at Princes Street, due mainly to the poor condition of existing utilities (i.e. leaking water mains). This resulted in some sections requiring deeper excavations and extensive ground improvement works prior to installation of the tram infrastructure.

50. There were also other Notified Departures which related to changes, the impact of which had not been agreed. Some elements of the design affecting

Princes Street had not yet reached IFC stage or the change from the design on which we had priced had not been agreed with TIE. I understood that the continued presence of the utilities on Princes Street and these design changes had led to Infraco raising INTCs which TIE refused to accept.

51. The point about Princes Street was that we were going to have to commence works when the MUDFA contractor was still present. We were going to have to work around each other and carry out the works in much smaller sections, when in fact we were entitled to exclusive access to Princes Street. It is clear to see that this was going to be much more difficult, and also that it would delay the period available to us to carry out those works. TIE continued to refuse to accept the Estimate reflecting that situation. TIE was also refusing to agree the value of the Notified Departures which related to BDDI to IFC design changes. Our concern was that if we proceeded to carry out all of these works without agreement on the impact of these changes, we would end up in a very bad situation financially. We were not obliged or permitted to start these works until the value of these Notified Departures had been agreed (with reference to clause 80.13).

52. At this point, TIE used the media to state that BCUK was refusing to proceed with the works having demanded £80 million before we would start. This was not true. In reality, BCUK was only doing what it was contractually required to do. This was one of the first major examples of TIE using the media against BCUK in a very public way.

Princes Street Supplemental Agreement ("PSSA")

53. Shortly after I joined the Project, we attended a meeting with TIE to see if we could find a way through the impasse. Princes Street had been closed but no work was progressing and this was attracting a huge amount of media attention. Siemens and CAF were also represented and the senior members of TIE were present. We also had Pinsent Masons in attendance to assist with drafting if we reached any agreement. This meeting went on until after 10pm at night, but we managed to reach agreement.

54. We signed the first version of what became known as the PSSA (**CEC00302099**) on 20 March 2009. The first version of this document referred to works having to commence on Monday 23 March 2009, which we achieved. It only dealt with the work required in the first week thereafter. There were various subsequent iterations of this document to deal with comments from others, including I believe Siemens and CAF, and some Appendices had to be added. The final version was signed on 29 May 2009 (albeit the works had actually commenced on 23 March). It was part of my remit and my intention on arriving on the Project, that we would find a way through the difficulties which had arisen. This was a good first step.

55. In terms of the PSSA, Infraco were entitled to be paid on a Demonstrable Cost basis for the works to be carried out on Princes Street. What that meant was that we would be paid for all of the work carried out by our subcontractors (Crummock and MacKenzie Construction) on the basis of actual time spent carrying out the work, at rates which were agreed and were set out in the PSSA.

56. This was a workable agreement, allowing works to proceed even though we didn't have agreement with TIE on the consequences of the Notified Departures which affected every element of these Works.

On-going obstacles re Princes Street

57. The Programme which was submitted with the PSSA showed works commencing on 23 March 2009 and going all the way through to March 2010 without a break for either the Festival or Christmas. But TIE and its stakeholders made it clear early on at the project management panel meetings (meetings of the Parties' senior management to address issues impacting the delivery of the Project as a whole, not just the Princes Street Works) that Princes Street would need to re-open to traffic on 29 November 2009. We were therefore instructed to use whatever resources we needed in

order to make this happen, including working twenty-four hours a day, seven days a week. This is what we ended up doing towards the end of that period. Even then, works were not fully complete in November 2009, and so we had to return in January 2010 to complete the Princes Street Works and to carry out certain remedial works.

58. It is worth noting how difficult the Princes Street works were to perform. Areas of Princes Street, particularly The Mound junction, were not made available to Infraco at the outset of the works as the MUDFA Works were incomplete. This section, when eventually handed over to Infraco, still had incomplete MUDFA utility works and was subject to considerable disruption during our works.

Outstanding MUFDA works

59. It proved very difficult to assess the incomplete MUDFA Works as TIE were not particularly open when advising of outstanding works, unresolved issues or reviewing programmed MUDFA Works or completed MUDFA Works. At the commencement of the Infraco Works on Princes Street, it was clear that there were considerable MUDFA Works still wholly incomplete. Examples include:

a. Scottish Power infrastructure transverse crossings were not at the correct height to accommodate the track slab at various locations (e.g. Frederick St, Castle St, South St David St).

b. BT infrastructure transverse crossings were not at the correct height to accommodate the track slab at various locations with major works not completed at The Mound. In addition there were other longitudinal locations impacting the construction of the carriageway works (e.g. South St David St to Waverley Bridge Junction).

c. Scottish Gas Networks Infrastructure works were not completed at various locations with major works not completed at The Mound impacting track slab construction.

d. Scottish Water Infrastructure works were not completed at various locations with major works not completed at The Mound and other longitudinal locations

impacting track and carriageway construction works (e.g. South St David St to Waverley Bridge Junction and a water main running the length of Princes St).

60. The on-going MUDFA issues also impacted the infrastructure design and hence the infrastructure construction works. As an example, once Infraco obtained access to the area of Princes Street at the junction with The Mound, the Crawley Tunnel was uncovered. This was an existing tunnel with a live water main running through it and it clashed with the tram infrastructure. Whilst everyone was aware of the tunnel prior to the works, the exact dimensions, depth etc. were unknown. It was not until Infraco uncovered the tunnel that we could see that there was a clash with the tram infrastructure. This proved to be a major issue requiring identification and redesign to come up with a design solution which could be approved by Scottish Water. This element was overlooked in the MUDFA work scope. It fell to Infraco to develop options, design and implement the preferred solution to which Scottish Water subsequently agreed. From a site perspective, Infraco seemed to be caught up in outstanding MUDFA/Scottish Water issues which complicated and protracted the design and construction process. Indeed, this element of the Princes Street Works was the last to be completed. It is not clear why, during the MUDFA Works, a survey of the tunnel was not undertaken and those details then not provided to the designer so that the clash with the infrastructure design could have been resolved prior to commencement of the Infraco Works on site. This issue resulted in further delay and cost to the programme.

Payment

61. Despite carrying out the Princes Street Works in these difficult circumstances, TIE subsequently refused to honour the PSSA agreement. They refused to pay us monies which we were entitled to in respect of the Princes Street Works – totalling in excess of £2 million. This matter had been referred to adjudication at the point at which we went to Mediation in March 2011. This seemed typical of TIE to find reasons not to pay us what we were

contractually entitled to, even where they had previously reached a written agreement with us.

62. The reasons they relied upon for not paying us in full for the Princes Street Works included arguments which were just not sustainable. For example, they stated that the PSSA only covered our works up until when we handed Princes Street back over to CEC on 29 November 2009 (when there is no such cut off). They argued that they would not pay for staff who were *'not seen on site'* even although all of the records submitted showed that those individuals were present. On such a large and busy site, it is ridiculous that all staff need to have been 'seen' by TIE representatives before their costs were payable (particularly given that the TIE representatives were not on site all the time). Although we referred this matter to adjudication, in the end no decision was reached by the adjudicator as this was swept up in the agreement reached following the Mediation in March 2011. We had had a separate mediation on Princes Street alone in November 2010 as part of the dispute resolution process, but this had not resulted in an agreement on what was due to us.

Quality of Works

63. I have been asked why the tram track on Princes Street needed to be re-laid. My response is that the tram track did not need to be re-laid. I deal with this further below and it is also covered by paragraph 7.18 of my original witness statement. In relation to the issue of quality control, BCUK had full ISO 9001 certification in place prior to and for the duration of the Project. By way of background, ISO 9001 is a certified quality management system ("QMS") for organisations who want to prove their ability to consistently provide products and services that meet the needs of their customers and other relevant stakeholders. This is audited internally and externally and we fully complied with and met the requirements of ISO 9001 throughout the Project. In accordance with any good and competent main contractor, we had in place through our Integrated Management System robust quality control procedures to ensure that all works were carried out properly by our sub-contractors. On

each-and-every Bilfinger job, we have processes in place to make sure that we appoint the right subcontractors who also have ISO 9001 certification and a similar approach with regards to quality. MacKenzie and Crummock are well known subcontractors in the Scottish market. They have worked for CEC on many other jobs (before and after Trams) and are competent and experienced subcontractors.

64. Regarding the element of the Princes Street Works that had to be redone by BCUK, part of the problem was the pressure we came under to meet the requirement that Princes Street reopen on 29 November 2009 (in advance of completion of the works). The month of November 2009 was extremely wet and frosty and these are not ideal conditions for laying tarmac, particularly with 24/7 working. In addition, the work was finished very early in the morning of 29 November and TIE/CEC allowed buses to run on the newly completed surface just hours later contrary to our advice.

65. We also had a long debate with TIE over the reasons why the road-rail interface on Princes Street was subject to cracking. The cracking that displayed on Princes Street occurs on the majority, if not all, of the tram systems that use this trackform system (which is called 'Rheda'). The cracking was also exacerbated by the volume of buses that utilise Princes Street and in particular the turning forces of the bus axles brought about by the constant requirement of buses having to pull out onto the tram tracks to pass other stationary buses.

66. Ultimately, however, we reached a position at Mediation where Infraco agreed to redo Princes Street at our own cost and to an enhanced trackform design (i.e. concrete shoulders rather than asphalt). This work was successfully carried out post-Mediation.

67. We had ISO 9001 compliant management structures in place within BCUK including quality control procedures and guidelines to make sure their works were carried out to the required standards: this included good site management and presence, daily control meetings, interface meetings,

inspection and test plans and records and quality inspections and audits. Where necessary, Non-Conformance Reports ("NCRs") would be raised that identified works or elements of works that, for example, were not constructed in line with the required standards. In order to close out the NCR, the sub-contractor would be required to carry out remedial works. I would refute that there was any mismanagement by BCUK of its subcontractors. In any case, defects are part of construction contracts – there will also be some corrective action to take before the Project is considered complete. The fact that there were defects on Princes Street does not mean that Infraco was in breach of contract.

Subcontractors

68. In addition and in relation to our subcontractors generally, there were of course problems (which would be expected due to the complex nature of the Project) but we managed to avoid major disputes with all of them. This was despite the fact that we were aware that they suffered because of the nature of this job – in particular its stop / start nature. For example, Crummock geared up for work on Leith Walk, only for the work to be stopped before it had properly started. Barr Construction were similarly disrupted with their work at the Depot.

69. All of our subcontractors understood the difficult situation with TIE. They were on-board and were part of our team. This can be seen by the fact that many of them came back on-board after the majority of works had been suspended, following the settlement which we reached with TIE/CEC following the Mediation. If relationships had not been as good, I do not think they would have agreed to return to finish the works. We did have some issues with our subcontractors along the way, but we managed to negotiate a way through with them, following Mediation and after the works restarted.

Development Workshops

70. Colin Brady sent a letter to Steven Bell, TIE, titled Development Workshop: Roads and dated 27 February 2009 **(CEC00999080)**. I sent a letter to Steven Bell titled Development Workshop Report, Overhead Line Equipment and dated 9 April 2010 **(CEC00971086)**. I sent a further letter to Steven Bell titled Issue 2 of the Development Workshop: Road and dated 10 August 2009 **(CEC00793517)**. These letters refer to the on-going Development Workshops in respect of full road reconstruction. There was a process required to align the Infraco proposal with the SDS design. The original SDS design was different from the Infraco proposals that were to be integrated into it. TIE failed to issue the timely instructions that would have allowed the design process to progress in the right way. I deal with this in more detail at paragraph 10.14 of my original witness statement.

9 April 2010 should be 9 April 2009

Physical aspect of Utilities

71. We could not physically proceed with our works where utilities were still in place beneath the ground (in positions that clashed with the tram infrastructure), when these were supposed to have been removed or relocated by TIE's contractor MUDFA before we commenced works.

72. Our understanding and the position on which the tram infrastructure design was taken forward was that any utilities within the area required for the installation of the tram infrastructure (i.e. the tracks, OLE foundations, ducting and drainage etc.) would be diverted by MUDFA in advance of our works. This would allow Infraco to have a clear corridor within which to install the tram infrastructure. Our price and programme was based on this understanding. The "utility free zone" was understood to be the width required to install the tram infrastructure (trackform, OLEs, ducting, drainage etc.) to a depth of 1.2m below finished road level. The exception to this was at the location of tram structures. At structures, the utilities would be diverted clear of the area required for the structure including its foundations. It was assumed at the commencement of the Project that the utility free zone would be clear of utilities to allow a straightforward installation of the tram infrastructure.

73. The BCUK works involved initially excavating to a depth of approximately 1.2m below existing ground levels and ensuring the ground conditions at this level met the design requirements. This meant that on occasion ground improvement works were required. This entailed deeper excavations (a further 0.3m to 0.6m) and subsequent reinstatement to formation level with imported granular materials. The width of the excavation differed between on and off-street for various reasons, including traffic management requirements. However, the minimum width would be of the order of 8.0m. Following this, the ducting and drainage were installed and the initial track improvement layer constructed. Once the track improvement layer was in place, Siemens would place the sleepers, rails and fixings prior to the track slab works being carried out by BCUK. Following this, the final adjustments to the rails were carried out by Siemens to allow the coverage layer and road pavement tie-in works (where applicable) to be carried out by BCUK. The joint sealant works would then be carried out by Siemens to complete this element of the works.

74. In simple terms, if the utilities were still located within what was supposed to be the utility-free zone then we did not have the clear corridor which was needed to perform our works. The MUDFA Works were nowhere near completed when I arrived on site, and there were few areas where we had unhindered access to proceed with our works in a sensible and economically viable way. TIE were very keen that we work wherever we could, even in extremely small sections, in order to be seen to be making progress – even where the MUDFA contractor was still present. We believed that working in extremely small sections was not an economic way to proceed and that it was not in accordance with the Infraco Contract. In Clause 18.1.2, TIE had granted to Infraco, *"a non-exclusive licence to ...enter and remain upon the Permanent Land for the duration of the Term and an exclusive licence to ...enter and remain upon the Designated Working Area for the duration of the time required (pursuant to Schedule Part 15 (Programme)) for completion of the Infraco Works to be executed on such Designated Working Area..."*. This meant that we were entitled to exclusive access, with no other contractors present, to the key areas of the site where we planned to carry out works,

during the periods noted in our construction programme (which was included within Schedule Part 15).

Workarounds

75. Infraco had tried to be accommodating and to work around the MUDFA Contractor, Carillion, who were very much still on site. One area where this occurred was at Leith Walk. As I was arriving on the Project, it was explained to me that, in relation to Leith Walk, we had proceeded with works at TIE's insistence despite the fact that the MUDFA Contractor was still present and performing its works. It was very inefficient to work around other contractors, and large areas of the site were effectively frozen while utilities were diverted. Working in very small areas is also very inefficient. Resources tend to be used in a disruptive and inefficient manner. My predecessor as Project Director had written to TIE in relation to these works on Leith Walk. This didn't work, and TIE instructed us on 6 March 2009 to cease work on Leith Walk in order to mitigate overall delay to the Project. We were told to concentrate efforts elsewhere, and that in the meantime we would be reimbursed our actual costs for the works carried out on Leith Walk at that time to take account of the disruption.

76. We did undertake works elsewhere. On-Street Work was carried out in Princes Street between March and September 2009. There were other sections where work was taking place but not on-street. It was more preparatory work that was carried out. There were On-Street Works undertaken at Edinburgh Park Bridge, and other areas where there were no complications similar to those on Leith Walk and Princes Street.

Raising issues with TIE

77. In various areas, the design could either not be completed or constructed due to the incomplete MUDFA Works. For example, at the location of South Gyle Access Bridge, TIE had not diverted an existing sewer. The IFC design was issued on 23 May 2008 and the design highlighted a clash with an existing

sewer. Infraco had planned to commence works in June 2008. This clash was raised with TIE by Infraco. TIE stated that the sewer was to have been diverted under MUDFA but that this had not been carried out as the traffic management would not work. We were informed unofficially that the actual reason was that the TIE team responsible for the MUDFA Works wanted to avoid the spend coming out of their budget, and wanted to pass responsibility to the TIE team dealing with the Infraco Contract. TIE did not then issue a Design Change Order to amend the infrastructure design as it should have done, and so no tangible Infraco Works could proceed at this location. We attended numerous meetings with TIE at various levels in an attempt to resolve the issue. Each proposed solution put forward by Infraco (e.g. a review of traffic management proposal for diversion of the sewer, revised infrastructure design options etc.) was rejected. The sewer was finally diverted by TIE in late 2010. Following Mediation in March 2011, the IFC design was subsequently constructed by Infraco.

78. We were aware that TIE had failed to relocate or remove all of the utilities from the utility free zone. In some instances, they had merely relocated utilities within the zone – leaving future issues requiring resolution to construct the tram infrastructure works. This information was observed on site by our site teams. There was a requirement for TIE to provide the MUDFA as-builts to Infraco under the Construction (Design and Management) Regulations. We subsequently requested the MUDFA as-builts from TIE. When these were not issued, we formally requested the as-builts in August 2009. These were necessary from a health and safety perspective to ensure that our site teams were informed as to likely utility positions prior to digging works commencing. They were also required to allow Infraco and SDS to check for clashes between the tram infrastructure and utilities. Identifying these prior to commencing works mitigated cost and delay. TIE responded in March 2010, some seven months later, providing only a small percentage of as-builts with limited and inaccurate information contained therein.

Contractual aspect

79. Another problem with the on-going presence of utilities arose because of the way in which the Infraco Contract was intended to operate. All Notified Departures were to be dealt with through the TIE Change mechanism which was contained at Clause 80 of the Contract. Having notified a TIE Change via an INTC, or having received a TIE Notice of Change ("TNC"), Infraco were obliged to submit an Estimate outlining the cost and time implications of the Notified Departure. Clause 80.13 clearly states that, except in the situation where an Estimate had been referred to the Dispute Resolution Procedure for determination, *"the Infraco shall not commence work in* respect *of a TIE Change until instructed through receipt of a TIE Change Order unless otherwise directed by TIE".* Accordingly, until there was an agreement in relation to the cost and time implications of a particular Notified Departure and a TIE Change Order was issued to reflect that agreement, we were not permitted to proceed.

80. The meaning of Clause 80.13 and the operation of the TIE Change procedure became a major bone of contention. It remained a significant issue until Infraco's interpretation of the clause was found to be correct at the adjudication before Lord Dervaird in relation to the Murrayfield Underpass in August 2010. Nevertheless, TIE did not acknowledge the decision up to the Mediation in March 2011.

Design Changes

81. Changes to design were still being instructed a year after contract close as there was still a lack of clear definition of what was required. This was a result of the failure of TIE to close all third-party agreements in a timely manner.

82. The consequences of these changes were the subsequent delay to the Infraco Works. The MUDFA design was carried out directly by TIE so I cannot comment on that. It was not under our jurisdiction. There were multiple utility design changes required due to the delay of the completion of MUDFA Works, which were then subsequently delaying the Infraco Works.

83. The Infraco design (e.g. OLE design, track design etc.) was subject to the approval of TIE under Schedule Part 14 - the contractual Design Review Process. This was envisaged as a TIE-led, 4 week review process as set out at Section 2 of the Design Management Plan (Part C of Schedule Part 14 to the Infraco Contract). It required the design to be submitted to TIE, who would then review and either approve (Level A), approve with comments (Level B) or reject (Level C). However, TIE also mismanaged this design Approvals Process, not managing it in accordance with the programme. Comments were provided late or after the design had been issued at IFC status, resulting in requests for further – at times "superficial" – changes that then became 'tied-up' in the contractual change process. Furthermore, TIE attempted, contrary to the provisions of the Design Review Procedure, to 'downgrade' the level of approval given to design deliverables – preventing work being progressed which had previously been approved. TIE's role as a design reviewer and approver was halted following Mediation. Schedule Part 14 was amended as part of the Settlement Agreement to streamline the Approvals Process.

SDS

84. SDS were procured by TIE and CEC in 2005. They were not in position to issue the finished design during the novation period. This indicates that a considerable amount of mismanagement by TIE had already occurred. The basic design should have been coordinated through the so-called authorities, TIE/CEC. What emerged was a very preliminary BDDI design. This had not really incorporated the circumstances regarding third party approval. It required approvals on specific aspects, including integration of the CAF element and the Infraco proposals. There were a lot of issues in relation to MUDFA. Where utilities could not be relocated, the designs had to be adapted. This resulted in design delays.

85. When the design was novated into our contract the novation was undertaken in accordance with the contractual requirements. However, there remained a lot that TIE and CEC had to deliver. As a contractor, we had to make

requests to CEC. We had the management of the designer – but you can only manage to a certain extent if what needs to be provided by others is not there.

86. I believe that the people who negotiated and signed the Infraco Contract were fully aware of what they had signed. The people who administered and managed the contract were either stupid or completely ignored what others had signed for them. They had completely and deliberately misinterpreted the way the contract is written up.

87. There were issues, errors and omissions within the design which was provided by SDS. To a certain extent this was understandable, considering the circumstances, complexity and the magnitude of all the design changes. These issues were dealt with between SDS and Infraco without any delay, impact or additional cost to the Project.

MUDFA Completion

88. In general, MUDFA delays always led to a Notified Departure. It was stipulated in the Infraco Contract. The anticipated date for completion of MUDFA Works appeared realistic. However, it transpired that this was not the case. It subsequently became clear that TIE never fulfilled what they said they would. From April 2009 to the time of Mediation, which was almost two years later in 2011, a huge number of utilities had not been relocated. MUDFA was not completed. At the start of the Project we never received programmes identifying the status of the MUDFA Works. During various meetings with TIE, we requested an overview to enable us to plan our works. As it was clear that the MUDFA Works had a significant impact on our work, an overview was required. However, it soon became apparent that TIE would not provide such information or overview.

89. It is difficult to say why the MUDFA Works were not completed within the agreed programme. We were not in contract with the MUDFA contractor. This was TIE's remit and so only they can really answer why the MUDFA contractor failed to complete within their programme. Within the contract -

Schedule part 4 - it is clearly stipulated when and which areas should have been completed. Comparing these dates with the dates when we were subsequently advised by TIE that the MUDFA Works might actually complete (as per a programme issued to us called MUDFA Rev 8) then it is clear that there was a huge delay.

BSC and SDS

90. BSC had a full understanding of why and where the SDS programme had slipped. The team responsible for designs would have met regularly with the SDS. There would have been weekly meetings where all the issues would have been discussed.

91. BSC did manage the SDS. In general, the SDS provider was responsible for the production of the design. Their own design teams dealt with this and any issues regarding design. We had an over-arching managing role to control them.

92. I am confident that there were no failures on the part of BSC that resulted in any delay with progressing and completing design. There were some normal issues encountered but these had no impact on the construction programme. SDS always delivered what was required to keep the job progressing. This was achieved through technical queries when there was uncertainty about certain elements. There was a quick mechanism in place to achieve a prompt response before new drawings were issued.

93. BCUK or Siemens did not fail or delay in providing design information to PB. BCUK were not a designer and did not provide design information to PB. Siemens and CAF provided design information to SDS on behalf of BSC. CAF, which delivered the trams, and Siemens who were the M&E (Mechanical and Electrical Services Contractor) for the track plus all the M&E functions, provided their own design which required to be incorporated into the over-arching design from SDS. I cannot recall any late issue of design information impacting the construction works.

94. As far as I am aware, neither BCUK nor Siemens delayed in carrying out an Integrated Design Review ("IDR").

On Street Works Supplementary Agreement

95. The On Street Works Supplementary Agreement followed on from the PSSA being agreed. This was a proposal that all other On-Street Works should be carried out on the same basis as the PSSA. We had the same problems on other on-street sections with the continued presence of utilities. This led to changes, resulting in the Estimate process not being completed. Incomplete design and changes between BDDI and IFC also occurred in the on-street sections of the ETP, and on-street was also affected by outstanding consents and third party approvals. Generally, the on-street sections were more prone to pricing assumption changes and therefore Notified Departures. The proposal for an On Street Supplementary Agreement was an opportunity to unlock all these problems to allow works to proceed (in the same way as they had done on Princes Street). This would be the case even if those works were disruptive because we had previously worked under disruptive circumstances. If required, we would also work around existing utilities or get involved in their removal. This could have been done on a cost reimbursement basis, but we could not price it in advance.

Provision of Information re MUDFA

96. There were a number of sporadic MUDFA programmes. In December 2009, we were still working with the MUDFA Programme from April 2009 which was now out of date. I believe that we should have received monthly updates in respect of MUDFA Works. In reality, it was every six months. It was TIE's responsibility to provide this information to us. We did request progress reports but to no avail. As a result, it was impossible to align our work with MUDFA. I believe that the reason why we did not receive regular updates was because TIE did not want to recognise and acknowledge the delay that MUDFA was clearly causing.

97. The two main contractors engaged in the MUDFA work were Carillion and then, later, Clancy Docwra. There were a few other firms engaged in minor work.

98. TIE replaced Carillion with Farrans Construction and Clancy Docwra, but gave the Infraco no notice of this. At no point did TIE provide the Infraco with: (i) the reasons for the delay to the completion of the MUDFA Works; (ii) when TIE became aware of such delays; and (iii) reliable anticipated completion dates for the MUDFA Works (which would have allowed us to know when we could expect reasonable access dates for the commencement of our Works). Had TIE provided us with this information, it would have made our job much easier. The closest we got was sporadic marked up drawings from TIE's sectional Project Managers on site regarding anticipated completion dates for certain MUDFA activities in various locations. There was no formal communication of this information from TIE.

99. As it was, we simply had to make assumptions about when the MUDFA Works might complete. Any dates from information we did get (e.g. from the site managers), or assumptions we made about anticipated completion dates for the MUDFA Works, were missed without any explanation from TIE. Most of the time we had no reliable information on when the MUDFA Works would be completed and when we could get access to the site to enable our works to proceed. This made it impossible to plan works or engage meaningfully with subcontractors.

100. In February 2010 – and at our insistence – TIE started to provide, on a monthly basis, access maps showing where Infraco had access to areas of the site. They also included forecasts of when Infraco would get access to other areas of the site. However, even this information was misleading and differed from other information we received. By doing a cross-check against other documents, letters, Change Orders etc., we prepared another INTC (no. 536). This was submitted in January 2010. We followed that up with a further

Estimate, which this time included costs of circa £40 million plus €4 million, on 17 September 2010. This new Estimate approached matters in line with the adjudicator's decision in the first adjudication on MUDFA ("MUDFA 1"). The previous adjudication had been based on MUDFA Programme Revision 8. By September 2010, we were reporting a delay of almost 15 months to the final completion date (for Section D) from MUDFA delays alone.

101. Even at this stage we were reporting delay against Infraco Programme Revision 1 as TIE steadfastly refused to acknowledge the delay we were reporting and had not agreed an updated Programme. We were reporting against a very out of date Programme. Again, TIE refused to accept our Estimate and raised many of the points they had raised in MUDFA 1. It is worth putting some of this into context. By the time we went to Mediation in March 2011, we were 34 months into the original 38 month Infraco Contract period. Even at that stage, TIE could not provide any certainty as to the sequence and timing for completion of all the MUDFA Works. This had a massive effect on our ability to progress the works. By refusing to even acknowledge the effect this was having, and continually stating that we could mitigate any delay, TIE were simply exacerbating an already very difficult situation.

Conflicting Planning and Technical Requirements

102. In many instances, there were conflicting planning and technical requirements, or conflicting requirements between the approval authority and a third party. These were outwith the control of Infraco or SDS to manage.

103. The design for Picardy Place was delayed due to conflicting requirements within CEC's Technical and Planning departments. The Planning Department wanted to minimise the impact to the existing footway widths. However, the traffic modelling element (CEC Technical) could not be approved without taking some existing footway to provide additional junction capacity. TIE failed to manage CEC, leading to delays in completion of this design package. This

element of work was not approved or completed during the duration of the Project. This is despite numerous meetings between CEC and SDS as well as considerable money being spent by the Project on numerous iterations of design.

104. The Airport Canopy and Kiosk element of design could not be completed prior to Mediation due to TIE's failure to manage the approvals and third party requirements. At the time of Mediation, TIE had still to issue to Infraco a clear and defined scope to allow the Airport Kiosk and Canopy design to be finalised. This had knock-on impacts to the completion of Gogarburn Retaining Wall W14C. At this time, TIE had still to agree the interfaces between BAA and the Airport Tram Stop to allow the design to be completed. Only when a design change was instructed by TIE, on 16 February 2011, were the Airport Kiosk and Canopy and W14C deemed sufficiently acceptable to CEC Planning for them to recommend the design to the Planning Committee for Approval.

105. In addition to conflicting requirements, comments were often provided after approvals had been obtained as mentioned above. This constituted a contractual change, as SDS were entitled to recovery of the costs to amend the design to reflect the late comments. However, TIE rarely agreed the valid changes – when they did, this was generally after a protracted period that impacted the completion of the design and ultimately the construction works. This can be seen from the minutes of the Design Change Meeting held fortnightly between TIE and Infraco. When compared with the Control meetings held post-Mediation and the progress made therein, the lack of progress made within the Design Change Meetings is even more startling.

Betterment and Preferential Engineering

106. CEC, through its Technical and Planning Departments, sought additional improvements to the city centre (new road pavements, higher specification materials etc.) that, in other projects, would not normally have formed part of the core tram works or tram budget. Usually, additional requirements to be

carried out at the same time for cost efficiencies would be funded by separate budgets. Examples include high specification OLE poles and street lighting columns, setts, etc. Whilst Infraco did not have sight of the original tram budget, it would be highly unlikely for it to have allowed for the high specification materials ultimately requested through the Planning Process. TIE made few, if any, attempts to control CEC or value engineer any of the high specification items.

107. For example, with regards to road pavement works, Infraco's initial proposal was to only remove and replace the wearing course on the on-street sections: Pricing Assumption 12 of Schedule Part 4. TIE and CEC did not accept this, and a design was developed for full depth reconstruction of all of the associated roads on which the tram tracks were to be installed. This resulted in a contractual entitlement for Infraco to claim the resulting additional costs and time. This was subsequently changed post-Mediation in a value engineering exercise, and the initial proposal was restored.

Approvals

108. Planning and Technical Approvals were not sufficiently complete to allow Infraco works to proceed. We could not proceed without planning approvals – that would be against the law. SDS could not issue any IFC drawings without having technical or planning approvals in place. There is a procedure which requires to be adhered to in line with the CEC regulations.

March 2009

109. A document titled Framework Concept (for discussion) was produced by Siemens around March 2009 **(TRS00016833)**. This document was produced as a suggestion for how the dispute could be unlocked. I think that it was produced shortly before I arrived. However, I was involved in various subsequent discussions. I was part of the Framework Team, which was an attempt to try and resolve and unlock the disputes. The group identified certain issues that should have been resolved, but I recall that this was

unsuccessful. The meetings involved more senior people in an effort to obtain results. This did not work out, and there was escalation to an even higher level of management. There were about three or four Framework Management Team meetings that I attended. After this I had discussions directly with Steven Bell, but again these were not successful. As a result of the foregoing, a decision was made to stop holding the meetings.

110. Steven Bell sent a letter to me dated 6 March 2009 **(CEC00630202)**. I mention this at paragraph 30 above and in my original witness statement. Part of this letter suggests that it would be more appropriate to concentrate efforts outside the Leith Walk area. This is a contradiction. On the one hand TIE had complained that we were not working. Now, in March 2009, they basically instructed us to stop work in Leith Walk because it was not efficient to work there. The main reason was the presence of the utilities in Leith Walk. TIE had to recognise that they needed to fulfil their obligation to us before a proper work rhythm could be achieved on Leith Walk.

111. I sent a letter to TIE dated 11 March 2009 **(CEC00940980)**. This intimated a Compensation Event to TIE due to the failure of SDS to release IFC Drawings by the dates identified in the Programme. This was in relation to section 2A, roads, kerbs, footways, paved areas and drainage. BSC also intimated other Compensations Events in relation to similar failures to achieve the release of IFCs by the dates identified in the Programme. This was in relation to other sections and works. As well as drawings not being released on-time, these could have been related to SDS design changes from BDDI to IFC. They could also be issues related to delay in TIE's provision of instructions.

112. BSC produced a Period Report dated 28 March 2009 **(CEC01002684)**. At page 3, it is noted that "*Virtually all construction works are impacted by external issues which require resolution through the change process of the contract*". A full explanation for this statement is within 5.10 to 5.23 of the Appendix. This provides information in respect the issues preventing work. This was around the time that I joined the Project.

113. Minutes were taken of a meeting dated 31 March 2009 **(CEC00942613)**. I refer to item 2.0, "*5.0 Design Programme. It was noted that this has not been issued as per the previous minutes. BB [Bob Bell] confirmed this had been raised with Colin Brady who stated at weekly meeting that this would not be issued as it is deemed to be commercially sensitive at this time*". I think that this relates to TIE's request for an integrated design programme. We had multiple meetings with Siemens and SDS to develop this integrated design programme, which I think was issued to TIE around April 2009. The individual programmes meant that Siemens designs were integrated into the SDS design Programme. These were then issued to TIE in each period. I do not understand the statement around commercial sensitivity.

114. There were difficulties producing a finalised design Programme. This was mainly because of the need to understand when the SDS design would be issued. This was continually delayed in part because TIE did not issue instructions for changes following on from Development Workshops (resulting in mandatory TIE changes). Delays were also caused by TIE failing to obtain third party approvals. Further, CEC had an obligation to issue their consent for certain elements – but there were delays with this. When one party is not delivering it has an impact on the other interested partners and the wider programme.

April 2009

115. There was a BSC/TIE meeting on 16 April 2009 **(BFB00056177)**. The minutes refer to a number of priority areas highlighted by BSC for redesign. These areas were Princes Street, Victoria Bridge, Leith Walk and the Tower Bridge. There was a letter from Steve Reynolds, Parsons Brinckerhoff, to myself dated 6 May 2009 **(PBH00003626)**. This states that, "*It is now clear that the scope of the work to be provided under the novated SDS Contract is significantly different from that envisaged at Novation. Changes are still being instructed and it is currently not possible to define an end date for Phase III [Detailed Design]*". Regarding the changes being instructed, all

correspondence in respect of these matters was recorded within the INTC register and the Post Mediation Changes ("PMC") register.

116. There was a progress meeting on 21 April 2009 **(CEC00420522)**. Item 6.0, Procurement, noted TIE's concerns in relation to BSC's procurement of sub-contractors. Regarding BSC's procurement plan, I stated that it was "*compliant with the Contract and is the productive and cost effective method of procurement in the current circumstances*". These are all related to sub-contract issues. There was also an allegation by TIE which led them to issue under-performance notices because they said we had failed to enter into subcontracts in the correct format. This allegation even resulted in an adjudication, where they believed we had not chosen the right mechanism to secure the sub-contractors. The statement that I made in the progress meeting was highlighting that we had all these changes and no clear scope. The arrangements we had with our sub-contractors at that time was that they were all working on a scope defined in letters of intent (not formal subcontracts). This was done for the benefit of the Project. If we had not followed this procedure, our subcontractors could have issued a massive amount of claims against us due to the fact that they would have been unable to get on with their works as intended. This would not have been beneficial or cost-effective for the client. If we received these claims and they were caused by obligations which TIE or CEC had to provide, we would have had to claim this back.

117. The letters of intent basically defined that we intended to go into a sub-contract relationship with the sub-contractor for a certain scope. They would not define the full scope and full outline of the work to be undertaken. The sub-contractor would then invoice us for the works executed. Letters of intent were only ever used for a specific part of work. BSC had multiple sub-contractors. Each individual section of work had its own sub-contractor. We had six main sub-contractors. There were then sub-contractors for the smaller areas of work.

118. There was an email from Tony Glazebrook dated 30 April 2009 **(TIE00037854)**. This highlighted continuing problems with design. There were minutes of a meeting dated 6 April 2009 **(CEC00354164)**. Item 053 noted problems with design. These relate to very detailed design issues. Regarding the Design Assurance statement, there was a fundamental misunderstanding within TIE. The design could not be fully assured until it was complete. If we had issued a complete Design Assurance Statement at such an early stage our designer would have asked for money, so that was the most cost-effective way to do it.

119. I received a letter from Steven Bell dated 30 April 2009 (**CEC00322635**). This letter attached a copy of revision 8 of the MUDFA Programme. The document outlined a revised Programme which detailed Project-wide completion of the MUDFA Works by December 2009. I also sent a letter to Steven Bell dated 8 July 2009 **(CEC00322640)**. Within that letter, I advised Mr Bell that this constituted a Notified Departure because the access dates were at variance with Schedule 4 Pricing Assumptions 3.4.24 (diversion of any utilities) and 3.4.32 (Schedule Part 15 (Programme) programming assumptions). There was further correspondence between myself and Steven Bell. My letter dated 6 August 2009 **(CEC00322634)** contained an Estimate for the Notified Departure. It also demonstrated that this would be undertaken in the most cost effective manner. Steven Bell responded by letter dated 3 September 2009 **(CEC00322639)**. Within this letter, it was intimated that TIE did not accept that BSC's proposal was demonstrably the most cost effective solution. I deal with this whole issue in more detail at paragraph 7 of my original witness statement. The MUDFA Revision 8 Programme subsequently became the subject of the MUDFA 1 adjudication referred to above.

May 2009

120. There was an email from David Bill, Mackenzie Construction Ltd, to Jim Donaldson, Bilfinger, dated 15 May 2009 **(BFB00058190)**. David Bill highlighted that due to design failings there was a lack of progress. Our subcontractor had to undertake "*piecemeal work*" as a result of the design

coming out in bits-and-pieces. As a result of this, McKenzie had to work to very late provision and sometimes even wrong provision of documents in relation to their role in Princes Street. The other main issue was the SDS design for the overhead electrification poles. TIE had accepted the Infraco proposals for this and certain elements of the Siemens design had to be incorporated with the original SDS design. There were alignments required to adapt the designs to each other. This was not instructed by TIE in time so that caused delay in the construction, and complaints from our subcontractors. This was all covered by the PSSA. The issue was that everything should have been in place before we started. This meant that we had to undertake this work during construction. Although we were obliged to make sure that the original SDS design and the Siemens design were aligned, this was again a pricing assumption where the cost consequences of this lay with TIE.

121. I sent a letter to Steven Bell dated 15 May 2009 **(CEC01004773)**. This was titled BSC's Extension of Time Entitlement Programme – 31 March 2009 – Revision 0. The letter intimated that an extension of time was required. This was due to the programme being delayed, which entitled Infraco to the extension. The main reason, again, was MUDFA delays. The exact details of our request are within hard copies of our programme documentation.

122. TIE would never accept any EOT request which showed late completion. This was seen as a major area of dispute, and we spent a lot of time and effort trying to get agreement on the programme extensions required but it was hopeless. TIE never acknowledged the real impact of things like the delays caused by the late MUDFA Works. It was only resolved after the Mediation at Mar Hall. Prior to this, they were just not recognising that they had caused the majority of the delay and were not able to grant anything.

123. Had TIE agreed an extension of time, then the consequences of this would be obvious – all of the milestones would have been extended. The delivery of the Infraco Contract was one such milestone. There were other milestones which were defined throughout the contract on different sections. Without extensions, the dates remained as per the current programme but the reality

was that these dates were impossible to achieve because of the delays caused by MUDFA and changes to the design (amongst other matters).

124. There was a TIE/BSC meeting on 25 May 2009 (**TIE00361999** item 010, Design Programme). It is noted in the minutes that, "*BSC have now submitted an 'Entitlement' programme and a 'Recovery' programme for overall contract works. A design programme to be read with the Recovery programme is presently being finalised within BSC*". The Entitlement Programme illustrated the extension of time we considered we were entitled to at the point of time. That is why it is titled *"Entitlement Programme"*. The Recovery Programme demonstrates the other steps that we planned to try and reduce the impact. However, the problem was that this was not always possible – albeit that TIE refused to accept this.

125. Reference to the design programme in the minutes of 18 May 2009 referred to, are references to when the design would be available and what impact that would have on the construction programme. For example, construction of block piles at Russell Road Retaining Wall could only commence once the design for Russell Road Retaining Wall was available.

126. There was a TIE/BSC meeting on 19 May 2009 **(CEC00939625)**. Item 7.2 noted Frank McFadden's statement that, "*BSC had 1100 metres between Haymarket and Russell Road where Grahams could be working, however, Jim Donaldson had advised that BSC felt it was not economical to commence these works until a resolution had been achieved for Russell Road*". This sounds like a significant number, 1100 metres, but the position was overplayed and misrepresented by TIE I think the section available to Grahams was 3½ cubic metres of volume. TIE always wanted to push us to make progress although they did not deliver on their obligations. Haymarket remained, even after Mediation, busy. Jim Donaldson's point was that putting resources in very short sections without unhindered access would replicate the problems on other sections.

127. It is not just a matter of arriving at a site and commencing work. Machinery and resources have to be put in place, which takes time. If there is not sufficient work then everything comes to a standstill.

128. Alastair Scott, BCUK, sent an email and attachment to me and others dated 25 May 2009 **(BFB00056224** and **BFB00056225)**. The email and attachment outline concerns relating to SDS. I would not say that the SDS provider was perfect, but they generally performed well in challenging circumstances. There were errors and omissions within the design, but this is to be expected in a project of this scale.

129. There was an internal TIE email from Richard Jeffrey, TIE, to Alastair Richards and others dated 28 May 2009 **(CEC00985815)**. This email appears to summarise a meeting attended by Richard, Steven Bell, Miguel Berrozpe, Project Director, Siemens and me. I did not see this email at the time. I would agree that the meeting was good natured and business-like. It was very clearly identified in the email that TIE and BCUK did not trust each other. This I believe was due to the differences between us. TIE believed we were not moving in the direction they wanted. In fact, we had undertaken many goodwill exercises and had tried to make certain things work. We would then discover that TIE were not keeping their word in relation to what had been discussed and agreed. This led to a lot of mistrust. In addition, the fundamental disagreements about Princes Street had not been resolved. This was the £2 million dispute that remained even after having agreed a demonstrable cost mechanism. This mechanism clearly stipulated that such a huge difference should not have arisen. Siemens also had a lot of issues, so this led to the high level meeting referred to in the email. Richard Jeffrey had arrived around May 2009. Richard was not involved in the PSSA. When he arrived, Richard attempted to identify what the issues were. Within the email Richard refers to the Project Management Panel ("PMP").

130. The PMP was the reason why it was Steven Bell, Miguel and myself that were discussing issues. It was at a high level. Richard states at the end of the email, "*It seems to me we have a choice. We can tough this out, grinding out*

every point along the way or we can take the whole relationship (rather than each issue) to mediation (marriage guidance!) In doing this I think we will very quickly get to the issue of the unfinished design risk. We can address the issues of the unfinished design in a contractual level as above or we can go through a couple of dozen examples and see if we can resolve pragmatically. Each approach has its risks." I think Richard Jeffrey had realised that there were a number of very tough issues between both parties. I recall Richard mentioning to me that the issues would need to be resolved in a similar manner to marriage guidance. Richard again referred to this concept at Mediation and later with the disputes. In relation to the disputes, Richard believed that whichever party had the correct standpoint would then provide guidance to move forward. The problem was that TIE lost all these cases and they would not take anything on board (they would not honour the principles determined at adjudication). This resulted in matters escalating further. Noting the content of the email, it is clear that it has been discussed internally. The conclusions Richard details were not discussed during the meeting I was present at.

131. I believe that – If Steven Bell had acted on the issues raised within Richard's email – then we might not have had two years of disagreements between us and TIE.

132. I sent a letter to Jason Chandler, PB, dated 28 May 2009 **(TIE00697032)**. Within this letter, I advised that there were areas of Phase III (Detailed Design) work scope that PB required to complete under the SDS Agreement. There were a lot of issues raised in the letter. SDS believed that they were entitled to additional monies due to further design changes. In theory, they were correct. However, there were elements where they had not completed their design yet. These were covered by their original lump sum payment. TIE would not make any additional payments for these additional design changes because they did not instruct them. As a result, we made the decision to make some additional payments to SDS. This was despite the fact we had no recovery from TIE for these situations. This so-called agreement which we made with SDS was subsequently sent to TIE in error by private email. TIE

were challenged on this, and confirmed they had received the email and subsequently deleted it. It was mistakenly sent as the correct recipient had a similar name to a TIE employee.

133. At various times, we thought there might be scope for some progress. For example, following reaching agreement on the PSSA (in March 2009) we attempted mediations with TIE to see if we could unlock issues. We had a mediation before Eileen Carroll on 29 May 2009; the same day we signed the final PSSA. This was about the percentage uplift – to cover overheads and profit – which was to be applied to the Actual Cost associated with the Notified Departures, and sums due to us via Appendix G to Schedule Part 4. We reached a settlement which was recorded in a Minute of Variation dated 3 June 2009 **(BFB00053622)** that we would get an uplift of 17.5% in respect of the civil element in valuing these changes.

June 2009

134. I sent a letter to TIE and dated 1 June 2009 **(TIE00339741)**. This letter advised TIE that we would issue an invoice for £3.2 million. This followed TIE's acknowledgement that it would not proceed with the construction of Phase 1b. On 1 July 2009, BCUK issued TIE with a sales invoice for £3.2 million plus VAT of £480,000, in relation to, "*Compensation for Infraco's work in the procurement period on Phase 1b in accordance with Schedule Part 37 of the Infraco agreement*" **(TIE00339743)**. This was part of the Kingdom Agreement, which was subsequently incorporated into the Infraco Contract. This payment was stipulated to be made if the 1b phase was not proceeding. I received a letter of response to this invoice from TIE dated 4 August 2009 **(TIE00339746)**. That letter intimated that TIE would pay the sum in the invoice under reservation. There was no reason for this letter. We were contractually entitled to the payment and there was no question of misinterpretation.

135. BSC's proposed fixed price for phase 1b was £134 million. This was almost three times the bid price of £49.7 million. It was clear to us (BCUK) and TIE that 1b was not proceeding. We had never had the opportunity to undertake

proper pricing for 1b. There was not a great deal of time spent to fine-tune any exact costing.

136. Richard Jeffrey sent an email to various recipients dated 8 June 2009 **(CEC00986647)**. An earlier email from Michael Heerdt, Bilfinger was part of this chain. Michael states that he anticipated additional Project costs in the range of £80 million to £100 million, excluding any additional costs of Siemens and CAF. Michael also predicts a project overrun of around 18 months. Michael Heerdt was the Managing Director of Bilfinger Western Europe, which was located in Wiesbaden. It was not the UK organisation, it was the overarching organisation. When Richard Jeffrey started with TIE Michael met with him. This was an attempt to build a relationship at a high level.

137. The reference to a cost overrun related to the build part of the ETP. This was a Bilfinger element and not Siemens.

138. The Executive Summary of BSC's period report to 20 June 2009 **(CEC00624393)** noted that production of civil and building drawings in accordance with the original design was 80% complete. In general, earthworks, roads, track and structures drawings were available but drawings for the depot and tram stops were incomplete. It also noted that meetings were in progress to agree a new programme. At that time, a total of 409 changes had been notified to TIE with a submitted estimated value of £47,500,000. It was, again, noted that, "*Virtually all construction works are impacted by external issues which require resolution through the change process of the contract*". This report was issued under my authority and I fully agreed with the content.

July 2009

139. We attempted a further mediation from 29 June to 3 July 2009 which was much more ambitious in scope. This dealt with 12 issues identified by the CEOs of Infraco and TIE following a meeting on 22 June, covering all of the major issues then in dispute. This included: the valuation of EOT 1, which was

the 2 month initial delay due to the SDS programme moving from version 26 which was what the price was based on, to version 31 by the time of signature of the Contract; the time due to us in respect of EOT 2 (MUDFA delays as at March 2009); how to interpret Schedule Part 4; the valuation of BDDI to IFC Changes etc. This was also the start of the discussions on what became known as the 'On Street Supplemental Agreement' which was a proposal that all On-Street Works be dealt with on a similar basis to the PSSA.

140. Unfortunately, we were unable to reach agreement with TIE at this mediation because it became clear that we had fundamental disagreements on the interpretation of key aspects of the Infraco Contract. We followed the mediation up with a 'Without Prejudice' offer to TIE on 8 July 2009 (**CEC00531230**). In this letter, as well as making proposals in relation to many of the things discussed at mediation, I also urged TIE to, *'abandon its passive behaviour in favour of an active decision making process'*. By this I meant that the issues between us were only likely to get much worse if decisions on how to proceed were not taken early. In response in a letter dated 9 July 2009 (**CEC00531239**), Steven Bell took the position that TIE remained open to taking decisions but it was Infraco's failure to provide information which was making this impossible. It was clear that we were very far apart on many issues.

141. The minutes of a progress meeting were sent to me by Steven Bell, dated 14 July 2009 (**CEC00429610**). Item 5.5 provides that TIE had noted that the SDS programme was falling behind with no explanation. This was due to design related issues. There were general complaints about the SDS programme slipping. There was more than one reason for falling behind. The design contained many individual parts and each part had a different impact. It is therefore difficult to quantify precisely why the programme had slipped; it will have been the result of many differing reasons and so I cannot provide an answer now to such a general question. Certainly, failure by TIE to issue instructions and the MUDFA delays will have had a significant impact on why the SDS programme was slipping. There was always a variance statement

CEC00429610 should be CEC00423299

provided with the design programme – this would identify and define the exact reasons why things had been delayed.

142. An internal TIE email was sent from Richard Jeffrey to others dated 31 July 2009 **(CEC00667242)**. This email noted that Richard had met with me the previous evening. The email indicates that I had, amongst other things, indicated that BSC would not start any more On-Street Works without a much improved supplemental agreement. I sent an email to Richard Jeffrey dated 30 July 2009 **(TIE00031088)**. This email had a document attachment which outlined a Final Settlement Proposal. A further email was sent from Richard Jeffrey to myself dated 4 August 2009 **(TIE00033401)**. This email intimated that TIE would reject the Final Settlement Proposal.

30 July 2009 should be 31 July 2009

143. BSC did not refuse to commence any more On-Street Works without supplementary agreement. BSC carried out works on a *'goodwill works'* basis. An example of this was not requesting a TIE Change Order before proceeding. This was maintained up until September 2010, when the situation had become so bad that we could not continue on that basis. The exchange of emails referred to was as a result of the mediations. TIE then attempted to force us to work beyond the Infraco Contract without following the contract conditions. We did undertake work but, of course, there were areas where we raised a Change Order request. There was also the issue of the Infraco Contract, which did not permit us to work without a TIE Change Order (clause 80.13).

144. There was no difference in BSC's position in relation to Off-Street Works. The Off-Street Works were easier because they were generally not subject to the same extent of problems as On-Street Works. There were fewer utilities present and this meant fewer problems in these areas. However, we still had a lot of issues with design. There were changes from BDDI to IFC and consents and approvals outstanding, but we continued on the off-street during this period (as we did with elements of On-Street Works).

145. The Final Settlement Proposal (**TIE00031089**) sent with my email of 30 July 2009 does not differ greatly with what was achieved at mediation with CEC. This is very disappointing, given that it took two years to achieve what was a sensible way forward. An example was the proposal to have an independent QS and a simplified change procedure in respect of the Clause 80.13 hurdle. This became part of the agreement with CEC later on. As stated previously TIE refused to accept any updated programme that would have shown delay and proved our entitlement to an EOT. This meant that we were working against a completely out of date programme. The proposal was to give us what we thought we were entitled to with some payment – but with Infraco taking a hit on certain prolongation costs. The BDDI to IFC relates to our fundamental disagreement with TIE as to the meaning of Clause 3.4.1 of the Schedule Part 4. BSC maintained that, where there was a change from BDDI to IFC noted in that clause, this was a Notified Departure. We were therefore entitled to extra time and money under Clause 80. TIE were maintaining that it was all design development. BSC were subsequently found to be correct on this point at two very important adjudications. These were in relation to Carrick Knowe and Gogarburn. What we were proposing was that we would accept the 4% deduction from the value of the change to account for a degree of design development. However, the proposal was rejected by TIE.

August 2009

146. An email was sent from Kevin Russell, Contract Manager, BSC, to me and others dated 3 August 2009 (**CEC00805091**). Attached to the email was a draft schedule of services (**CEC00805093**). This draft was in relation to a proposal to appoint an Independent Quantity Surveyor to verify and determine disputed Estimates for changes to works. This proposal was not implemented. From what I can recall, TIE did not want to relinquish any control.

147. My view was that it was sensible to utilise an independent certifier. This was implemented after Mediation and was successful, so it was clear that this was a sensible way of determining matters. This process, if implemented earlier,

could have achieved agreements. This role was undertaken by Colin Smith as well as Turner & Townsend ("T&T") post-Mediation.

September 2009

148. The adjudications which commenced in September 2009, dealt directly with whether changes which had occurred between the BDDI and the IFC information were properly to be considered as Notified Departures. TIE's position was that the identified changes in respect of the design at each of these locations were simply the normal evolution of the design which Infraco was obliged to carry out in order to meet its design obligations in terms of the Employer's Requirements. Whilst we acknowledged that we were of course obliged to develop and complete the design and construct the IFC design, the issue was whether we were entitled to additional payment for doing so given the Pricing Assumptions which had been agreed and were contained with Schedule Part 4.

149. This was the first real test of the Schedule Part 4 Pricing Assumptions and we were very relieved that it was determined in Infraco's favour, albeit that TIE appeared subsequently not to accept that finding. The adjudicator on these two adjudications determined that a distinction had to be made between the general obligation to meet the Employer's Requirements and a commercial agreement that reflects the fact that the detailed design requirement for that obligation had not been completed at the date of the contract agreement. That is, there was a distinction between Infraco's obligation to design the works and the price that they were to be paid. He also highlighted clause 4.3 of the Infraco Contract. The provisions of Schedule Part 4 took precedence over any other part of the Infraco Contract as far as Infraco's entitlement to payment was concerned. He therefore determined both the Carrick Knowe and Gogarburn disputes in favour of Infraco.

150. There are minutes from a TIE/BSC meeting on 8 September 2009 **(CEC00429610)**. I received a copy of these by letter from Steven Bell on 21 October 2009. The minutes noted at item 4.3 that, "*Section 1B – Leith*

Walk; works now planned to commence on 4 January 2010 after completion of BT works, RB [Robert Bell] stated that it was hoped that BT would be completed prior to 27 December 2009, however BSC advised that very little work could be undertaken prior to stated commencement date." Item 129 of the MUDFA Programme noted that the latest programme had been issued for Leith Walk and that BSC had requested similar information for the whole Project. I do not know the extent to which the MUDFA Works had been completed by this time. It was the responsibility of TIE to engage the contractor, so Infraco would have no direct knowledge of what had been completed at any given time. What we were aware of was that MUDFA was delayed considerably.

151. The Executive Summary of BSC's period report to 12 September 2009 **(CEC00624408)** noted that production of civil and building drawings in accordance with the original design was 86% complete. It also noted that in general, earthworks, roads, track and structures drawings were available but drawings for the depot, substation and tram stops were incomplete. It also noted that a total of 464 changes had been notified to TIE with a submitted estimated value of £71,199,000. I cannot really recall the details of this after so long but this will have been an accurate snapshot of progress at the time.

152. The document also noted that TIE had referred four disputes to the Dispute Resolution Procedure. These were Financial Aspects to EOT, Hilton Hotel Car Park, Carrick Knowe Bridge and Gogarburn Bridge. However, BSC did not consider that these four issues would resolve the overall global issues which would allow the construction of the Project to move forward. The first two issues were minor. We did not have decisions on matters three and four. We did however go on to win these at adjudication. Despite this, TIE refused to acknowledge the decisions. In addition, there were a lot of other issues including the continued presence of the MUDFA contractor and how to deal with and progress Estimates. Therefore even if TIE had accepted the outcome of these adjudications (which they didn't), then these issues alone would not have resolved all of the issues between the parties.

October 2009

153. An adjudication decision was issued on 13 October 2009 by Robert Howie QC **(WED00000026)**. This was in relation to the Hilton Hotel car park works. Further adjudication decisions were issued on 16 November 2009 by Mr Hunter in respect of the Gogarburn Bridge **(CEC00479432)** and Carrick Knowe Bridge **(CEC00479431)**. Then, on 4 January 2010, Mr Wilson issued his adjudication decision in relation to the Russell Road Retaining Wall Two **(CEC00034842)**. I was fully involved in all these decisions from the point of knowing they were being progressed. In respect of the day to day matters with the adjudications these were dealt with by Pinsent Masons and my commercial QS team. If there was any documentation to be signed I had to be fully aware of the content.

154. The Hilton Hotel was a very minor issue with no effect at all. We lost, and I acknowledge this. We did, however, win the adjudications for Gogarburn and Carrick Knowe. These were about to change from BDDI to IFC and I have discussed these above. All of the adjudication decisions are dealt with in more detail in Appendix 1 to my original witness statement. This was also the case for Russell Road retaining wall. The problem was that TIE did not accept the outcome of these adjudications and they were not prepared to accept that the decisions reflected the proper interpretation of the Infraco Contract. This was even when an adjudicator had ruled on the facts which were stipulated in the contract. This was one of the main reasons why it was not easy to proceed. Indeed, there were more issues than just the four referred to.

155. The decisions, even for someone not involved in the process, are relatively clear when you read the summaries. The adjudicator has ruled very clearly on who the decision favours. This is also clearly illustrated when the adjudicator records who will be responsible for costs. If TIE had to pay the full amount, then it was clear they have lost the case completely. On occasion the costs may have to be shared as a percentage dependant on the ruling. When we lost, we paid the costs. The difference was that we acknowledged this, even though the case that we lost was minor on a principle which was very isolated.

I think there was a strategy from TIE's side not to acknowledge decisions which went against them.

156. I sent Steven Bell a letter dated 23 October 2009 **(DLA00001692)**. It related to on-going disputes with TIE in respect of delay in submitting Estimates and the difficulties caused by the fact that we didn't have agreement on a programme that reflected the impact of the MUDFA delays. Within the letter I am highlighting my opinion that the dominant cause of delay in the Project was the delay caused by the incomplete MUDFA Works.

November 2009

157. I sent an email to Steven Bell dated 10 November 2009 **(TIE00399860)**. I advised Steven that it was BSC's intention to commence work on particular sites between November 2009 and January 2010. At this time, we were still discussing the way forward regarding the On Street Supplementary Agreement. There was also discussion between David Darcy and Richard Jeffrey. David Darcy had taken over from Richard Walker as the Managing Director UK. On several occasions, David had direct discussions with Richard. This was an attempt to achieve progress. On our part this showed a degree of goodwill, despite there still being unresolved issues.

158. The sites we had identified to commence works at were selected because they were high value for TIE. Haymarket Viaduct still had utilities present at that time, so there was a lot of work to be undertaken.

159. It is my understanding that work did commence on the sites identified within the email. The progress reports from this time would confirm this. This was evidence of a goodwill gesture by BSC, despite the on-going contractual issues. We were attempting to find a way for the Project to move forward. The On Street Supplementary Agreement was still under heavy discussion, and a lot of time and work was spent on this. There was also a commitment to move forward on the Off-Street Works so that progress could be made.

December 2009

160. There was a progress meeting on 1 December 2009 **(CEC00429454)**. The minutes were submitted to me by Steven Bell. Item 5.1 noted that 92% of Planning Approvals and 84% of Technical Approvals had been granted. These issues were TIE's responsibility. TIE or CEC would need to provide a reason why they were not complete.

161. There was an internal email from Baltazar Ochoa, Change Manager BCUK, dated 9 December 2009 **(CEC00328711)**. Attached to the email was a draft Memorandum of Understanding between BCUK and PB **(CEC00328712)**. The email trail also contained an email from Suzanne Moir of Pinsents. Ms Moir set out her understanding of why the memorandum was required, stating, "*because Infraco believe SDS may have a successful defence in relation to any claim under the SDS Agreement for late delivery of the design – as a result of BB/Siemens failure to provide design information, carry out the CIDR etc in time and in accordance with the current design programme. This could result in Infraco being exposed under the Infraco Contract if as a result of the OSSA or success in the Adjudications, TIE instructs or Infraco become obliged to proceed with the works – for which there is no design at this time as a result of the Infraco failures as set out above*". This is an example of grossly unfair behaviour by TIE. It is clear from the email chain that it was internal legal advice provided by Suzanne Moir of Pinsent Masons. In error Colin Neal, TIE, has received a copy rather than the intended recipient Colin Brady. Baltazar went to TIE on realising the mistake that had been made. There was an attempt to recall the email but this was unsuccessful. Colin Neal confirmed that he had received the email but assured Baltazar that it had been deleted from the system. In fact, he circulated it widely within TIE.

162. At a subsequent TIE/BSC meeting on 21 June 2010 **(TIE00369812)**, it was noted in the minutes that Kevin Russell advised that there was one additional agreement in place between BSC and the SDS Provider. Its purpose was to unlock the design change issue which was held up by TIE. This is reference to the agreement I refer to in the preceding paragraph. The agreement

incentivised PB to speed up the completion of the design, and reduced the risk of having a claim against us. In normal circumstances, we should have received the design Change Orders prior to progressing. The money should have passed through us to SDS to accommodate all the changes. TIE, however, did not pay and so we had to find a mechanism to get SDS working. It was only natural that they did not want to work free of charge. This was referred to as incentivisation – finishing off design without TIE's knowledge. Otherwise, TIE would never have issued these Change Orders. This agreement was discussed at meetings between BCUK and PB. I cannot recall the conclusion of the agreement, but my understanding is that it was produced and signed.

163. I cannot remember whether Siemens were involved in these discussions. I do not believe that they wanted to be involved whilst there remained issues mainly related to civil works.

Events in 2010

Audits

164. Clause 104 of the Infraco Contract (**CEC00036952**, page 229) is headed 'Information and Audit Access'. Clause 104.2 provides as follows: *"The items referred to in Clause 104.1 (all Deliverables, and invoices, timesheets to support claims for reimbursement....) shall be kept in good order and in such form so as to be capable of audit (including by electronic means) by TIE's representative, TIE, CEC, TIE's auditors or CEC's auditors or any other third party. The Infraco shall make such records available for inspection by or on behalf of TIE's Representatives, TIE, CEC, TIE's auditors or CEC's auditors or any other third party at all reasonable times during normal working hours on not less than one Business Days' notice...."*

165. The frequency of such audits was to be reasonable. Clause 104.2 also stated: *"In addition to the requirements of Clause 104.1 and 104.2, the Infraco shall provide to TIE's Representative, TIE, CEC, TIE's auditors, CEC's auditors of*

their successors, any other information, documents, records and the like in the possession of, or available to the Infraco (and to this end, the Infraco shall use all reasonable endeavours to procure that all such items in the possession of the Infraco Parties shall be available to it) as may be reasonably requested by TIE's Representative, TIE, CEC, TIE's auditors of CEC's auditors for any purpose in connection with this Agreement and/or the Infraco Works."

166. I discuss TIE's misuse of the audit process at paragraph 16.3 of my original witness statement. In short, TIE tried to use the audits to get information from BSC to use against us. The whole process became very contentious.

TIE Relationship

167. There was an email from Richard Jeffrey to David Darcy dated 19 January 2010 **(CEC0058795)**. David Darcy was the Managing Director of BCUK. Richard highlighted concerns within his email. There was further correspondence in relation to this matter by Richard Walker dated 3 February 2010 **(CEC00655626)** and Steven Bell, TIE, dated 16 February 2010 **(CEC00578867)**. David Darcy was seconded by Richard Walker who was the previous Managing Director. David was basically his deputy so they had a double function within the UK. David attempted to build up a relationship on another senior management level with Richard Jeffrey to get things moving forward.

CEC0058795 should be CEC00587959

168. In response to the correspondence between the individuals stated, I sent a letter to Steven Bell dated 1 March 2010 **(CEC00578328)**. In my opinion, this letter provided an accurate summary of all the problems which existed with TIE. We had a very difficult relationship with them in 2010 and it later escalated further. It felt like a campaign by TIE to bring BCUK to its knees (this is what I refer to at paragraph 16.2 of my original witness statement). That is also what a few individuals, including Tony Rush, have intimated directly to us. This included the on-going audits and refusal to accept programmes that would allow us to realise our complete entitlement to an EOT. In addition, there were complaints about our approach to Estimates and

sending us hundreds of letters every month. I think the record was receiving close to 100 items of correspondence in one day. TIE also disputed the adjudication decisions; disputing what we thought was the clear wording of Clause 80.13. I believe that my letter illustrates what a difficult position we were in at that point of time.

169. There was a breakdown in trust between the personalities involved, together with the contract issues. It was the same personnel involved over a 14 month period. The only person who came in afterwards was Richard Jeffrey, in May 2009. In my opinion, the way in which TIE administered the Infraco Contract was unprofessional. I had tried to build a relationship, which included undertaking goodwill works. We also implemented the PSSA. However, it always appeared that TIE would turn their back on what was agreed. This would result in threats being made in respect of the contract. Then they would not even pay for what was agreed. This was clearly a major obstacle in allowing trust to be built.

On-Street Supplemental Agreement

170. I sent a letter to TIE dated 19 February 2010 **(CEC02084034)**. This letter detailed an offer for a Supplemental Agreement covering the remainder of the On-Street Works. The basis for the proposed agreement was almost identical to the PSSA which had allowed the works on Princes Street to proceed. This had been prepared by us but based on a jointly proposed strategy to try and overcome the effect of the much delayed MUDFA Works which were badly affecting the on-street sections of the Project, as well as the changes (Notified Departures) which remained unresolved and which were therefore holding up our ability to progress with the Works. We got so far with this proposal and we believed that it would be a good workable agreement which would allow works to progress even where the cost of changes and the impact of the MUDFA delays were not agreed. The basis for this agreement was that all the On-Street Works would be paid for on a 'demonstrable cost', 'open-book' basis (the 'On Street Supplemental Agreement' or 'OSSA').

171. I received a response by letter from Richard Jeffrey dated 26 February 2010 **(CEC00368373)**. Within this response, Richard rejected BSC's offer. There were 11 'background factors' that he considered were relevant to a forthcoming meeting between TIE and BSC. These included the following assertions. "*6. ... The recent audit carried out by TIE shows that Infraco has failed to appoint key-subcontractors for any Civil Engineering Works required by Clause 28 of the Infraco Contract. 7. ... the SDS Provider should have completed the design in January 2009, TIE are not satisfied that Infraco have complied with their obligations under the Infraco Contract in managing the SDS Provider. 8. CEC asserts that Infraco has been responsible for delays in obtaining approvals*". I replied to Richard Jeffrey by letter dated 3 March 2010 **(CEC00648426)**.

172. Of Mr Jeffrey's 11 factors in his letter dated 26 February 2010, :
I agree with point one – there is an acknowledgement of the delay.
The second point was that, *"any extension of time will have to take account of mitigation measures performed or lost by Infraco"*. I generally agree, but we had taken mitigation measures into account in the programme.
The third point was that, *"Infraco have been offered an extension of time of nine months in addition to the 7.6 granted"*. We had been offered nine months, but only six months cost if I recall this correctly. We had shown a full entitlement to time which TIE simply refused to accept. If we had accepted then we would have been contractually liable.
The fourth item was that, *"Infraco's current rough programme shows that Infraco are intending to seek a further 16 months of an extension. The third extension has not been substantiated nor does TIE believe that it could ever be substantiated"*. We denied this - it could be and was substantiated.
Item five was that, *"TIE has confirmed that six months of prolongation costs will be valued. (See TIE's letter dated 13 November 2009)"*. This was unacceptable to us.
In relation to number six, there was no delay or issues that flowed from the fact that we hadn't entered into subcontracts with key subcontractors. We tried to proceed on the basis of letters of intent to avoid unnecessary cost.

In relation to item seven, the SDS delay – I could also ask why the design was not complete by 2008 when the novation took place. We were not in breach of the contract, so it was not really damaging the Project as a whole.
Item eight was that, "*CEC assert that Infraco has been responsible for delays in obtaining approvals*". It was a failure by CEC Planning and Technical Department, and their preferential engineering request. I strongly refute that we were responsible for the delays in getting approvals, and we were vindicated in this respect at Mediation.
Item nine was that, *"Representatives of Infraco and TIE have been unable to agree on the value of on-street works and give certainty of costs. They were making it impossible for TIE to fulfil their duties to obtain best value"*. I agree that we could not reach an agreement on the costs and that that was the whole reason for needing a revised approach for the On-Street Works.
Under item 10, *"Infraco members have expressed the desire for alternative arrangement for procuring civil engineering works to the on-street"*. I would agree that this was a sensible approach. This would probably allow works to proceed.
Item 11 related to EU employment law, as discussed below.

173. This last point was the most significant as far as the OSSA was concerned. TIE declared that the OSSA would have been a breach of its obligations under EU procurement legislation. Discussions on such a proposal were therefore abandoned at the end of February 2010. It was frustrating that we had put so much effort into this for TIE subsequently to cut the proposal dead, on the basis of EU legislation which, if correct, was something that they should have been aware of six months earlier.

Disputes over Estimates

174. Steve Bell, TIE, sent a letter to me dated 19 February 2010 **(CEC00574090)**. This correspondence set out the findings of their review of the Estimates provided by BSC in relation to the INTCs. It was very difficult for us to fully comply with the contract. This was due to the refusal of TIE to accept general principles. This letter also strays into Clause 80.13 and whether we were

obliged to proceed with work in the absence of the TIE Change Order. This then became the subject of the Murrayfield Underpass adjudication which we won and which therefore clearly demonstrated that TIE were wrong in their interpretation that we would have to proceed with works in the absence of a TIE Change Order.

175. Steven Bell sent me a further letter on 19 February 2010 **(CEC00530669)**. This letter set out TIE's interpretation of clause 65.2 of the Infraco contract. In response, I replied to Steven Bell by letter dated 1 March 2010 **(CEC00578327)**. TIE continually hid behind the process of dealing with Estimates and Compensation Events, rather than accepting the underlying principles. A major dispute was INTC 429, which was the major delay caused to March 2009. This was because MUDFA was not complete. What we had intimated was that until we got an agreement on the effect of MUDFA, there would be significant issues and it would be impossible to submit Estimates or Compensation Events which could properly deal with the time impact of these events. Individual Compensation Event applications should have sought extra time in relation to these individual events. If we were to review programme revision 1 and select at random individual events, this would demonstrate an entitlement to an EOT, but this would be the wrong approach. In reality, that event was unlikely to cause any delay at all because works had not been able to start because of the on-going presence of the utilities – the latter being the critical cause of delay.

Remediable Termination Notices

176. On 9 August 2010, we received the first three (of ten) Remediable Termination Notices and the first of three Underperforming Warning Notices from TIE. The letters continued up until late October 2010. This was happening at the same time as we were trying to negotiate a solution with TIE through the Project Carlisle I and II proposals. It was also happening at the same time as the flood of correspondence, audits and on-going adjudications occurred. I believed then, and still do, that TIE was trying to exert as much

pressure on Infraco as they possibly could, to force us to agree to a compromise arrangement with them.

177. The first Remediable Termination Notices, and the Underperformance Warning Notice received on 9 August 2010, all related to defects on Princes Street (**CEC00378692**). We treated the receipt of these notices very seriously. The consequences of a contract termination could have been extremely expensive for Infraco given that, if it were right in its decision to terminate, TIE would have ultimately been entitled to bring in another contractor to complete the Project and Infraco would have been liable for all the additional costs incurred in having to do so. We would also have been required to pay the difference between what TIE would have to pay to that new Contractor, over and above what it would have been obliged to pay Infraco. It would have led to a huge and complicated dispute. We did not accept the basis for any of the Remediable Termination Notices served on us and we would have disputed TIE's entitlement to terminate had it subsequently gone on to do so.

178. Some of the Remediable Termination Notices were for trivial matters, others related to matters which were at the very heart of the disputes between the Parties. For example, the other Remediable Termination Notice of 9 August 2010 (**CEC02084518**) related to Infraco's alleged failure to keep documents in an orderly fashion, to allow TIE access to those documents and to set up an Extranet. The Remediable Termination Notice of 16 August 2010 (**TIE00252793**), dealt with allegations that Infraco had failed to update the Programme and had failed to take all measures to mitigate the effects of any delay.

179. Another example of a Remediable Termination Notice which reflected a dispute which went to the heart of the Infraco Contract was the Notice sent on 29 September 2010 (**CEC00079410**) which dealt with Clause 80 and TIE Changes. TIE repeated all of its arguments about Infraco allegedly submitting INTCs without detail, not submitting Estimates in time, not delivering Estimates at all, submitting incomplete Estimates and again refusing to comply with mitigation measures. We were also accused as we had been

before, of over-valuing Estimates. The biggest bone of contention was Infraco's refusal to carry out work before a TIE Change Order had been issued. By this time we had already had a series of adjudications which dealt with Clause 80 issues, not least the decision of Lord Dervaird on Murrayfield Underpass of 7 August 2010 which made it clear that Infraco was both required and entitled to refuse to carry out changes where there was no TIE Change Order issued. In our response of 9 November 2010 (**CEC00133622**), we made it clear that TIE's refusal to even acknowledge that matters were changes (let alone acknowledge the delay caused by them) had rendered the process unworkable and frustrated production of Estimates. We did not submit a rectification plan in response to this letter because we believed that we were complying with the Infraco Contract. TIE were simply wrong to keep insisting on an interpretation of the Infraco Contract which had already been determined to be wrong through the decisions in several adjudications.

180. Perhaps the most extreme Remediable Termination Notice we received was on 30 September 2010 (**CEC00130712**), being the allegation of breaches, *'evincing a course of conduct'*. It appeared that someone had sat with the Infraco Contract doing a page turn. Whenever an Infraco obligation was found, we were accused of being in breach of that obligation: this ranged from allegations of a lack of supervision, disregard for contractual mechanisms, an unwillingness to resolve difficulties or the Infraco's breaches, non-delivery of the works (with no reference of course to the reasons why we were delayed), disregard for the client's public accountability and best value. Attached to this letter, at Appendix A, was a schedule which listed out 100 clauses of the Infraco Contract we were said to be in breach of. If the consequences of receiving a termination notice had not been so serious, this would have been laughable. The breaches we were accused of included lots of matters already the subject of other notices or already decided elsewhere. For example, paragraph 2.5.2 again repeated that we were in breach of contract for failing to *'continue with any works which are the subject of a TIE Change or Notified Departure prior to the issue of a TIE Change Order or the referral of the relevant estimate (if there is one) to the Dispute Resolution Procedure'*. This was just another example of a refusal to accept Lord Dervaird's decision in the

Murrayfield Underpass dispute. This letter also continued to accuse us of 'delinquency' which had by this time, become TIE's term of choice for describing Infraco's 'behaviour'. Again, we did not submit a rectification plan in respect of this letter.

BCUK response to RTNs

181. On 17 September 2010 (**CEC00044543**), we responded to the first of the Remediable Termination Notices. This response was drafted in conjunction with our internal team and our lawyers. In fact, we established a group to keep track of all the Notices we received and to make sure that we took a consistent approach in these responses. This group also looked at the consequences of the immediate steps we would need to take to protect our position in the event of a termination. It was a matter which senior management in Wiesbaden were heavily involved in. Termination of such a large and important contract would have been a major issue for BCUK, and the line we took required Board involvement and approval.

182. In the letter of 17 September 2010 (**CEC00044543**), we refuted that there had been a breach of contract in relation to the defects on Princes Street (which, we considered at that time, were due to the manner in which the works were carried out and the road being opened prematurely to traffic). We also made the point that, although it was denied that there was a breach, it did not *'materially and adversely affect the carrying out and completion of the Infraco Works'*. This was on the basis that the timetable that we proposed in the Rectification Plan showed that rectification of the Princes Street works would not affect the carrying out and completion of the Works as a whole. We disputed the validity of the two Remediable Termination Notices which related to Princes Street and we made clear that we did not consider that TIE had any grounds to terminate on the basis of these Notices. Our Rectification Plan was submitted on the basis that it was without prejudice to our position that the Notices were not valid.

183. My letter of 17 September 2010 also contained the following statement: *"As at the date of writing you have served Remediable Termination Notices in respect of another 4 matters. None of these matters have been the subject of referrals to dispute resolution. It appears to us that TIE has abandoned the contractual mechanism for resolution of disputes. This may be because every major issue of principle has been decided against TIE in adjudication. However that is no justification for now abusing the termination provisions of the contract. It is clear that TIE is now pursuing a policy of serving a Remediable Termination Notice in respect of each and every grievance it may have, regardless of the significance of each grievance and its implications for the Infraco Works. Whilst we will respond to each Remediable Termination Notice in turn, we object to TIE's adoption of this policy."*

184. The letter concluded: *"such matters as require attention in Princes Street are being attended to. In no way do these merit the instigation of a process to terminate the Infraco Contract. Such a course of action is wholly disproportionate to the matters in question. We assume that the Notices have been served to advance a tactical position on TIE's part, rather than any genuine belief that these matters merit the termination of the Infraco Contract. This is entirely contrary to the parties' obligations at clause 6.1 of the Infraco Contract."*

185. BSC's response to the Notices was to strongly refute the basis for serving them. However, we did attempt, without prejudice, to offer Rectification Plans where we could under the terms of the contract.

186. None of the Remedial Termination Notices or Underperforming Warning Notices were taken any further by TIE. TIE must have known how high the stakes were and how risky such decisions would have been in relation to the Notices. In my view this is the reason why they did not proceed with them. TIE flagged the Notices up to scare us and try to ensure we bought into their approach. If any of the Remedial Termination Notices had been proceeded with then this would have led to the termination of the Infraco Contract. I would not say all of the Notices were without foundation. However, any issues

were very minor and would not normally lead to the situation we arrived at in this instance.

Volume of TIE correspondence

187. I sent a letter to TIE dated 1 March 2010 **(CEC00578328)**. Within the letter, I highlight that TIE had sent 312 letters in the month of February 2010 alone. This was one of TIE's campaigns. It was obvious they had just increased the number of letters issued and were complaining if we were not responding in time. TIE knew that under the contract we were obliged to respond to all correspondence that we received.

188. This was indicative of a change in approach by TIE. They appeared to have adopted a very aggressive approach. In my opinion, they had a campaign to try and make us accept their position.

189. The volume of correspondence was maintained by TIE in the following months. It was very labour intensive to respond to all the letters. It was a distraction from the real issue of getting the ETP built. Many of our staff, commercial, operational, design and lawyers, were completely tied up with responding to letters. It was very labour intensive. The majority of letters repeated the same nonsense over and over again. It was no way to run a project like this.

Design Assurance Statements and Value Engineering

190. Design Assurance Statements ("DASs") were requested by TIE when TIE realised that it could not review the design in a timeframe that would meet the design programme. The DAS was created as a statement of assurance from the Designer that the final design met the Employer's Requirements, the required standards etc. It was not possible to provide a completed DAS until the design was complete (including the incorporation of all design changes). However, TIE continually tried to hold it against Infraco that the design was not fully integrated or assured as the DASs had not been issued.

191. Whilst not a contractual requirement, Infraco and SDS issued draft DASs to TIE to demonstrate as much as possible that the design was as integrated and assured as it could be given the significant design changes to be instructed by TIE.

192. Schedule Part 4 also contained certain value engineering proposals. We did what we could to review these. A lot of the best value considerations were subject to major interference by TIE and CEC. Requirements from CEC or a particular third party did not always align with the best value for the Project.

Dispute Resolution

193. The dispute resolution procedures in the Infraco Contract were contained within Schedule Part 9 to the Infraco Contract. They provided that, where a dispute had arisen, the Parties were to follow a staged process to try and resolve the issue. This staged process included:

- A meeting between TIE and Infraco's Representatives to be held within three business days of either party notifying the other of a dispute.
- If that meeting either didn't take place or didn't resolve matters, the parties were to serve a written Position Paper on each other within seven days of the notification of the dispute. That Position Paper was to state in reasonable detail that party's position and what it was looking for from the dispute, as well as commenting on the other party's position.
- Once the Position Papers had been exchanged, the Chief Executives of Infraco and TIE were to meet to seek to resolve the dispute in good faith.
- If that didn't work and there was no settlement of the dispute within 20 business days of the original notification of the dispute, then the Chief Executives of both companies had a further 5 days to agree how to resolve the dispute. That could be by -
  I. mediation as set out in Schedule Part 9;
  II. adjudication as per Schedule Part 9; or

III. litigation in the Court of Session.

- If they could not agree how to resolve the dispute, then mediation became mandatory before the party wishing to raise the dispute could refer it to adjudication.
- Normally, we would have welcomed a staged dispute resolution procedure like this, because if parties can properly air their differences, there is always a possibility that the dispute can be resolved without having to resort to formal adjudication or court proceedings. However, here there was never any agreement at meetings, nor was there even an agreement on which method of dispute resolution the parties wished to adopt to resolve the issue. It is perhaps understandable why this came to be the case. TIE refused to accept what the Infraco Contract said, and in particular refused to accept the risk allocation as per Schedule Part 4 of the Infraco Contract. This was not something where concessions could be made in a meeting between the Chief Executives.

194. The result was that the meetings were perfunctory in order to get to the stage of mediation. The mediations were almost exclusively before Eileen Carroll, and were a waste of time because TIE refused to concede that our interpretation of the Infraco Contract was correct and we could not compromise on our clear contractual entitlements. The mediations which took place never lasted the whole day they were set down for and were really only held in order to allow the party wishing to refer the dispute to adjudication to do so.

Adjudication Decisions

195. There were 12 adjudications in total between the Infraco and TIE during the Project. A number of adjudication decisions were issued in spring and summer 2010:

- Tower Bridge adjudication by Mr Hunter dated 18 May 2010 **(CEC00373726** and **CEC00325885)**.

- Section 7A – Track Drainage by TG Coutts QC dated 24 May 2010 **(TIE00231893).**
- Delays Resulting from Incomplete MUDFA Works by R Howie QC dated 4 June and 16 July 2010 **(CEC00375600** and **CEC00310163).**

196. The adjudications were 28 day processes, which could be extended by up to another 14 days with the approval of the party referring the dispute or longer with the approval of both parties. The adjudicators were obliged to issue reasons for their Decisions.

197. The adjudication decisions were temporarily binding. They became fully binding on the settlement being reached post-Mediation. On major points of principle, the decisions without exception were in favour of Infraco. It was very frustrating for us that, right up until Mediation, TIE refused to accept the validity of these decisions and refused to implement them, both on an individual basis and by refusing to accept that they set broader precedents for how other disputes would be determined. Had they done so, this would have unlocked the on-going battles and disputes. It may also have led to TIE confirming to CEC at a much earlier stage, that it did not have sufficient funding to complete the whole of the planned ETP.

Murrayfield Underpass

198. We had taken the decision in mid-2010 to refer the issue of the effect of clause 80.13 to adjudication. We did this in the hope of unlocking the dispute and in the belief that we were right in our interpretation of the Infraco Contract.

199. The dispute referred related to the Murrayfield Underpass (**BFB00053462**), which was a reinforced concrete structure at Murrayfield. The design shown on the IFC drawings differed from the design shown on the BDDI. TIE was notified by way of INTC 109 in September 2008. The cost of this TIE Change was estimated by Infraco at £134,296.71. On this issue, TIE accepted that a

Notified Departure occurred but disputed the value. However, TIE had then issued us with a letter on 19 March 2010 instructing us to proceed with these works under Clause 80.13 of the Infraco Contract. We believed that this was an instruction, which TIE were not permitted to give us. We believed that we were precluded from proceeding with these works until the Estimate had been agreed.

200. This was referred to Lord Dervaird, one of the adjudicators named in the contract. He issued his decision on 7 August 2010 and found entirely in our favour. In short, what he determined was that in the absence of an agreed Estimate, Infraco is not obliged or permitted to commence or carry out works associated with a TIE Change (Mandatory or otherwise). As a result of this adjudication, we were relieved and pleased. However, we were also disappointed that TIE refused to accept Lord Dervaird's decision. This was another case of TIE refusing to accept a ruling in our favour.

201. TIE issued a letter to us on 10 August 2010, following Lord Dervaird's decision. This letter intimated that TIE believed they could still rely upon clause 34.1 which provides that: *"The Infraco shall construct and complete the Infraco Works in strict accordance with this Agreement and shall comply with and adhere strictly to TIE and TIE's Representative's instructions on any matter connected therewith (whether mentioned in this agreement or not) provided that such instructions are given in accordance with the terms of this Agreement and will not cause Infraco to be in breach of this agreement... "*

202. TIE's position was that, where it disputed whether a Notified Departure had occurred and irrespective of whether there was an Estimate, it was entitled to rely upon Clause 34.2. We did not consider that to be correct and it was not in accordance with Lord Dervaird's decision. He makes the point that the question here is whether an instruction given by TIE under Clause 34.1 would, *"be in accordance with this Agreement"*. He concluded that parties were directed to clause 80 where there was a Notified Departure, and that in terms of clause 80.13, TIE could only issue an instruction where an Estimate had

been agreed (the last part of 80.13) or where Clause 80.15 applied. TIE's interpretation of Lord Dervaird's decision was wrong.

203. Where works were not held up by TIE's refusal to accept what the Infraco Contract said and to apply its provisions correctly, we did proceed with them. But the whole site was generally held up by delays caused by a lack of agreement to critical changes, late completion of design and incomplete MUDFA Works. There were large stretches where there was very little that we could do at all.

Project Carlisle

204. In May 2010, the parties entered into discussions to reach an agreement whereby the scope of the works would be reduced, a new programme agreed, risk re-allocated in the Infraco Contract and a new price agreed. These proposals followed on from discussions which had taken place between Tony Rush, TIE's consultant, and Siemens' Michael Flynn. The discussion took place in Carlisle, hence the name of the initiative. Infraco produced two proposals on this basis ("Project Carlisle 1" and "Project Carlisle 2") which were followed by detailed discussions on how the Project might be completed. The proposals were based on delivering a reduced scope for the funding which was available to TIE, and seeking to simplify the contractual procedures which had been at the heart of many disputes between the parties.

205. For BCUK, we brought in Ed Kitzman to lead the discussions with TIE on our behalf. He mainly dealt with Tony Rush and his colleague, Jim Molyneux (they were both from the Gordon Harris Partnership). Our original proposal was submitted on 29 July 2010 (**TIE00885457**). TIE's request had been for us to propose a Guaranteed Maximum Price ('GMP') based on a reduced scope and an accelerated programme. Our proposal envisaged that the tram line would run from Edinburgh Airport to the East end of Princes Street. At this time, TIE was discussing bringing in a replacement contractor for civil works east of Princes Street. We proposed an amended change mechanism whereby work in respect of a change could progress even where it was not

agreed. However, there were still many uncertainties and although TIE wanted a fully fixed and final GMP, there still remained risks which we could not accept. We therefore proposed retaining certain Pricing Assumptions: the key ones being in relation to the discovery and replacement of utilities, and ground conditions. However, the majority of the other pricing assumptions would go, including those that related to design change. Our accelerated programme envisaged completion of construction and commissioning in August 2012 (Section C Completion).

206. I sent a letter to TIE dated 29 July 2010 which included an attachment in relation to BSC's *"Project Carlisle 1"* proposal (**CEC00183919**). Under the proposal, BSC offered to complete the line from the airport to the east end of Princes Street for a GMP of £433,290,156 and €5,829,805, less the amounts previously paid. This was subject to a shortened list of Pricing Assumptions.

207. The total sum of £433,290,156 was broken down as follows: £234,331,022 to Bilfinger, £126,901,621 to Siemens, £55,781,634 plus €5,829,805 to CAF and £16,275,879 to SDS.

208. We received a response from Richard Jeffrey dated 24 August 2010 **(CEC00221164)**. This letter provided that BSC's proposal was rejected by TIE. TIE responded to BSC with a counter-offer for a construction works price. This was for a line from the airport to Waverley Bridge for £216,492,216, with £45,893,997 to CAF. The amount to SDS was to be determined. Finally a sum of just under £4,922,418 would be dedicated to Infraco maintenance mobilisation, Tram maintenance mobilisation and Infraco spare parts.

209. TIE's response seemed to take us backward rather than forward. This letter proposed an alternative GMP proposal, but the proposed GMP was entirely unrealistic and all Pricing Assumptions were removed. Rather than looking at an achievable programme, TIE went back to asserting that Infraco had not proved an EOT but that TIE would allow the time already awarded by Robert Howie QC and a 9 month EOT which TIE had 'offered' previously etc. TIE's proposal would have meant that Infraco took all remaining risk for utilities

which might still be present. Schedule Part 4 would effectively be deleted. It was an entirely unrealistic proposal and one that could not be accepted by Infraco. TIE had also requested BCUK not to do any further civil engineering works, except the remedial works on Princes Street. In discussions, TIE had stated that it was reflecting CEC's desire 'not to have Bilfinger Berger in Edinburgh Streets'.

210. All communications really broke down after the rejection of this proposal. This meant that there had been no resolution of the issues between us on some fundamental matters. In addition, this came together with the receipt of the Remedial Termination Notices.

Project Carlisle 2

211. However, discussions continued and on 11 September 2010 we submitted Carlisle 2 ('Project Carlisle – Revised Infraco Full and Final Proposal') to TIE **(TIE00667410)**. This letter made reference to attempts to incorporate TIE's requirements but that we had not been able to incorporate all of them (for example, TIE had made assurances about Third Party Approvals being resolved but they had not managed to resolve a single outstanding issue). There were therefore remaining risks which, again, we could not take ownership of. I also confirmed in this letter that TIE's 'Counter Proposal' would not be considered by us further as we considered it to be, *'wholly and totally unrealistic both in terms of its pricing structure and level of risk transfer back to Infraco'*. Our new proposal was to stop work at Haymarket. We took the transfer of risk in relation to matters which we considered were quantifiable, but again, could not take other risks as we still believed that these could potentially increase our costs substantially.

212. TIE responded with a letter dated 24 September 2010 **(CEC00129943)**. It was as if they continued to refuse to believe what we were telling them about not being prepared to give a truly GMP given the risk that remained. This letter in essence repeated much of TIE's previous counter-proposal and continued to insist that any agreement must provide price certainty for TIE and its

stakeholders. TIE also wanted a complete veto over who Infraco's Representative would be going forward, and to request that only Key Personnel as approved by them be allowed to have day-to-day responsibility for the Contract. Unhelpfully, TIE also never provided a detailed breakdown which would allow us to see where their numbers came from. Their proposed GMP remained entirely unrealistic. I made this clear in a response to TIE on 1 October 2010 **(CEC00086171)** when I concluded that *'Until such time that TIE formally proposes increased amounts, we feel that Project Carlisle will most likely fail.'*

213. Following this, we received a further letter from TIE on 12 October 2010 (**CEC00079851**) with further proposals in relation to Project Carlisle. We received this on the same day that we received yet another Remediable Termination Notice. After this, relationships deteriorated very quickly. Our letters to TIE of 14 and 29 October 2010 (**CEC00079531** and **CEC00133316**) show that we believed that there was very little point in continuing the discussions: on our analysis, and based on TIE's proposed GMP, TIE were asking Infraco to 'donate' (that is, lose) around £45 million if we entered into the type of agreement it was proposing. TIE had also stated in conversations that *'Infraco must reduce its price by £45 million to avoid termination'*. TIE's approach was entirely unacceptable and we saw no point in continuing with these discussions. My letter to TIE of 29 October 2010 referred to the impasse between the Parties which I described as: "*...Infraco will not agree to reduce its price, TIE's non-payment of Preliminaries to which Infraco is entitled, TIE's non-payment of £3M for the demonstrable costs on Princes Street to which Infraco is entitled, TIE's non-payment of other parts of agreed changes or Clause 80.15 instructed works to which Infraco is entitled, TIE's constant threat to Infraco of termination and TIE's general failure to act in a fair and reasonable manner in administering the Contract. Clearly TIE has difficulty accepting the entitlements arising for Infraco therefrom.*"

Events in 2010

January 2010

214. Steven Bell sent a letter to me dated 11 January 2010 **(TIE00728750)**. Steven noted certain concerns in relation to Design Issues Support from Halcrow. Although SDS were the design provider, it was a joint venture between PB and Halcrow. Halcrow were responsible for very minor parts of the design. It was administered through PB. There was very little contact between BSC and Halcrow – the whole design management for the SDS was undertaken by PB. PB encountered similar issues to those we at BSC had dealt with. There was a huge amount of frustration on the designer's part as they could not complete the design due to the multitude of change, delays in approvals and attitude and behaviours of TIE that would have cost the SDS parties money in terms of having to keep large teams of people in place. The whole design was executed in challenging circumstances due to multiple design changes. It was a lengthy process with TIE to agree Estimates and receive payment, due in the most part to TIE's unwillingness to recognise their obligations under the Infraco Contract. It should also be remembered that the design should have been completed prior to novation and the signing of the Infraco contract.

215. We had some concerns as to the performance of Halcrow. A number of issues were recorded in correspondence between ourselves and SDS. These were mainly highlighting the late issuing of design. Parts of the design package which were originally assigned to Halcrow were reallocated to PB. This was to ensure that the design progressed satisfactorily.

216. There was a TIE/BSC meeting dated 11 January 2010 **(CEC00354155)**. In the minutes, item 129 intimates that the MUDFA Programme information had been outstanding since 14 September 2009 and would be sent to BSC that week. This again demonstrates that the reports were not being submitted to us regularly. It is recorded in the minutes to allow us to update our records accordingly.

217. BSC did receive MUDFA Programme information, but this was never on a regular basis. We always had to force the issue to receive the information

from TIE. I discuss this extensively above and in my original witness statement.

218. There was a meeting between TIE, BSC and SDS dated 19 January 2010 **(CEC00589332)**. This meeting took place as part of a TIE audit of the structures design. I was not present at the meeting, as can be seen from the minutes. The minutes show the contentious nature of these audit meetings. As I discuss above, this was part of TIE's campaign to use audits to obtain information to pursue further adjudications. It was an attempt to come up with design-related failings that could be used against us. I do not know what the outcome of the meeting was.

March 2010

219. I sent a letter to Steven Bell dated 1 March 2010 **(CEC00578330)**. Within the letter, at paragraph 3, I noted that prior to contract award the parties had agreed that Infraco would incorporate the SDS Design Delivery Programme v31 into the Schedule Part 15 – Programme and the result would be the first TIE change. It was further noted that the proposed revised Programme was submitted to TIE on 2 June 2008 but remained without agreement until 17 December 2008. This letter demonstrates the difficulties we had and the reasons why. We agreed a process with TIE, but fundamentally they would never accept a programme that showed delayed completion. They continuously required us to mitigate. Mitigation is one thing, but they wanted us to accelerate. This means spending our own money to reduce their delay. They would not accept any obligation to pay for this. The whole programme experience was a mess.

220. No revised programmes were agreed beyond revision 1. Revision 1 was the incorporation of the change from v26 to 31 of the SDS programme. The Contract Programme was completely out of date. We started recording progress against programme revision 3a. This was to make it more realistic, but TIE did not formally approve the programme.

221. Had we agreed a revised programme it would have shown the massive delay due to MUDFA. It would also have shown the increase in costs commensurate with this.

222. I received a letter from Steven Bell dated 19 March 2010 **(CEC00405690)**. The letter instructed BSC to commence, carry out and complete the INTC works listed within the letter. In response, I sent a letter to TIE dated 31 March 2010 **(CEC00405689)**. I think this correspondence is central to the whole dispute between Infraco and TIE on clause 80.13 and this is the issue which I have already discussed above at paragraphs 80, 174, 179 and 198-203 of this witness statement.

223. There was a report to CEC's Tram Sub-Committee, dated 22 March 2010 **(CEC01891483)**. This provided an update on the MUDFA Works. The report stated that the MUDFA Works had commenced in July 2007 with a planned duration of 70 weeks and that additional unforeseen works had required to be carried out in many locations. It went on to state that 97% of the MUDFA Works were now complete, and that the remaining 3% on-street MUDFA civil engineering works would be completed by September 2010. It further noted that, *"This work does not generally require any excavation work to be carried out and therefore should be unlikely to present any significant obstacle to progress on street"*. There is a further report to Council on 24 June 2010 which noted that 48,000 metres of an expected 50,000 metres, 96%, of utility diversions had been completed (**CEC02083184**).

224. It is not for me to have a view as to what extent the MUDFA Works were complete and to what extent they remained outstanding. That I believe is a question for TIE and those responsible for MUDFA - not Infraco. However, from my knowledge and experience, the statements provided in the CEC report are not true. These again are a further example of TIE misrepresenting the position to CEC. The MUDFA Works were still not complete when we entered into the Mediation in March 2011. Therefore, I would doubt that six months beforehand this is accurate. A quick review of the extent of the utility

works completed post-Mediation clearly demonstrates that the percentages recorded by TIE were inaccurate.

225. TIE would have sufficient relevant information to report accurately. I believe that they were deliberately misreporting. TIE did not want to disclose the truth to CEC or to the public.

226. I received a letter from Steven Bell dated 25 March 2010 **(CEC00142686)**. This detailed an Audit undertaken by the Nichols Group, on Design Assurance, System Integration and Best Value. I responded to this by letter dated 6 July 2010 **(CEC00212143)**. It is clear that the auditor had misunderstood some issues surrounding the programme. This included that the current version was a very out of date revision. As to Design Assurance Statements, please also see paragraphs 10.41 and 10.42 of my original witness statement.

April 2010

227. I received a letter from Steven Bell dated 2 April 2010 **(CEC00197190)**. This letter related to a Design Audit dated January/February 2010. It was undertaken by TIE under clause 104 of the Infraco Contract. I note that the Executive Summary of that document highlighted that certain things provided the audit team cause for concern. These were:

- Little evidence that Infraco had properly managed the design process in a timely manner.
- Lack of evidence that Infraco had paid serious attention to Best Value design solutions.
- The final outputs of design were in excess of the needs of the Client.
- No acceptance of liability for pre-novation issues.
- Lack of engagement with the audit process.

228. I would dispute these statements. It was a concerted campaign, including sending lawyers from DLA Piper, for example, to internal audits so they could take notes. Our management of SDS on these projects was not the issue. It

was the incomplete MUDFA Works and the incomplete design when we commenced work.

229. In a letter from Steven Bell dated 28 April 2010 **(CEC00210506)**, Steven intimated that, at a meeting on 14 April, Richard Walker had made a statement to the effect that the SDS Provider was not designing with Best Value in mind. I was not in attendance at this meeting and cannot comment on whether he said this or not. I have discussed our Value Engineering obligations above. I believe that the point that Richard was making was that the requirements of CEC and other third parties did not always align with Best Value for the ETP. When issues surrounding betterment or excessive third party requirements were raised with TIE, these were ignored despite these being additional costs to the Project.

May 2010

230. I sent a letter to TIE dated 21 May 2010 **(CEC00328161)**. At numbered paragraphs two and three, I noted that TIE had proposed that, *"after the issue of this instruction Infraco proceeds on a demonstrable cost basis for all Notified Departures,"* and that, *"your offer to reimburse our reasonable costs on a 'without prejudice basis' in respect of the On-street works is somewhat unsatisfactory"*. My letter was in response to a letter received from TIE and dated 1 April 2010 (**CEC00570730**). This was a long and particularly nasty piece of correspondence, part of the chain where TIE tried to circumvent the true meaning of Clause 80.13. It also relates to the issue referred to in adjudication in respect of the Murrayfield Underpass. Our fundamental problem was that TIE did not accept some of the key concepts in the Infraco Contract. There was no trust between us whatsoever. We would not do as TIE requested, which meant that we would probably be requested to give up all contractual rights and entitlement.

231. The issues covered in this chain of letters included the following:

- Our complete inability to agree a workable Construction Programme with TIE. This was because of their failure to accept the delay which we were reporting.

In reality, we believed that the real reason TIE would not accept a revised Programme was that they would then have to report to CEC and others that the Project was at least two years behind (for reasons which were not Infraco's responsibility).

- Continuous disagreement about the operation of Clauses 65 and 80 and their interaction. Infraco was subsequently found to be correct in its interpretation of the Infraco Contract on these key issues.
- TIE continually insisting that we were obliged to comply with instructions they issued to carry out works, either under Clause 34, clause 80.15, 80.16 or based on other interpretations of clause 80.13. Again, TIE were subsequently held to be wrong in their interpretation of the Infraco Contract.
- TIE continually alleging that Infraco's interpretation of Clauses 65 and 80 made 'no commercial sense'.
- Continuous assertions that Infraco would have to prove that delay had not been caused by its own mismanagement of the SDS Designer.
- Allegations that one of the reasons TIE could not issue the TIE Change Orders that were required by Clause 80.13 was because Infraco was inflating the amount it was looking for as contained within Estimates.
- TIE stating that it could not issue TIE Change Orders because of the absence of competent Estimates submitted by Infraco. If TIE rejected the principle of a change having occurred, then the matter of the Estimate is irrelevant.
- By this point, TIE was repeatedly referring to Infraco as a 'delinquent contractor' and was accusing us of responding to their letters in 'abusive and inflammatory language'. I accept that the wording of the letters going back and forth between TIE and Infraco was more aggressive that I am used to using in contracts of this nature. However, our need to respond robustly was driven by the very aggressive position adopted by TIE and its complete refusal to accept what the Infraco Contract said.

232. I received a letter from Steven Bell dated 28 May 2010 **(CEC00313328)**. Within the letter, Steven set out certain concerns and allegations by TIE in relation to BSC's management of the design post-novation. Again, this was TIE attempting to throw mud in our direction and a criticism of our

management of SDS. To suggest that this was the exclusive reason for the delay was completely false. I deal with our response on all issues associated with design at section 10 of my original witness statement.

June 2010

233. Anthony Rush, TIE, sent a letter to Nick Flew, Managing Director, PB (Europe), dated 4 June 2010 **(CEC00298078)**. This letter advised that the design was still incomplete, including the on-street track. I note a further letter from DLA Piper to PB dated 5 August 2010 **(CEC00337893)**. DLA Piper wrote to PB expressing concern, "*over the programme and cost implications of the unusually high volume of design changes or alleged design changes that are still appearing and causing claims related to design development*". This would appear to be another attempt by TIE to obtain the agreement between SDS and BSC by formal means, so they have directly written to PB. This is the agreement which I discuss above at paragraphs 161 and 162. This is clearly not acceptable as PB were contracted to us.

234. There was a draft report titled Tram Project Assurance Review, produced by Marshall Poulton, CEC's Tram Monitoring Officer, and dated June 2010 **(CEC00230821)**. I did not see this document at the time. What is of note is the bonus culture that prevailed up until 2008. My view is that the key reason the Infraco Contract had been signed when it was (prematurely), was to ensure that the consultants employed by TIE would receive their bonuses. This led to them entering into the contract far too soon, when the utilities were not moved and the design was not complete.

235. The report also summarises the issues with the technical approval process. This caused many of the issues on the Project with the different steps put in place by the Road Departments. These delayed the completion of the design, because the issues were around the technical approval process for the roads design. It is my opinion that this was due to the failure of TIE to have a robust and streamlined process in place. There were fewer issues and confusion around structures and planning approval. The conclusion on page 41 of the

report was very interesting. It refers to initial findings that the lack of a fully coordinated and complete design was a significant factor that caused many of the contractual difficulties. I agree with this statement. If the design had been completed on time and managed better prior to Financial Close, then many of the issues would not have arisen.

236. There are other criticisms of BSC and BCUK in this document, which I do not accept.

July 2010

237. From mid-2009, TIE started to request a high frequency of audits and audit meetings. From the start, the way in which TIE managed the Audit process was confrontational. It engaged a plethora of outside consultants, at further expense to the Project, to attend these meetings. The audits were also attended by lawyers, and we instructed Pinsent Masons to attend on our behalf. In my opinion, the approach which TIE adopted at these audits was entirely unreasonable. They were not looking for information to aid the Project in any constructive way; instead they were looking for evidence which they could use against us in their on-going campaign to deny our entitlements under the Infraco Contract. In the audits held in 2010, there was a clear design slant to the issues raised by TIE. They were trying to find evidence to prove that Infraco was not managing the design process or fully integrating the design.

238. Letters were issued during this process, including one from TIE to me on 30 June 2010 (**CEC00161476**) and my response of 5 July 2010 (**CEC00439115**). In TIE's letter of 30 June 2010, they accused Infraco of not co-operating and engaging in the audit process. Attached to the letter was a schedule of additional information required. This was all focused on our dealings and discussions – commercial and otherwise – with SDS. The list is huge – it took days of our time to pull information together, and even where we stated that we did not have some of the information TIE were looking for (such as hand written notes of commercial meetings between SDS and

Infraco), they did not accept this as an answer. TIE had also been asking for information about compensation events. Through Pinsent Masons, we had confirmed that we would be following the procedure in the Infraco Contract in relation to Compensation Events and Clause 65. The general tone of this letter was to complain about our lack of reactiveness to the audit request.

239. My response of 5 July 2010 (**CEC00439115**) sets out our position on a lot of these issues. We pointed out that there did not seem to be any clear audit objective, and that the time spent in trying to comply with these audit requests was time which would have been better spent in progressing the Project. In addition, the schedule that TIE produced of the documentation they were looking for made it clear that they must already have been in possession of much of the information. My conclusion in this letter sums up Infraco's position in response to these audit requests - we thought that the time that it was taking us to comply with the audits was excessive and unnecessary and that TIE were trying to interfere and disrupt our ability to perform our contractual obligations. I referred TIE to clause 6.3.4 of the Infraco Contract, whereby under the partnering obligations neither party was to interfere with the rights of the other party or hinder or prevent the other from performing its obligations under the Infraco Contract. I also referred to the duty contained in Clause 118 which stated: *"Wherever in this Agreement a Party is required to make any determination or give any decisions, instructions, opinions or consents or to express satisfaction or approval or otherwise take any action, that Party shall act fairly and reasonably within the terms of this Agreement (save where the Agreement expressly states that TIE is to have absolute discretion), and having regard to all the circumstances."*

September 2010

240. I sent letters to TIE dated 17 September 2010 **(CEC00044543** and **CEC00044544)**. These letters outlined the position of BSC in relation to the dispute concerning defective works at Princes Street. BSC's position in relation to Princes Street is commented upon at paragraphs 7.17, 7.18, 7.20 and 7.21 of my original witness statement.

241. Mr Porter issued his adjudication decision in relation to Depot Access Bridge S32 on 22 September 2010 **(BFB00053391)**. TIE accepted that this was a Notified Departure. It was a dispute about the valuation of the work. BSC were largely successful on this adjudication, and I was pleased with the outcome.

242. I sent a letter sent to Steven Bell dated 22 September 2010 **(CEC00084813)**. I advised Steven that, "*The recent behaviour of TIE in how Project Carlisle is being approached and the aggressive campaign of Notices* being *served on Infraco, is symptomatic of the misery that has persisted throughout this Project*".

243. I sent a further letter to TIE dated 23 September 2010 **(CEC00159509)**. This was to advise it of certain consequences of the adjudication decision of Mr Howie QC, issued on 28 July 2010. My understanding was that Mr Howie's decision to award us an EOT for section A meant that the completion dates for sections B, C and D also had to change.

244. I sent another letter to TIE dated 29 September 2010 **(TIE00409574)**. I advised TIE that BSC were no longer prepared to carry out *"goodwill"* works. For example, the works which were the subject of 94 outstanding INTCs listed within the letter – in respect of which no TIE Change Order or an agreed Estimate existed. In addition, BSC considered that they were not required to carry out this work under the Infraco Contract. The consequences of this decision were to make our staff redundant and terminate the subcontractors.

245. This decision was made reluctantly and against the backdrop of all of the other correspondence and communication we were having with TIE at this time. We had come to build a tram system for Edinburgh, not to get embroiled in disputes. However, faced with the intransigence of TIE, we felt we had no other option but to minimise the risk to Infraco of proceeding with Works where TIE were refusing to recognise our contractual entitlement to payment and extensions of time.

October 2010

246. Further correspondence took place between BSC and TIE between October and November 2010. There was a letter from TIE to BSC dated 19 October **(CEC00132507)**; a letter from BSC to TIE dated 29 October 2010 **(CEC00133316)**; and a letter from TIE to BSC dated 3 November 2010 **(CEC00133317)**. Project Carlisle stood no chance of success when we were so far apart on fundamental issues. TIE seemed blinded by their on-going campaign, which was designed to try and force BSC to accept a very bad deal. We could not agree with their proposals.

November 2010

247. An adjudication decision was issued by Lord Dervaird around 26 November 2010 **(BFB00053475)**. This was in relation to Landfill Tax. This again was an adjudication where we were successful. The landfill issue was a complete sideshow, and just another example of TIE taking an unreasonable attitude. The landfill tax related to who was responsible for the payment of tax in respect of the disposal of contaminated material.

Events in 2011 to September 2011

Preliminaries

248. Lord Dervaird issued a decision on 14 February 2011 **(BFB00053489)**. This decision was in relation to payment of preliminaries. This, again, was a successful outcome for BSC.

249. There was perhaps a misunderstanding of what preliminaries really were. Preliminaries related to the time-related fixed costs that we would incur. This would be whether works were being carried out or not, and related to office costs and general everyday outgoings not directly related to the actual Project work. We were entitled to these payments, as they were a running cost written

into the contract. These are flat payments and not measured against variables, such as how much electricity is used per month. TIE's argument in relation to this was found to be totally wrong. TIE misinterpreted what the contract stipulated. They challenged the requirement to pay these monthly preliminaries. TIE stopped making these payments and that was why we challenged it. The decision issued clearly showed we were correct.

250. Two drawings were produced by BSC in early 2011 (drawings **ULE90130-SW-DRG-00803** and **ULE90130-SW-DRG-00804**). These were to demonstrate the number, subject matter and location of the disputed Notified Departures. They show that there were only very small sections of the works which were not affected by non-agreed INTCs. I would dispute that we didn't try to mitigate delays where we could by proceeding with work that we could do.

Project Phoenix

251. This was a continuation and amendment of the previous Project Carlisle Proposals. Infraco proposed amending the Infraco Contract on the basis of a truncated Project scope that could fit within a budget that was available to TIE, finding a sustainable solution to the matters which divided the parties and proceeding on a new agreed basis. The key advantages of Project Phoenix included not wasting CEC's £400 million invested to date, providing greater price/time certainty to CEC, providing revenue-earning services to CEC and avoiding a costly and very protracted public dispute.

252. BSC produced a document dated 24 February 2011 **(BFB00053258)**. The proposal was 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. The total price comprised a payment of £231,837,822 to Bilfinger, £136,881,719 to Siemens, £65,306,030 to CAF and £15,140,795 to SDS. Project Phoenix was a follow-up to the other two submissions, Project Carlisle 1 and Project Carlisle 2. Phoenix was a concerted effort by BSC to obtain a solution and allow the Project to move forward. The reason why this proposal only went as

far as Haymarket was the continued presence of utilities and the On-Street Works required. We could not put in place an estimate of cost for this.

Approach re Mediation

253. Having received the Remediable Termination Notices, and having made the decision to cease all goodwill working, we fully expected that TIE would terminate the contract. We were therefore surprised when TIE suggested mediation, albeit that I believe this may have been driven by a Council Leader's Emergency Motion dated 18 November 2010 rather than by TIE themselves. By this point in time, Sue Bruce had been appointed as CEC's new Chief Executive. I first met her at the Mediation and I believe she was a key driver behind the disputes being unlocked at the Mediation which took place at Mar Hall in March 2011. She was assisted by Colin Smith of Hg Consulting. We understood that Colin had worked with Sue on previous projects.

254. Our approach to the Mediation remained solutions-orientated. We had not come to get into disputes. We had come to build the ETP for the City of Edinburgh. If this could not be achieved, which was looking increasingly likely in the latter part of 2010, and then we wanted to agree an amicable separation from TIE.

255. Infraco and SDS worked as an internal team to prepare our Mediation Statement along with our legal team **(BFB00053260)**. We could have made this a very accusatory document, and gone on at length about how we had 'won' at adjudication and how unreasonable TIE had been. However, we decided that the document should be far more open and forward-looking. Whilst we thought that our interpretation of the Infraco Contract was correct, we recognised that neither party could continue as matters currently stood. We recognised that TIE and CEC had budgetary constraints. If they could not afford to build the entire Network at this time, we proposed what could be built for the budget that we believed was available – Project Phoenix. If TIE could not agree to this or some form of amended deal, then we wished to discuss

how we could best extricate ourselves from the Infraco Contract (referred to by TIE as Project Separation).

256. In contrast to the position adopted by Infraco in its Mediation Statement, TIE submitted a document which was very contractual, very confrontational and accusatory (**BFB00053300**). It presented many contractual arguments (some with a slightly different slant) that had already been dealt with in adjudication. The Mediation Statement was also accompanied by 31 exhibits, which were obviously prepared by TIE's lawyers and which covered issues such as their view of how Clause 80.13 should be interpreted. We then had to work with our internal team and external legal team to prepare detailed responses to each of these exhibits. Infraco was fully prepared to present the evidence to the Mediator and TIE/CEC at Mediation to demonstrate the inadequacies of TIE's arguments. However, this was not necessary.

Conduct of Mediation

257. The Mediation started on Tuesday 8 March 2011. The Mediation was probably attended by up to 60 people, all of whom had had to sign personal confidentiality agreements prior to even being present. The fact that the Mediation was even happening had attracted a huge amount of media attention. Sue Bruce delivered an opening statement on behalf of CEC **(CEC02084575)**. Richard Walker subsequently delivered an opening statement on behalf of BSC **(BFB00053256)**. I would like it noted that the Edinburgh Trams Inquiry refers to a document with number TIE00670846 as being Richard Walker's opening statement. That is not correct as it appears to be the notes taken by someone within TIE. It is inaccurate in various respects. Following on from these statements, the Mediator went with TIE and CEC first to discuss their position. The Mediator came back some hours later and stated that CEC were looking for a solution to progress and deliver the Project. It was evident that CEC were taking the lead in the Mediation talks rather than TIE. The subsequent talks were between CEC and Infraco with limited contributions from TIE.

258. Although there was discussion around some of the issues which had divided the parties, the focus through Mediation quickly became about how to deliver the Project (subject to funding), using Infraco's Project Phoenix submission as the basis for the discussions. The key issues and blockers were discussed and pathways to resolution set out. The new approach by CEC (led by Sue Bruce and Colin Smith) was to repair relationships, build trust and work in a spirit of partnership. The challenge set at Mediation was to turn the Project around and to jointly deliver the Project under a new governance structure that would be a success and could ultimately be a model for other projects. This was the challenge communicated to me following discussions between Sue Bruce and Dr Keysberg at Mediation.

259. This was the first time that I had met with Sue Bruce. She had a certain openness. You could see that she had a different view on the issues to what we had encountered previously.

260. Over the course of the week there were numerous discussions which were led by the mediator, Michael Shane. There remained disputes between both parties. There was, however, a very quick acceptance by TIE/CEC that a revised model needed to be identified. This would have to fit in with their budget. It was very clear, from the statements provided, that they had limited budgets available. It was also necessary to identify a revised model to really return to operation. I think the opening statement of Sue Bruce indicated very clearly that there was some openness and maybe not the very fixed opinion which we had encountered previously through TIE. There were discussions on these issues to try to find a way forward. Over the course of the week there were different working sessions. It was, however, a very healthy, open and transparent atmosphere. It was quite positive. Right from the beginning we had the feeling that there seemed to be a different mood to what we had faced before.

Terms

261. Ultimately, a way forward was found with CEC at Mediation. Heads of Term were agreed on Saturday 12 March 2011 at the end of the week-long Mediation **(CEC02084685)**. The Mediation had by this time moved from Mar Hall to another hotel nearby with far fewer parties involved. The Heads of Term covered the agreement reached at Mediation. We would enter into immediate further discussions with CEC to get agreement of what were to be known as the Prioritised Works. The tram line would end at St Andrews Square. The price for the Off-Street Works portion was negotiated and reflected in the Heads of Term. This price was based on the Project Phoenix drawings with some exceptions. The price was £362.5 million. It was a lump sum price for completing the section from Haymarket to the Airport including the Siemens element and the SDS works. This price included everything, including preliminaries.

262. The remaining on-street section (Haymarket to St Andrew's Square) was to be further negotiated but was to be based on a target sum of £39 million, based on assumptions. We would not have to wait for a TIE Change Order. Clauses 65, 80 and Schedule Part 4 would be renegotiated. TIE would retain the risk associated with the removal of the utilities in the on-street section. CAF were to leave the consortium and be novated back to TIE. Everything beyond the prioritised works was conditional on TIE/CEC securing additional funding and so there was a cut-off date. If additional funding to complete the truncated scope could not be found, the Infraco Contract would automatically terminate on 1 September 2011. Infraco would be entitled to all sums due to be determined by 1 July 2011, including sums in respect of materials etc. purchased for the section of the line which was not now going to be built (St Andrew's Square to Newhaven). There was to be a concerted effort involving CEC to clear all outstanding technical and planning approvals required, and for all other barriers to progression and completion of the design issues to be removed. The design for the full line (to Newhaven) would be completed, albeit the St Andrew's Square to Newhaven section would not be built.

263. Clause 13.1 of the Heads of Term provided: *"There will be a cultural shift in the behaviour of all parties including interaction, co-location and*

empowerment." This change in attitude and behaviour was crucial to how matters then progressed. Infraco was very keen to see a change of the TIE personnel. In fact, TIE were then phased out with CEC taking over the running of the remainder of the Project.

264. There was not a requirement for BCUK to obtain approval from Bilfinger Germany before any agreement could be reached. Dr Keysberg, the CEO of Bilfinger Construction, was present at the Mediation so we had the full authority to make any decisions on agreements.

Post Mediation

265. I was pleased with the outcome of the Mediation. We now had a platform to move forward. Bilfinger Germany were also pleased with the outcome. Before Mediation they had looked on the ETP as a disaster. From their point of view, they had a Project in their order books with so many problems on the legal side. That is not what a construction company stands for. They looked on the outcome of Mediation as a way to move forward. Even though it was not 100% fixed, there was positive momentum which we could take further.

266. I believe a lot of the issues that were dealt with at Mar Hall could have been resolved much earlier. Mediations on a smaller scale had already occurred. We had all the adjudication decisions which had provided clear guidance about the way the Infraco Contract was to be interpreted and executed. The opportunities which were there to find a way forward were just not followed by TIE. They preferred to proceed with their own agenda.

267. I sent an email to David Gough and others dated 18 March 2011 **(BFB00094672)**. This email had certain programme documents attached that I had provided to Colin Smith. These documents were the Programme following Mediation **(BFB00094673)**, Priority Works Programme Following Mediation **(BFB00094674)**, the ETN Summary of Programme following Mediation **(BFB00094675)** and the Accompanying Narrative **(BFB00094676)**. The prioritised works programme and its outline was discussed, as we had to

commence work as soon as possible. As a result of the Mediation talks and further discussions during summer 2011, we had developed a complete programme. This is referred to as the *'ETN Summary of Programme following Mediation'*. This identified not only the on-street but also the Off-Street Works, including all the Priority Works issues. They were part of the programme to ensure that they were delivered, bound into the contract and therefore would adhere to the timeframe.

Misalignment Workshops

268. During the Mediation, TIE requested certain additional information from BSC **(BFB00095823** to **BFB00095830)**. This included a schedule of the Changes that had arisen as a result of the Misalignment Workshops post novation **(BFB00095824)**. TIE had previously refused to issue instructions for most mandatory-type changes. These included development workshops, and even when instruction had been issued TIE had not paid monies due to SDS. This was despite an instruction being in place.

269. The Development Workshop Process (defined within Schedule Part 23 of the Infraco Contract) involved holding workshops to identify misalignments. The workshops were to be held as soon as reasonably practicable and attended by all parties. At time of contract award, it was known that misalignments existed between the SDS design and the Infraco proposals. The workshops were held to determine the development of the Infraco proposals and any consequential amendment to the design deliverables. A misalignment report would then be prepared and signed off by all parties. It would identify the misalignments; detail the conclusions in respect of each matter and payments to be made to SDS in respect of the work to be carried out by SDS as a result of the conclusions set out in the report. The work to be carried out by SDS to address the misalignment was a Mandatory TIE Change. TIE should then have issued a TIE Notice of Change requesting an Estimate from Infraco to carry out the necessary design works. Following receipt and agreement of the Estimate, TIE would then issue the corresponding TIE Change Order. TIE also had the option of instructing the design in advance of agreement of the

Estimate through the appropriate contractual mechanism (see Clause 10.18 of the Infraco Contract).

270. The total value of these changes is detailed at the bottom of the schedule document **(BFB00095824)**. It should be noted that these are just the design changes, not the Infraco changes.

Remobilisation Payment

271. An internal email was sent from Colin Smith to Sue Bruce and others within TIE/CEC dated 5 April 2011 **(CEC01927616)**. The email provided that BSC had accepted a cash flow proposal to mobilise. An attachment to the email outlined that the total re-mobilisation payment would be £49 million **(CEC01927617)**.

272. There appears to have been a misunderstanding as to what the payment of £49 million related to. This was not really a remobilisation payment, even if it was quoted as such. This was actually a payment of the settlement sum which was agreed at Mediation to bring us back to a so-called cash-neutral position. We had not received any monies from TIE for a considerable time. This meant that we were completely cash-negative as a result of having to send the payments to SDS and to the contractors. The £49 million was a fixed amount to bring us back to a point where were not cash-negative. The payment also covered the agreed amount for the off-street and Prioritised Works. These had to commence from early May 2011. In addition, the payment covered the first certificate of the settlement sum as described in Clause 6 of the Prioritised Works Agreement (known as 'MoV4'). It included the payment of some sums agreed at Mediation in relation to all extensions of time, other claims and in respect of Siemens materials. This was why the payment to them was so much more than the payment to Bilfinger – Siemens had incurred considerable costs.

273. The payment made after Mediation was a standalone payment, and not connected with any other payments. The payment of £45 million, paid after

Contract Close in 2008, was completely separate. There was not a double-payment made for mobilisation. When the contract started in 2008, the contract arrangements were such that we received a mobilisation payment to commence work. That was completely separate to the payment of £49 million which was part of the total settlement sum.

Collaboration

274. After Mediation, a more streamlined procedure was established. TIE was essentially not involved. We now had buy-in from CEC and other authorities. We had weekly design and consent governance meetings. These were chaired by Colin Smith, and attended by all parties contributing to the design as required. This included Scottish Water and Network Rail, who were concerned with key problem areas. This new governance helped to overcome problems and there was far more input from CEC. All the roads and consents with third party approval now had to be dealt with by CEC. It was hands on and suddenly worked.

275. With all the parties working in a collaborative partnership approach, the remaining problems were overcome. This worked very well. If the will had been present earlier, it could have worked earlier.

Funding

276. The main settlement agreement was dependent on CEC obtaining the necessary funding to complete the truncated Project. CEC were aware that this would take some time to obtain. So as not to lose several months, it was decided to proceed with those works for which there was funding available. This would ensure momentum was not lost, and was the reason why the agreement was entered into in advance of the main settlement agreement. This agreement also facilitated the initial payment of some of the sums agreed at Mediation. It covered the Prioritised Works that were agreed at Mediation. We now had a contractual basis to move forward with the Project. The Heads

of Terms is not really a contractual document, it just reflects the main issues identified and agreed.

277. All parties entered into a Minute of Variation dated 20 May and 10 June 2011 **(CEC01731817)**. This was the Minute of Variation 4 (MoV4), which varied the Infraco Contract to allow certain Prioritised Works to take place. The Prioritised Works were listed, along with planned completion dates. The Heads of Terms was transformed into the MoV4 because we really required time until September to renegotiate the remainder – including this target price arrangement for the on-street. The Minute of Variation was an official change to the existing contract so that it became a formal contract document. It is not the final settlement document or the overall amendment to the Contract - that came in MoV5.

278. The timescale for the conclusion of negotiations was extended to 31 August 2011. This was to accommodate CEC and their need to confirm funding. This took them longer than anticipated, as a result of having to deal with Transport Scotland along with other authorities. They needed to ensure that the funding was fully secured. It may have been that the earlier date for agreement of 30 June 2011 was overly optimistic.

Design Issues

279. Damien Sharp sent an email to me and others dated 19 April 2011 **(TIE00376423)**. Attached to the email was a list of outstanding design issues and concerns **(TIE00376424)**. BSC's Design and Consents report dated 7 June 2011 was attached to the minutes of a design and consents meeting held on 8 June 2011 (**BFB00096931**). The design had not been completed pre-contract and post-contract we had all the problems and disagreements with TIE about things which affected the design, such as: outstanding utility works which affected design; disagreement about who paid for design changes; outstanding third party approvals and consents; CEC involvement and interference and a very cumbersome design approval process. This is really why there were outstanding design issues, at this very late stage.

280. Simon Nesbitt, Design Manager, BCUK, sent an email to Jason Chandler, PB, dated 6 July 2011 **(BFB00097124)**. It included an attachment relating to a table of Review Comments **(BFB00097126)**. Within this document, there was comment on a number of on-going problems with design. This highlighted that there was *"significant slippage"* between the current draft of SDS design programme v72 and a previous version. There was no explanation provided for this. In providing an explanation for on-going problems with design, it is necessary to remember that after the works stopped prior to Mediation there was effective demobilisation. During that time, the design slowed down. We commenced the priority work in May, with the new governance approaches in place. SDS had issues when work was commenced under the new structure. This was quite normal, as all the necessary resources had to be assembled. This is the reason elements of the design were not issued in line with the programme. This was to be expected in a project of this size, scale and complexity. Some of the issues are directly attributed to SDS, and others due to incorrect information being provided on occasion by Siemens. This is what the emails refer to. What should be noted is that these issues did not result in increased Project costs for CEC, nor did they delay the completion of the Project. Indeed, the Project was delivered ahead of the revised programme and was within CEC's revised budget.

281. In every contract, designers tend to be late or provide incorrect information. This requires a very strict follow-up. BSC pushed the new governance models, and also methods to get it operational. We provided office space within the consortium office for our designers. Previous to this, SDS worked separately in their own office space. CEC resources were now able to work in partnership with SDS, and CEC staff were able to deal with approvals. This worked well. We even provided space for Network Rail and Scottish Water so their staff were also now working closely with the rest of the partners involved in the Project.

282. With senior SDS management now involved, issues were resolved quickly. The fact all the partners were working closely together meant that when a problem arose, everyone worked together to identify a solution.

MoV 5

283. The document titled Settlement Agreement (Minute of Variation 5) is dated 15 September 2011 **(BFB00005464)**. This was the full and final version of the agreement entered into by TIE, CEC and BSC. CAF were negotiating separately – they were already negotiated out by the oral agreement at Mar Hall. CAF had their own contractual relationship with CEC, although there was interaction with us as a result of the crossover. I was responsible for leading the whole team along with our legal team from Pinsent Masons. I was heavily involved from May to September 2011. I would say that I was an integral part of the negotiations.

284. This Settlement Agreement introduced the full contract amendment which was necessary to reflect the agreements reached. The key points to note about the Settlement Agreement are as follows:

a. The Infraco Contract was 'unpicked' to remove CAF as a Party to the Infraco consortium. The Tram Supply and Maintenance Agreements were effectively novated back to CEC as Employer, with various indemnities and waivers of claims which could have arisen being dealt with. The Agreement held that CAF was to have no further liability under the Infraco Contract, and TIE and CEC waived any claims against CAF accordingly.

b. The Tram Supply and Tram Maintenance Agreements required to be amended to deal with the fact that CAF would now be carrying out its obligations under these Contracts directly for CEC.

c. Clause 3 of the Settlement Agreement dealt with the fact that it was entered into by all the parties to it in full and final settlement of *"all* Disputes *claims and entitlements, whether past, present or future, of any kind whatsoever and howsoever arising...."* with a few exceptions (including in relation to disputes in relation to the Prioritised Works which had been carried out under MoV4, third party claims, claims by TIE in respect of systems integration and claims

in relation to the underlying construction of the Project (i.e. latent defects etc.)). This meant that by signing up to the Settlement Agreement, all of the adjudication decisions previously issued became finalised. It was not open to either Infraco or TIE to revisit or challenge those Decisions by taking the underlying disputes to Court.

285. Schedule A to the Settlement Agreement, dealt with all of the amendments required to individual Parts and Schedules to the Infraco contract, to reflect the renegotiated deal. It was a major task to reach agreement on all of this and I deal here with some of the major changes:

a. Schedule Part 2: the Employer's Requirements were amended to deal with the truncated scope of what would now be delivered by Infraco.

b. Schedule Part 4: this now contained an Off Street Works Price which was genuinely a fixed price (of circa £362.5 million), and the On-Street Works Price (circa £47 million) which was dealt with by a new Schedule to the Contract – Schedule 45 (On Street Works). A Schedule of Rates was inserted for arriving at the value of TIE Changes (other than those that related to the On-Street Works), and a process was detailed for agreeing the value of those Changes.

c. Schedule Part 45: this was the mechanism for dealing with the Pricing for the On-Street Works Price. This was where some of the terminology and concepts which had previously been in the unamended Schedule Part 4, could still be found. This was to deal with remaining uncertainties in respect of the On-Street Works where TIE retained the risk, i.e. the fact that it was known that utilities remained to be diverted and a number of other matters required to be finalised such as third party approvals and outstanding consents. This meant that Clause 6 of Schedule Part 45 still had the concept of Pricing Assumptions but there were now far fewer of them. Although clause 80 remained in the main Infraco Contract, all changes to the price and programme for the On-Street Works were only to be dealt with through the Schedule Part 45 mechanism, which effectively meant that Clause 80 was no longer relevant for changes to the On-Street Works. The changes were now known as Pricing Assumption Variations and not Notified Departures.

d. The other very important change introduced by Schedule Part 45 was that the prohibition on proceeding with On-Street Works before the value of the Change was agreed, was removed. The concept of an On-Street Works trigger date was introduced. This meant that if changes occurred as a result of the Pricing Assumptions (i.e. the facts and circumstances differed from the remaining Pricing Assumptions), and Infraco applied for time and money, which was then not accepted by TIE/CEC so that the gulf between what was applied for and what was certified rose to more than 21 days in time, or £750,000, then the Trigger Date occurred. What that meant was that the Joint Project Forum was to meet within 4 weeks of the Trigger Date to discuss the claim. If those differences rose to more than £1.5 million outstanding, then by clause 8.1, Infraco could suspend the On-Street Works and would only be obliged to recommence once the difference got back to £750,000 or below.

e. Schedule Part 45 also introduced a detailed Variation Mechanism and a Schedule of Rates and Prices for calculating what was due in respect of Pricing Assumptions Variations. It was a far more workable mechanism that the previous Schedule Part 4 and Clause 80 mechanism which had been at the centre of so many of our disputes with TIE.

Governance Structure

286. There were many other parts of the Infraco Contract which required to be amended to reflect the agreement reached. Following on from Mediation, a new Governance Structure (agreed at Mediation) was put in place. The new Governance Structure and changes from the pre-Mediation situation are briefly outlined below:

a. The Project would be led by CEC and directly overseen by the Council CEO. TIE would in effect take a step back prior to being phased out. There were clear lines of communication set up between the parties with a commitment at the highest levels to work together in an open manner and spirit of partnership. It was agreed that an Independent Certifier (Colin Smith) would be appointed and would be charged with making determinations on issues that could not be resolved swiftly by the parties.

b. A series of Control Meetings chaired by the Independent Certifier were set up for each of the key work streams (i.e. Utilities, Design & Consents, Construction, Commercial, Princes Street etc.). The Control meetings encouraged and allowed open and frank discussions on any and all issues. The meetings were held in "the room without corners" as phrased by the Independent Certifier. The expectation was that any issues were to be aired in this forum rather than through formal correspondence. The aim was two-fold: to reduce the amount of Project correspondence and to allow for issues to be raised, discussed and resolved face to face. The Control Meetings were attended by the key Project representatives of each party.

c. Key stakeholders (e.g. Network Rail, Scottish Water etc.) were also invited to all or parts of the relevant Control meeting. This was a positive move to create a spirit of ownership of the Project by third parties and for them to understand the challenges faced by or from the perspective of the tram project team as well as outline the issues from their perspective. This greatly assisted in unlocking a number of key issues and encouraged open communication between all the parties.

d. Any issues that could not be resolved in a timely manner through the Control meeting process were then escalated. The escalation process, whilst non-contractual, was agreed to by the parties to ensure swift and cost-effective resolution of issues. For any issues that could not be resolved through the Control meeting, briefing papers were prepared by each Party and issued to the Independent Certifier. The Independent Certifier would then make his decision promptly thereafter. Should the decision of the Independent Certifier not be accepted, the issue could be escalated to the Joint Project Forum. The Joint Project Forum was chaired by the CEC and attended by the senior representatives of each party including Transport Scotland. Whilst items and updates were reported to the Joint Project Forum, all issues were resolved by the Independent Certifier and no issues were taken to the Joint Project Forum for a decision. I recall that there were only a handful of issues that necessitated briefing papers being prepared – the vast majority of issues were resolved through the Control meetings.

e. The formal contract dispute mechanism remained in place and available for any party to use; however, this was not required post Mediation.

287. In addition, a number of initiatives were set up immediately following Mediation. This included the following:

a. A number of Prioritised Work areas were identified to be started as soon as possible after Mediation. These included the Depot and mini test track and Haymarket Yards. The intent was to make a start on key areas (i.e. Depot) as well as demonstrating that the parties could work together and in turn support the case for the additional funding that was required to deliver the truncated line as far as St Andrew Square. The Prioritised Works were completed on or ahead of programme and within the allowable budget.

b. The CEC Project Management team as well as Planning and Technical Officers re-located to the Consortium Project Office. Additional CEC resources were added to the Project to allow for the outstanding approvals to be progressed as quickly as possible.

c. New office space was added to accommodate CEC and the Network Rail team who were brought in, to allow for open and immediate dialogue to resolve issues quicker and face-to-face without unnecessary correspondence or through intermediaries. The same offer was made to Scottish Water. However, they declined to take office space.

d. The CEC Approval bodies and Infraco worked seven days a week during April 2011 to progress and resolve the vast majority of design approval issues. TIE were excluded from these meetings and the CEC and Infraco teams were charged to resolve the issues, which they did successfully. This was clear evidence of the new spirit of working and partnership. There was a clear "re-energisation" of the Project at this time.

e. A new approach was taken forward to changes post Mediation. Changes ("PMCs") were identified, discussed and agreed in a timely manner through the Control meeting, or separate ad-hoc meetings where necessary. Where a change was agreed, the correct contractual process was followed to allow the works to proceed and mitigate any impact to the programme. As an example, "time sheet" PMCs were taken forward to allow some design changes (i.e. due to the considerable utility conflict issues still to be resolved) to be progressed. Coming out of Mediation, a number of design changes were identified that could not at that time be fully quantified. In order to avoid any delay to the

completion of the design, Clause 80.15 Change Orders were issued by CEC with a not-to-exceed value to allow the design works to progress. The costs were then tracked through submission of weekly time sheets, and costs agreed and tracked on a weekly basis.

f. The aim of Infraco at Mediation was for TIE to be removed from the Project to ensure a successful delivery. This was because Infraco and SDS did not have any belief that the Project could be delivered with TIE as Project Manager. Between March 2011 and September 2011, TIE were phased out and T&T were brought in to assist CEC in managing and delivering the Project.

g. There were still substantial utilities diversion works to be carried out (at the Utilities Control meeting dated 30 June 2011, TIE stated that 600-700 potential conflicts had been identified). CEC led the new approach, under which all parties worked together to identify clashes and determine the most appropriate solution (i.e. diversion of the utility, dispensation from the statutory utility authority or amendment of the infrastructure design). The period following Mediation involved desktop review of the utilities issues and trial holes to inform the next steps. The extent of the utility works still to be carried out surprised CEC.

h. A thorough review of the Project was undertaken, and value engineering opportunities identified and taken forwards by the Project. The focus post-Mediation was to deliver the tram project. The value engineering opportunities taken forward included removal of the Crew Facility at Haymarket Viaduct, removal of the Canopy and Kiosk at Edinburgh Airport, deletion of significant quantities of setts and deletion of the requirement for full depth road construction.

288. In my opinion, the Settlement Agreement was good for the ETP. After all the months of negotiation, we were able to get an agreement signed. This allowed the ETP to be completed without further problems.

289. The agreement was also a good thing for the City of Edinburgh and the public. In 2008, when the Infraco Contract was first signed, it was anticipated that the tram network would be built. When problems arose we were losing money. There then began a period of negative reporting in the media about the trams

and the problems around its construction. There was also the issue of the utility problems which caused a lot of delay and inconvenience to the stakeholders and to the public. This was also a concern for CEC who had already invested a lot of money within the Project. We still had three years to go from May 2011 until completion. I would not say that everything ran totally smoothly. However, we were now able to work in a collaborative partnership manner.

Events from September 2011 to Project Completion in 2014

Aftermath of Mediation

290. After Mar Hall, work progressed in accordance with the new budget and programme. This was almost a fresh start. Previously we were struggling with the way in which TIE were administering the contract. I would say that, as a result of Mediation, both sides looked at their organisations. TIE was removed completely. Our senior management changed after Mediation. There was no Richard Walker. There was no interference now from senior managers on TIE's side. A complete new governance structure was in place, built on partnership and collaboration. It worked well.

291. The main difference was TIE did not exist anymore. I would not say the issues were all down to the personalities involved. I think the behaviour of TIE as a whole was not compatible with the management of such a project. I was still in place, as was Dr Keysberg. The overall and over-arching governance structure was still there. We met, at a senior level, with Sue Bruce every three months. Dr Keysberg also attended these meetings. It was apparent now that all sides understood the Infraco Contract. This was as a result of all the interested parties having an input into the new agreement.

292. The way in which On-Street Works are different to Off-Street Works was stipulated within the Settlement Agreement. This was as a result of having a target price agreement with pricing assumptions for the on-street. This was

achieved through working in a very collaborative manner. When work was started again the conflict with utilities remained. The utilities required to be relocated in parallel with our works, or just in advance. There was very close cooperation and coordination and this ensured it worked effectively. In relation to the Off-Street Works we had a fixed price agreement for delivering the section between Haymarket and the Airport. Although problems were still present, the new governance procedures were in place.

New approach to Utility Conflicts and Diversion Works

293. There was a new contractor, McNicholas, in place to carry out the utility work. This was under the supervision of T&T along with CEC. I think the contractor for the utilities under MUDFA before were McAlpine followed by Carillion and Clancy Docwra.

294. We were not in control of the utilities work. The authorities came in and dealt with matters directly. There was a good level of co-operation, with high level meetings taking place. There was a commitment to working together and ensuring the Project was completed.

295. Following the Mar Hall Mediation there were approximately 352 Post Mediation Changes ("PMCs"). I think the number of PMCs was a surprise to all parties. However, there were still a significant amount of utility clashes and conflicts to resolve post-Mediation. After Mediation, at one of the very first workshops there was still TIE involvement. I think they had reviewed the design against the utilities and they were identifying more than 500 clashes at that time. I recall on one occasion that the number may have been as high as 700. There were issues that MUDFA had not considered – for example, we understood that the TIE MUDFA team had not considered the OLE positions or some ducting when carrying out the MUDFA Works – this was the reason why there were so many clashes. When the work commenced, there were between 500 and 700 PMCs already identified. When excavations on the roads started, additional conflicts were identified.

296. The strategy for the utility diversion works was changed. The intent was that the new Utilities Contractor would go in just ahead of Infraco. They would excavate down to formation level and resolve the utility conflicts before Infraco came on-site. This was a more cost-effective way to deliver the works.

297. Following Mediation, the CEC leadership team were more open and honest about the scope of incomplete utility works. This allowed for a more creative and dynamic environment, where ideas and Value Engineering for both parties (CEC and Infraco) could be expanded. The more open 'partnering' approach led to better planning of resources and, ultimately, less abortive works.

298. The CEC/T&T team had a better relationship with the Utility providers, resulting in faster turnaround on issues. CEC were more open and realistic when programming the utility works, and upfront on the issues and constraints.

299. Under TIE, a number of traffic management proposals put forward by BCUK were rejected due to perceived disruption to local stakeholders. The proposals taken forward through TIE resulted in more protracted works that impacted on the local stakeholders for longer. The approach by CEC post-Mediation was to accept short term pain for long term gain, delivering a more cost-effective works plan that ultimately reduced programme durations. It was a more robust approach. A number of the traffic management proposals developed by BCUK for TIE, whilst rejected by TIE, were taken forward by CEC post Settlement Agreement.

300. Post-Settlement Agreement, we were allowed to explore and demonstrate that larger work sites were a positive for the Project overall – and these were better promoted by CEC. This also extended to all aspects, including City Centre embargos and extended site hours. CEC Utilities Contractor (McNicholas) took site possessions at weekends and nights to reduce the impact to the Infraco Programme.

301. CEC utilised Clause 80.15 effectively to ensure that changes were progressed ahead of agreeing an Estimate. This ensured that there was no impact to the Programme, and the works could progress. Valuation meetings were held each period and the Independent Certifier ensured that no issues dragged on beyond two periods unless by prior agreement of both parties (perhaps where the full extent of the issue could not be determined within that timeframe). There were no disputes or Estimates not agreed within an acceptable timeframe.

Further Issues

302. During this period, whilst there were issues to be resolved between the Infraco parties as would be expected, the relationships between the parties remained strong and the issues were worked through and resolved in a professional manner and without impact to the Programme. There were no disputes between the Infraco parties.

303. There were still difficulties with the Off-Street Works. This was mainly with stakeholders such as Scotrail, Network Rail, Scottish Water and the Airport Authority. These issues were resolved through the new governance structure. We had weekly meetings, where we were addressing openly all the issues. CEC along with T&T were also involved in these discussions. This allowed solutions to be achieved through partnership working.

304. When the Mediation process commenced, there were still individuals at CEC with strange ideas. A lot of the design principles provided by CEC were for the On-Street and Off-Street Works. This is where we required the consent and planning approvals from CEC. It is difficult to state exactly when the design was fully complete. The progress was recorded utilising the design trackers. It was now a much more straightforward process to obtain the approvals and consents from CEC. This was due to everyone working within the same office space.

305. Colin Smith was the independent certifier at this time and he was assisted by T&T. Colin had a role within CEC, although I cannot recall the title. Colin was basically the person from CEC whose responsibility was to deliver and ensure others were also delivering. That was the biggest difference from what had occurred in the past. Previously it was completely uncoordinated. You had the feeling that TIE were not working closely with CEC or other authorities. This was the biggest change between pre and post-Mediation.

306. The other difference between the meetings pre and post-Mar Hall was that after Mediation there was a governance structure in place. Colin Smith would chair all these meetings, which were led by CEC. Colin would address any issues and look for solutions to ensure there was always progress.

307. Following the Mar Hall Mediation, a number of Compensation Events were intimated by BSC, in terms of clause 65 of the Infraco Contract. This was in relation to the failure of the SDS Provider to release the IFC drawings by the dates identified in the Programme. Any new Compensation Event would have related to the post-Mediation contract, which was bound into the Settlement Agreement.

308. In respect of one payment for £9.6 million in relation to Prioritised Works, I cannot recall if this was paid in full. It was not reduced significantly.

Progress Monitoring

309. In the new programme there were intermediate stages when we had to deliver the test tracks and the depot prior to the CAF vehicles being delivered. Other key points to consider were the embargos at certain times for on-street working. This would be when the Edinburgh Festival was taking place and for some winter events.

310. In relation to the work streams in the new programme, this is dependent on an understanding of the programme. It was a very detailed programme which identified all the outstanding works at the time. This was from the point they

commenced until completion. These are Primavera programmes – very detailed with thousands of on-going activities.

311. The key dates in the Programme were met as a result of the new contract. We did not have the delay that was previously present. It was a realistic programme which was developed by both sides on terms that were achievable to ensure the Project would be delivered. In addition to the meetings I have previously referred to there were monthly meetings with Sue Bruce, Alastair Maclean, T&T and Colin Smith where items of concern were addressed. All the senior managers from the partners involved in the Project would work together to ensure its success. In the majority of cases, matters were resolved before there was a requirement to escalate to a more senior level. There were only one or two issues over the three years which reached that level. There was no hidden agenda – where problems existed they were just resolved.

312. The Key Milestone Tracker was a part of the Contract Settlement Agreement. The tracker identifies the main sections and the progress being made. There are individual milestones under each section. There were further delays caused by utility diversions. We had to accelerate the work in more designated work areas so as to reduce potential delay. T&T were now managing the utility work. In order to meet the tracker requirements, we worked through the Festival periods with CEC's agreement. By September 2013 the programme showed a completion date of July 2014. However, we managed to open on 31 May ahead of schedule.

June 2012

313. Colin Smith sent an email to me and others dated 26 June 2012 **(BFB00095452)**. Within the email, Colin referred to the need to, "reset our behaviours," in relation to applications for payment. I do not recall what amounts were due on this application. One of the recipients of the email was Mike Mackenzie, the T&T Commercial Director. Mike would review our payment applications. These were then forwarded to the independent certifier,

who was Colin Smith. We then had monthly meetings after the application was sent to discuss if there were any questions in respect of the payment. At that time in 2012, there was a tendency for T&T to try and act in a similar fashion to TIE pre-Mar Hall. T&T removed a number of items from our payment. Alternatively, they would certify specific areas for less than what we had applied for. This was despite the works having been completed. That is what Colin refers to when he mentions, "reset the behaviours". We had meetings and that was basically where these matters were resolved.

314. Steven Sharp, Construction Planning Solutions Ltd, sent an email to me and others dated 28 June 2010 **(BFB00094441)**. There was an attachment titled Key Milestone Tracker **(BFB00094442)**. This document identified slippage at various locations. Steven Sharp was the BCUK's chief programmer. Steven was involved throughout the whole Project, from the beginning in 2008 until completion.

28 June 2010 should be 28 June 2012

July 2012

315. There was a document titled *"A revised "Requirement Management Plan"* dated July 2012 **(BFB00101909)**; and a document titled *"Verification & Validation Plan"* **(BFB00101910)**. These two documents are part of the system engineering approach adopted by BSC. The documents address the system design. These are Siemens documents – they were responsible for the system integration, although Infraco had to submit the plans jointly. The individual requirements are broken down and apportioned to the relevant subsystem. This enables technical requirements to be traced over the Project life cycle and ensures safety approval system acceptance. The management of both these requirements is also covered within the plans. These are handled in a similar manner to the technical requirements. The responsibility for the allocation and apportionment is different to that of the technical requirements plan. These documents do not cover the verification plan or the system assurance plan. In order to ensure discharge of system integration, including tram supply integration obligations, this plan was applicable to CAF. This was particularly relevant in relation to the interfaces with BBS.

August 2012

316. Shabu Dedhar sent an email dated 27 August 2012 **(BFB00100925)**. It included an attachment titled *"Design Issues Tracker"* **(BFB00100926)**. The outstanding design issues related to elements of design that could not be progressed pre-Mediation. This was as a result of a lack of instruction from TIE, and a lack of clarity on progress for third party agreements and requirements. Following Mediation, these issues were unlocked. However, each element still had to be designed and integrated into the final design. The main design items are listed within the document. Each design change had to go through the Infraco receipt process. This ensured that the designs were fully integrated in the Design Assurance Statement and could be issued to CEC on completion of the design.

October 2012

317. There was a Memorandum of Understanding entered into by CEC and BSC on 8 October 2012 **(CEC01933565)**. Post-Mediation we had a collaborative approach to all issues, and this document is recognition of this. It demonstrates the continued intention of all parties to proceed in this manner. This is basically a memorandum to record that the partnership was working. The document played an important part in improving working relations and practices. It provided a platform to reinforce what had been agreed after Mediation. It was signed off by me, and Alfred Brandenburger for Siemens.

318. I sent an email to Alfred Brandenburger and others dated 19 October 2012 **(BFB00101539)**. Within this email, I made note of a *"political game"* being played in respect of the revenue start date for the ETP. This reference was in relation to a modified CEC report which had not really incorporated all issues as had been discussed. I was informed, through Colin Smith, that there was not much merit in forcing these issues in. The *"political game"* was a phrase used in respect of the views of the different political parties. The SNP wanted good news stories and were not accepting accurate information in respect of

when the tram would be ready for service. The different political parties had their own agendas to ensure that they would be shown in a better light.

319. I did not feel that the revenue start date for the trams of spring 2014 was realistic. If we were to agree with a spring date this could mean February 2014. This, in my opinion, would potentially provide the public with a false promise as to a completion date. The scheduled date of July 2014 was more realistic. There were still a number of issues to be resolved. I would say that my discussions with Colin Smith addressed my concerns. It should be noted that we were referring to a CEC document that we were asked to provide comment on. That was why I raised the issues.

320. Steven Sharp sent an email to me and others dated 25 October 2012 **(BFB00082546)**. Attached to the email were two documents: *"Departures to Pricing Assumptions, recorded to 13 October 2012"* **(BFB00082547)** and a "*Prolongation Statement*" **(BFB00082548)**. The amended programme led to a new contractual improvement programme. This was part of the Settlement Agreement. It still contained pricing assumptions which resulted in changes, if the assumptions were not realised. Steven was reporting the impact, mainly in respect of utility diversion delays. This had an impact on the programme. It was an on-going issue, because you have to report and update your programme in accordance with that. The email is acknowledging that we had adhered to that on a monthly basis.

321. Steven Sharp sent another email to me and others on 25 October 2012 **(BFB00082543)**. There were two attachments to this email, a "*Revision 5c "22 week draw down"* analysis to 13 October 2012 **(BFB00082544)** and an accompanying spread sheet **(BFB00082545)**. These were part of the general monthly updating of the programmes.

322. BSC did not seek to maximise their claims for payment, either before or after Mar Hall. The spread sheet explains this to a point. The draw down referred to relates to the original anticipated progress. There is an original schedule

agreed with all the parties. Thereafter there are certain circumstances occurring during construction. These would then be administered as lost days.

November 2012

323. Steve Reynolds, PB, sent an email to me and others dated 2 November 2012 **(BFB00095618)**. Within the email, Steve provided his views regarding SDS Contra Changes. There was an omission within the SDS design post-Mediation. Some of these errors and omissions were addressed prior to construction. The drawings were modified for Technical Queries. This was the procedure that we had in place. However, some of the errors and omissions resulted in the Project incurring additional costs. The email refers to the discussion between SDS and Infraco on these issues. The issues were discussed amicably and an agreement reached. These issues did not delay the completion date or impact on the CEC budget. It was more an internal arrangement between us and SDS. Where we had incurred costs they were recovered from SDS through these contract charges and without any impact on CEC.

324. I received an email from Colin Smith dated 20 November 2012 **(CEC02019588)**. This email highlighted a proposed meeting the next day with Keith Brown, Transport Minister. The meeting took place, and Transport Scotland were also present. Most of the finance for the Project came from Transport Scotland. Colin Smith, Dr Keysberg and I also attended. From the Siemens side, Alfred Brandenburg was there. I think Sue Bruce was also at the meeting. It was to confirm that everything was progressing well. It was a polite, non-formal brief meeting.

325. A document was produced and updated to illustrate applications for payments, dated 20 November 2013 **(CEC01984136)**. This is our regular payment application which occurred every month. The left-hand column provided our application for payment. This is what we prepared and submitted. We used this common table with all parties. It was reviewed by T&T, mainly through Mike Mackenzie. They would then input their figures in

the relevant column. The IC certificate is the view of Colin Smith as the Independent Certifier. The last two columns are the balances between the T&T assessment and the application from Infraco. The last column illustrates what was certified against the application.

326. The mobilisation payments do not just relate to getting resources and equipment on site. There was a contractual agreement for part payment of the contract sum. These are the payments from the original contract. They have not applied for any more after the Mediation. In respect of the preliminaries, we had received payment for certain aspects prior to Mediation. Then, of course, post-Mediation, and based on the final negotiation sum, there was an assignment of preliminaries. These were then spread through the contract period on a monthly instalment basis. In addition to the foregoing, there were milestone payments for the individual works which were defined by the on-site progress and submitted accordingly.

327. Ultimately the responsibility for the preparation of the document was with our Commercial Manager.

328. The cost of Section 05A, Roseburn Junction to Balgreen Road, was dictated by the geography of that section. It was the longest road part of the Project. This section was built-up, and the tram infrastructure had to be constructed on top of significantly sized structures. There were a number of structures on this section. For example, Murrayfield Stadium and then along the Russell Road Retaining Wall. There are a lot of narrow access areas along this section. Even Gogarburn, where the golf club is, was part of Section 05A. It was a very long section, which was reflected in the cost to complete it.

December 2013

329. I sent an email to Colin Smith dated 10 December 2013 **(CEC02036775)**. I expressed certain concerns, but not anything major. Mike McKenzie was again proving difficult to deal with. There had been an issue throughout 2013 in respect of payments, or uplifts. We had discussions on the uplift percentage

to be applied to these changes. Although agreed, it was never really closed – that is why I had sent this email. I was disappointed about it as there was no reason why it could not be resolved with the agreement of all parties. It did not relate to anything of any great value. It was a point of principle. The reason for my contact with Colin with was because he was the Independent Certifier and had the final say on these matters. He was aware of the situation but was not committing one way or another. We just wanted it closed off. The same issue was being repeated every month. The value of the uplift we were talking about was £14,000, which was minor given the size of the Project. However, these matters had to be resolved before the Project completed because otherwise the final account could not be signed off.

330. BCUK and Siemens' continuing obligations in respect of maintenance for the trams were detailed within the Operational Maintenance Contract.

Project Management and Governance

331. I refer to Section 2 - 'Executive Summary' of my voluntary statement regarding the Project Management and Governance of the ETP. I do believe the new governance, which was put in place after Mediation, assisted in moving the Project forward to a successful conclusion.

332. It is my opinion that there was a great deal of mismanagement by TIE when I joined the Project. They ignored the contract which had been signed by both parties. Even if you interpret things differently which is, of course, the right of every party, TIE still did not adhere to the adjudication decisions. These were made to obtain clarity on the different and conflicting interpretations of the contract. TIE have not accepted any of the decisions. I cannot comment if this was as a result of TIE being driven by any other party but the way TIE dealt with us as contractors and in general, with the administration of the Infraco Contract, was completely unsatisfactory. I cannot comment on TEL or Transport Scotland. TEL had a minor role with us and Transport Scotland were not really an over-arching factor. CEC had responsibility to supervise

TIE. This may have been the wrong decision as they installed TIE as an organisation. In simple words I think they may have left TIE alone for too long. Both during and after Mediation there was a cooperative collaboration approach that really put the Project delivery on top. There was a clear indication to deliver this Project together and I think that was quite successful.

333. There were no major concerns about the performance of BCUK and Siemens. We knew each other quite well as a result of working together on other projects. We would not have tendered for this Project if we did not believe that we could deliver it. We have a proven track record worldwide on a number of similar projects. There were a few issues with PB but none of these have really led to a delay or increased cost for the CEC or for the Project. I believe that SDS delivered what was anticipated under such a contract.

Final Thoughts

334. In my 20 years' experience in relation to complex international infrastructure projects I have not experienced difficulties like those I encountered on the ETP. I have never worked with people as unreasonable as the people we had to deal with at TIE.

335. The main reason for the failure to deliver the Project on-time, on-budget and on-scope was the wrong contract. In addition, it was not properly managed by TIE. The timing of the Infraco Contract being signed was also wrong, and for the wrong reasons. What had been signed was not recognised. The Infraco Contract had very clearly stipulated what the agreement was. This was just ignored and challenged. I think the Infraco Contract was probably signed two years early. Even in 2011, there were still a huge number of utilities present and the designs were not at a stage where work on the Project could commence in some areas. This was due to all the outstanding obligations on CEC and TIE, in respect of changes that occurred. The advanced works which were originally expected to be completed prior to commencement of the

tram work (utilities and the design), should have been completed before the Infraco Contract was entered into.

336. If the full circumstances had been known to BCUK I do not think that they would have entered into the Infraco Contract. When we first tendered, we understood that the utilities were to have been relocated and design complete, before the construction works would begin. Then, during the contract negotiation until the signing of the Infraco Contract in May 2008, it was clear that this was not the case. If you start bidding for a project, you invest quite a lot of money and have shown an interest. The only way that we could sign the contract, as Bilfinger and Siemens, was with the development of Schedule Part 4 which clearly set out the pricing assumptions upon which the Contract Price was based.

337. I think that, at the time, TIE had two choices. One was to postpone the signing and to enter into the contract when more of these advance works were complete. The second option was to enter the contract, but follow what you had agreed to and manage it properly.

338. I believe that it was the delay to the preceding utilities diversion works coupled with TIE's fundamental refusal to acknowledge the risk that they expressly retained under the Infraco Contract, and thereafter their inability to properly manage the Infraco Contract, which led to all of the difficulties which we experienced.

I confirm that the facts to which I attest in this witness statement, consisting of this and the preceding 112 pages are within my direct knowledge and are true. Where they are based on information provided to me by others, I confirm that they are true to the best of my knowledge, information and belief.

Witness signature..[redacted]

Date of signing.....12th July 2017.....

IN THE MATTER OF THE EDINBURGH TRAMS STATUTORY INQUIRY

SUPPLEMENTARY WITNESS STATEMENT OF MARTIN HEINZ FOERDER

PROVIDED ON BEHALF OF BILFINGER CONSTRUCTION (UK) LIMITED

1. INTRODUCTION

1.1 I refer to my witness statements dated 10 December 2015 and 12 July 2017 which have been previously submitted to the Edinburgh Tram Inquiry ("**the ETI**").

1.2 I am aware that certain witnesses, in particular Steven Reynolds and Jason Chandler of Parsons Brinckerhoff, have given evidence to the ETI in relation to the design and construction of the trackform. I have been asked by the ETI to clarify my understanding of the issues surrounding the design and construction of the trackform, particularly in relation to the works on Princes Street.

1.3 In preparation for making this supplementary witness statement, I have seen the ETI Public Hearing Transcripts dated 12 and 13 October 2017. I have also seen the witness statements of Steve Reynolds (both **TRI00000124** and **TRI00000124_C**), and Jason Chandler (**TRI00000027_C**) which have been submitted to the ETI.

2. EVIDENCE PRESENTED TO THE ETI ON TRACKFORM

2.1 I understand that Steve Reynolds and Jason Chandler have told the ETI that the consortium ("**BBS**") proposed a cheaper, shallow-form trackform design which was less robust that the SDS design proposed by Parsons Brinckerhoff ("**PB**"). Their evidence was that due to the risk of cavities or voids beneath the road surface, and with heavy traffic running over the tram lines on the road, there was a risk of rail breakage and tram derailment. To counter those risks, PB proposed that a reinforced concrete slab should be constructed beneath the trackform layer.

2.2 Steve Reynolds and Jason Chandler were critical of BBS' trackform proposal and their evidence was that it was unsafe, unsuitable and ultimately unbuildable. Jason Chandler in particular expressed concern that the BBS' trackform would fail in subsequent years due to the presence of voids beneath the rail track.

2.3 Additionally, both Steve Reynolds and Jason Chandler were asked whether the acceptance of BBS' cheaper, shallow-form trackform proposal and the subsequent need for full-depth reconstruction could have cost the project millions of pounds in additional expense. There was a suggestion that remedial works were required because of the decision to implement the BBS trackform proposal.

2.4 I disagree with Steve Reynolds and Jason Chandler's presentation of the issues encountered with the design and construction of the trackform for the project. I do not believe that their evidence has fully or accurately portrayed the full facts and circumstances, and has instead confused two very different issues in connection with the trackform design and construction. The two issues are:

2.4.1 the trackform design – the trackform proposed by BBS was Rheda Trackform as shown on slide 1 appended to this witness statement. This was accepted by tie. The reinforced slab (or trackform improvement layer) upon which it sat was designed by SDS. The reinforced slab on Princes Street never had to be replaced. It was installed when Infraco carried out works on Princes Street in 2009. The cost of the reinforced slab was not included within the Infraco Contract Price and was an additional cost which tie had to cover (as a Notified Departure);

2.4.2 issues surrounding the road / rail interface on Princes Street and allegations of faulty workmanship. Infraco ultimately accepted the need to carry out remedial works on Princes Street following mediation in early 2011. All of this work was carried out at Infraco's cost.

I now deal with each of these issues in further detail.

3. BACKGROUND AND OVERVIEW OF TRACKFORM DESIGN

3.1 As part of the Infraco Proposals put forward with the bid, BBS proposed the Rheda Trackform as the proposal for the trackform design. The Rheda trackform required a formation beneath it capable of achieving 120MPa for the life of the trackform. How this was to be achieved was not part of the Infraco trackform design proposal. tie accepted the Rheda Trackform proposal and allowance was made for the cost of this in the Infraco Contract Price. In other words, the BDDI showed only the trackform itself and this is what was priced by BBS. Had due diligence of this being carried out prior to contract award, it would have been identified that an "improvement" layer would be required underneath the trackform due to the ground conditions within the majority of the "on-street" sections of the tram route – voids, poor ground etc. tie were either unaware of this due to their lack of experience and knowledge in tram projects or they chose to ignore it to keep the overall "visible" project costs down until after contract award.

3.2 To be clear on this, the design put forward by BBSwas for the trackform only and it clearly showed that a suitable formation layer was required beneath the trackform. The trackform proposal did not show the interface detail between the rail and the road (running surface). This was part of the design integration that needed to take place between the roads designer and the trackform designer as part of the Design Integration process.

3.3 The trackform proposal put forward by BBS still had to be integrated into the overall design. The trackform itself cannot be stated to be "unsafe". It was not suitable to be installed without further works, which was apparently clear to SDS and should also have been clear to tie. SDS had an outline Trackform design within their preliminary design; however, as the Trackform was then determined to be a Contractor Proposal, SDS did not detail this further. Ultimately, tie had gone with Rheda trackform as proposed by BBS, even though the requirement for and cost of an improvement layer should have been apparent to tie.

3.4 Having selected the Rheda Trackform (as part of the Infraco proposals), there was a misalignment within the overall design and the process to address this was through the Development Workshop Process as outlined in the Infraco Contract. When the Development Workshop for the trackform was held, it identified a misalignment in that the Rheda trackform required a trackform improvement layer capable of providing continuous support of 120MPa throughout the on-street sections of the track for the lifespan of the trackform. Different options to achieve the required 120MPa support were explored with SDS, but ultimately, the only solution that SDS would accept for the on-street works was the reinforced concrete trackform improvement layer. This was the 250mm thick reinforced concrete slab to be constructed beneath the Rheda trackform layer.

3.5 The misalignment was as a result of the initial SDS design being based on a different trackform that did not require a formation layer to provide a support of 120MPa.

3.6 Any SDS design that was required to be changed as a result of the identified misalignments was a Mandatory tie Change. The need for this reinforced concrete trackform improvement layer was a Mandatory tie Change (a Notified Departure), and Infraco were entitled to the additional cost of this (design and construction costs).

3.7 In addition, construction of the trackform improvement layer required ground improvements through much of the on-street sections of the Infraco works due to the poor ground conditions beneath. Those ground improvements required increased depth of construction which would take longer to construct, inevitably leading to an increase in construction costs.

3.8 The SDS designed trackform improvement layer for the Rheda trackform, was installed by Infraco when the trackform works were carried out on Princes Street in

2009. There was never any need for remedial works to the trackform improvement layer and it did not cost the Project more that the Contract provided for. To be clear, the remedial works which were carried out on Princes Street much later, had nothing to do with the SDS designed trackform improvement layer.

3.9 BBS were paid additional sums over and above the Contract Price to account for the design change required for the trackform improvement layer. Therefore, there were additional costs borne by tie to install the Rheda trackform with the trackform improvement layer. However, these were anticipated by and allowed for within the Infraco Contract and there was no delay or costs for any rework or remedial works in connection with the trackform improvement layer.

4. THE ROAD/RAIL INTERFACE – INTEGRATION OF SIEMENS AND SDS DESIGN

4.1 During Steve Reynolds' evidence, Mr Reynolds was asked about faults in relation to the trackform works on Princes Street and reference was made to remedial works being required because BBS' trackform design was not suitable for the tram project. In particular, Steve Reynolds said:

> "*The faults I think you're referring to with the initial implementation of the trackform, yes, because a part of the trackform design, just to amplify what You was talking about there, is the so-called shoulders that run alongside the rails, and our preference was for concrete shoulders to contain the trackform, as it were, whereas the initial BBS offer didn't have those concrete shoulders.*
>
> "*That then resulted in problems with the heavy traffic on Princes Street cutting across the track, the buses and so on and so forth, and then you got the cavities that you were just talking about.*" (**ETI Public Hearing Transcript 12 October 2017, page 43:7-17**).

4.2 Immediately after this, Mr Reynolds was asked why BBS' trackform proposals were not suitable for constructing trackform on Princes Street, and Mr Reynolds answered:

> "*In our view it wouldn't have been safe because a further characteristic of the trackform design necessary for inner city circumstances like Princes Street, you need what's called void spanning, because you've got to anticipate that there will be cavities under the roadway…So you need the trackform to be capable of spanning those voids so you don't get rail breakage, and obviously if you get rail breakage in an inner city environment, you get a derailment. That's particularly unsafe. You need to be able to avoid that, obviously.*" (**ETI Public Hearing Transcript 12 October 2017, pages 43:22 to 44:11**)

4.3 This seems to suggest that the absence of concrete shoulders in the initial trackform construction on Princes Street is either connected to, or is the same issue as the requirement for the track improvement layer (because of the risks of voids beneath the road surface). The "shoulders" formed part of the interface between SDS' design for the road and Infraco' design for the trackform and is an entirely separate issue from the track improvement layer.

4.4 Initially, BBS constructed the Rheda trackform on top of the track improvement layer, and then an asphalt layer was installed to form the running surface as shown on slide 2 appended to this witness statement. This was the layer between the rails to bring the "on-street" trackform up to finished road level. This design was signed off by the road and trackform designers. At this stage, the designers (SDS) had not identified any requirement for concrete shoulders.

4.5 Ultimately, the road/rail interface failed on Princes Street. We believed that a large part of why this occurred was because the asphalt works were carried out in cold, wet

weather conditions in late November 2009 in order to achieve the deadline for handover of Princes Street imposed by tie. These works would not usually be carried out in such weather conditions as the finished product is likely to be poorer in quality and can often require to be re-done. Another reason for the road/rail interface failure was that buses were permitted to run on Princes Street within only a few hours of the asphalt being laid on the road.

4.6 After further investigations on Princes Street when the defects were noted (after the work on Princes Street had been carried out), it was concluded that the design of the trackform with the road was unsuitable for the volume of traffic on Princes Street, including the loading of full buses turning over the tracks. This design issue was not picked up by SDS or Infraco until after the trackform had been installed on Princes Street. It should have been flagged as a misalignment that the road/rail interface needed to be more robust and hence required concrete shoulders rather than merely asphalt. If this had been noticed during the Development Workshop Process, then the need for concrete shoulders would have been priced as a Notified Departure and Infraco would have been entitled to the additional cost of this (design and construction costs).

4.7 Ultimately, as a result of both of these issues, it was agreed that remedial works were necessary. The design was reviewed and the solution we arrived at was that concrete shoulders should be installed to provide a more robust road/rail interface on Princes Street as shown on slide 3 appended to this witness statement.

4.8 Infraco therefore carried out remedial works on Princes Street. This involved replacing the asphalt "coverage" layer with concrete shoulders at the road/rail interface. This did not involve any works to the trackform or the trackform improvement layer. These works were carried out entirely at the consortium's own cost. These works were carried out after the mediation. There was no additional cost to tie or CEC in connection with those remedial works, nor did this result in any delay to the project given that the MUDFA works remained the critical delay throughout.

5. CONCLUSION

5.1 The suggestion made by (or to) the ETI was that BBS' failure to comply with the SDS trackform design could have cost the project millions of pounds in additional costs. That is not correct. There were two distinct issues with the design and construction of the trackform. tie accepted BBS' Rheda trackform proposal, although design and costs associated with constructing a trackform improvement layer was to be determined after contract close. Therefore, there was no failure on the part of BBS to comply with the SDS design. Infraco complied with SDS design from the outset and constructed the track improvement layer when the works were carried out on Princes Street. Although the design, where it related to the road/rail interface, did need to be reviewed after the trackform had been laid on Princes Street in 2009, the subsequent remedial works which were performed did not incur any additional costs to the tram project.

I believe that the facts stated in this additional witness statement are true.

Signed: ... [redacted]

Martin Heinz Foerder

Date: 15/12/2017

IN THE MATTER OF THE EDINBURGH TRAMS STATUTORY INQUIRY

SUPPLEMENTARY WITNESS STATEMENT OF MARTIN HEINZ FOERDER

APPENDIX

SLIDE 1

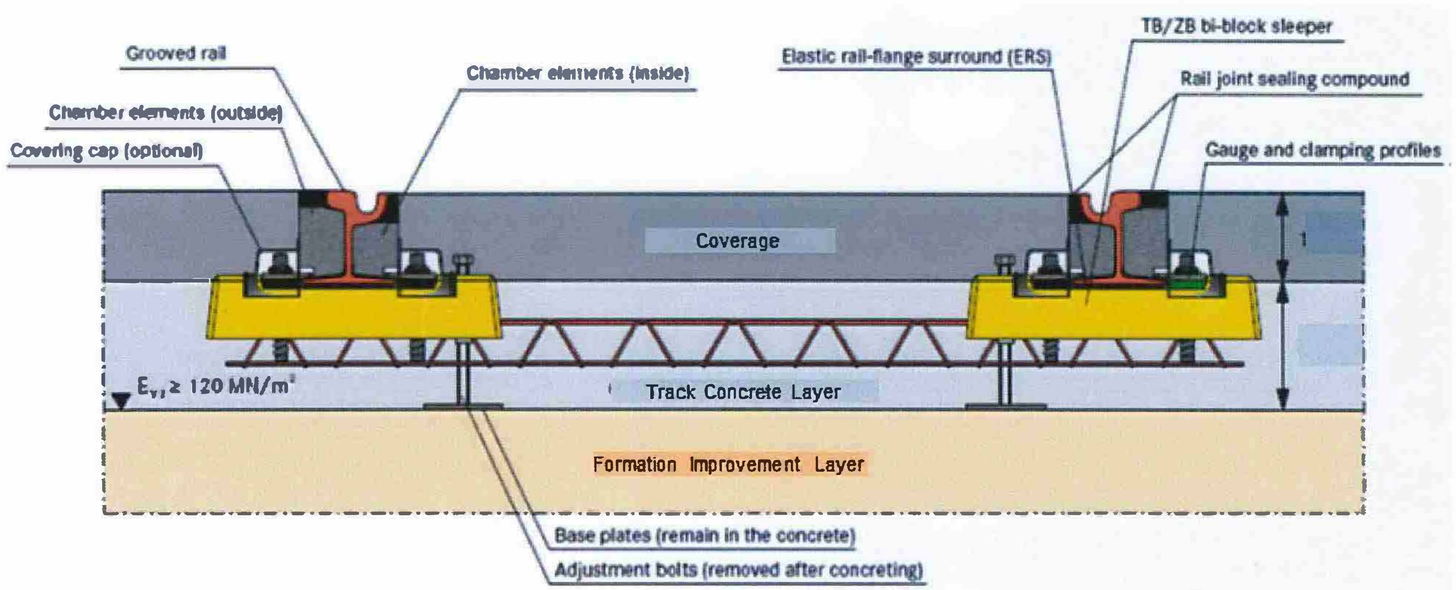
Edinburgh Tram Network
On Street Trackform

Introduction to Rheda

The Multi Service Group. BILFINGER BERGER UK Limited

SIEMENS

CAF



SLIDE 2

Edinburgh Tram Network
On Street Trackform

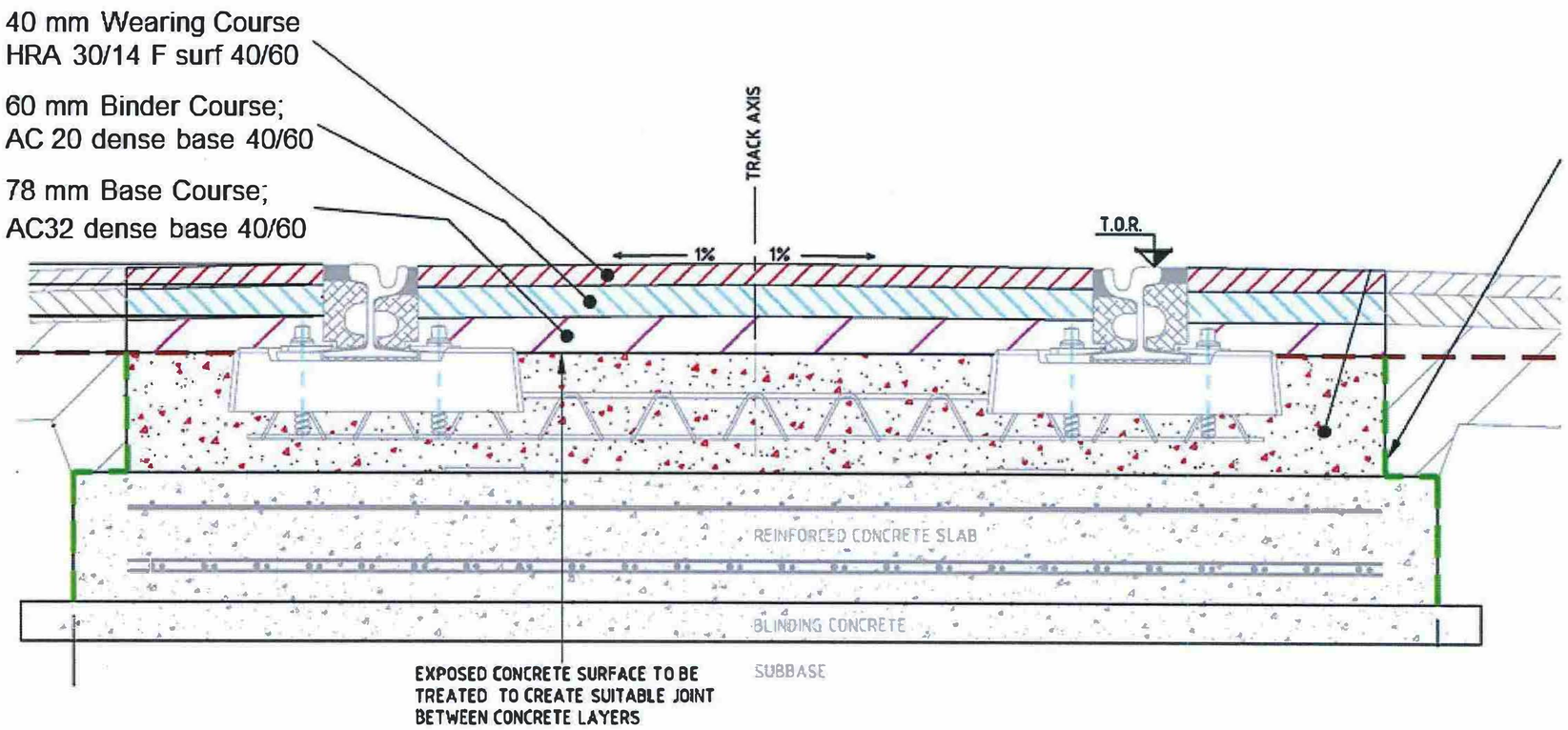
How the Rheda System works

Pavement Design 'As Built' in Princes Street

The Multi Service Group. BILFINGER BERGER UK Limited

SIEMENS

CAF



Edinburgh Tram Network
On Street Trackform

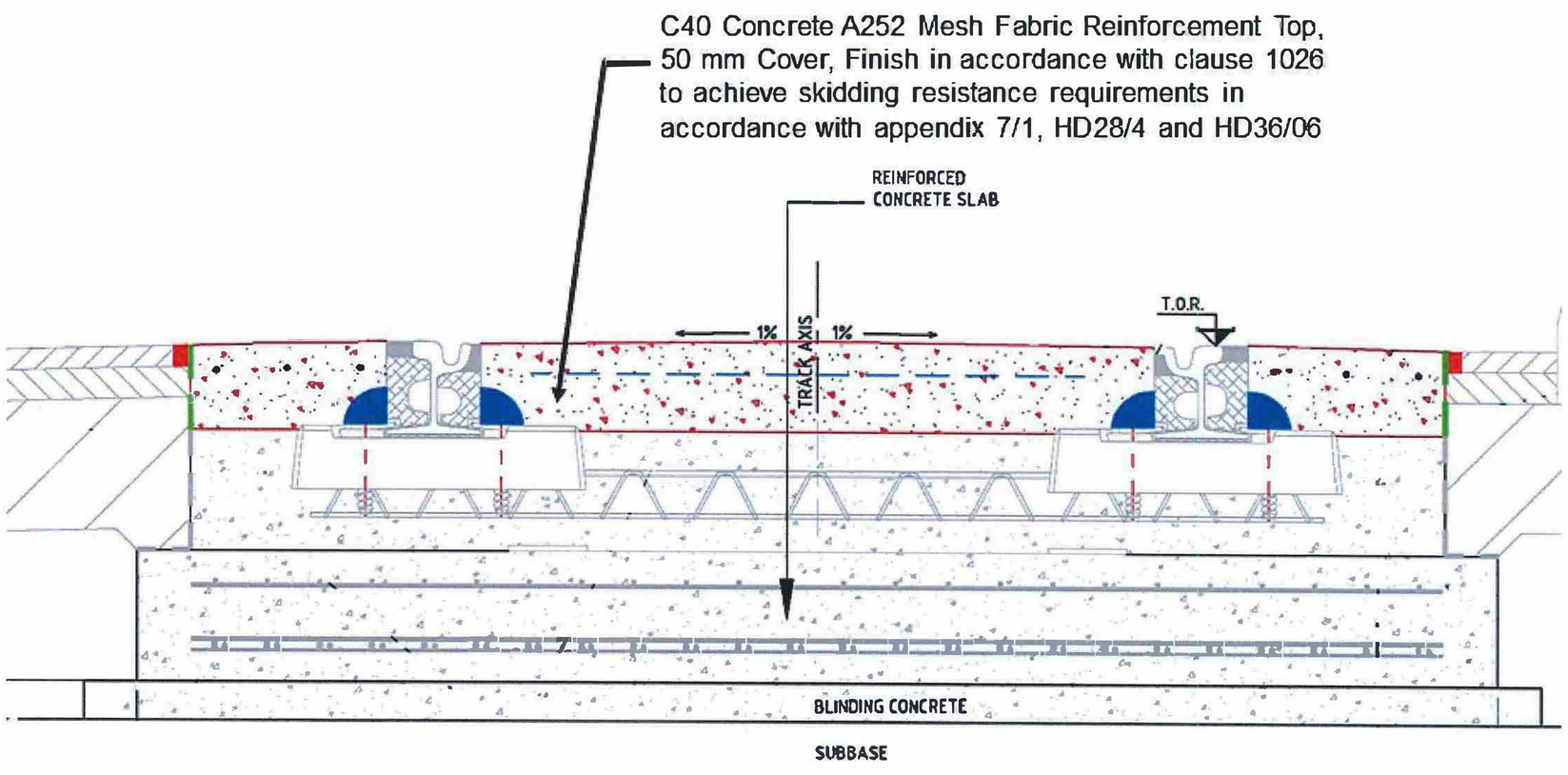
Lessons learned

The Multi Service Group. BILFINGER BERGER UK Limited

SIEMENS

CAF

Concrete Wearing Course Option for Princes Street



IN THE MATTER OF THE EDINBURGH TRAMS STATUTORY INQUIRY

WITNESS STATEMENT OF MARTIN HEINZ FOERDER

PROVIDED ON BEHALF OF BILFINGER CONSTRUCTION (UK) LIMITED

CONTENTS

1. INTRODUCTION

1.1 My name is Martin Heinz Foerder. I am 52 years old and reside in [redacted] Germany. I am currently employed by Implenia Construction GmbH as Head of Large Projects and am specifically attached to the Scandinavian Business Unit. I am currently involved in projects in Norway and Sweden, including Odenplan, Södra, NS 14, Kvarnsholmen, Johannelundtunnel (all in Stockholm), Vagstrandtunnel, Tresfjordbridge, Harpe Bridge, Farris Bridge and Eiganestunnel (all in Norway). In addition I am responsible for tendering to acquire new projects in both countries. I have taken over the position of Managing Director for Scandinavia from 1 June 2014. My currently employer, Implenia, purchased the construction division of Bilfinger SE in March 2015 which is when I transferred from working for Bilfinger to working for Implenia.

1.2 Prior to March 2015, I was employed by Bilfinger for almost 28 years. I started with Bilfinger in 1987 in the Head Office in Wiesbaden. From 1992 until 1997 I was Site Manager for the Metro Project Chungho Line in Taipei, Taiwan. In 1997 I was transferred as a Site Manager/Construction Manager to the Metro Project Chalaem in Bangkok, Thailand and became the Project Director in 2000. I successfully completed this Project which was handed over and went into operation in 2004. From 2005 until February 2009 I was the responsible Project Director for Malmö City Tunnel in Sweden. Between March 2009 and May 2014 I was the Project Director on the Edinburgh Trams Network ('the Project' or 'ETN') for Bilfinger Construction (UK) Limited ('BCUK') (the company was previously called Bilfinger Berger Civil (UK) Limited and prior to that Bilfinger Berger Construction (UK) Limited). I was asked to join the Project as Project Director to replace Colin Brady who was the previous Project Director for BCUK. I joined the Project in March 2009. Colin remained on as my deputy with the new title of Technical Manager. Due to the number of commercial issues being raised, it was agreed that I would focus on these and Colin would concentrate on technical issues. Colin left the Project in 2010.

1.3 In terms of the arrangement I have with my new Employer, I have undertaken to assist in relation to the Edinburgh Trams Inquiry ('ETI') based on the TSA (Transition Service Agreement) between Implenia & Bilfinger. I believe that I can assist the Inquiry as the former Project Director and that I am able to contribute to the matters which concern the terms of remit of the Inquiry. A set of questions which the ETI would like to discuss with me were contained in a letter to BCUK's lawyers, Pinsent Masons, dated 18 June 2015. In preparing this witness statement, I have taken on board those questions and have answered them as best as I am able.

2. EXECUTIVE SUMMARY

2.1 This Witness Statement reflects the many issues which arose during my involvement in the Project which covered a period of over 5 years.

2.2 To summarise my views in relation to the terms of reference of the Edinburgh Trams Inquiry, I consider that the reasons that the Project was delayed, cost considerably more than budgeted and delivered less than the original scope, are as follows:

2.3 In terms of the Infraco Contract, Transport Initiatives Edinburgh ('tie') retained many risks in respect of issues which the Infraco had not been able to price at the time of entering into the Infraco Contract.

2.4 In particular, tie retained the risk of delays to the preceding MUDFA ('Multi Utility Diversion Framework Agreement') Works, required to move utilities out of the line of the tram route. tie entered into a separate contract with the MUDFA Contractor and there was no cross-over or interrelationship with the Infraco Contract at all.

2.5 Although the designer (SDS) had been novated from tie to the Infraco, tie retained the risk in respect of design changes between the design which the Infraco had priced (the Base Date Design Information ('BDDI')) and the final design (the Issued for Construction ('IFC') design).

2.6 tie also retained the risk of obtaining third party approvals which had not been finalised prior to entering into the Infraco Contract, and many other matters which were set out in Schedule Part 4 to the Contract (in a series of Pricing Assumptions).

2.7 All of these risks subsequently materialised. The MUDFA Works were seriously delayed and had a huge impact on our ability to carry out the Infraco Works. The problems caused by the delayed MUDFA Works were compounded by tie failing to update us on these delays and failing to advise when we could expect the unhindered access to site that we were contractually entitled to. Likewise, the design changed significantly between BDDI and IFC stage. There were significant delays in obtaining

third party approvals and consents. All of these matters (and particularly the MUDFA delays) contributed to cause a huge delay to the Programme for the Infraco Works.

2.8 The Pricing Assumptions effectively excluded these risks from the Construction Works Price. Where the risks excluded by these Pricing Assumptions materialised, this resulted in the occurrence of Notified Departures which were to be administered and valued in accordance with particular provisions in the Infraco Contract (all as per Schedule Part 4). tie refused to accept that it retained responsibility for many of these risks. tie had maintained in a report to the City of Edinburgh Council ('CEC') prior to the Infraco Contract being signed, that the Contract was 95% fixed price. This was not true.

2.9 The Infraco Contract is clear that until the valuation of the changes introduced by these risks materialising was agreed (and tie had issued a tie Change Order reflecting the additional time and money that Infraco was entitled to), Infraco was not permitted to proceed with the affected works. tie portrayed this as Infraco refusing to carry out works and accused us repeatedly of 'delinquent' behaviour. Whilst we had been carrying out certain work on a good will basis (without agreement from tie on the time and cost implications of changes), we subsequently ceased all such good will working in September 2010 when it became abundantly clear that tie would never accept the extent of our entitlements in relation to these works.

2.10 Infraco was found to be correct in its interpretation of the key provisions of the Contract on this issue. During the period from late 2009 until March 2011, there were 12 adjudications between Infraco and tie which dealt with the major issues of dispute between us, mainly focusing on the correct interpretation of the Infraco Contract. These adjudications on key issues of contractual interpretation and principle, were almost entirely determined in Infraco's favour. Despite this, tie still refused to accept those rulings. This prevented agreement on a large number of changes and exacerbated and compounded the delays to the Programme which had already been experienced. tie took an entirely adversarial approach in all of its dealings with the Infraco.

2.11 Throughout the Project and particularly during the course of 2010, tie engaged in a series of activities intended to wear the Infraco down. This included its use of the media to portray Infraco (and BCUK in particular) in a very bad light; engaging in sending huge amounts of correspondence which were highly critical of many things including our 'behaviour'; and sending us a series of Remediable Termination Notices in which it threatened to terminate the contract for a whole host of reasons (some of which were entirely trivial and others which went to the heart of the differences in contractual interpretation between us). Throughout this period, we tried to look at ways of delivering the Project to meet the budget which was available to tie. Ultimately every attempt we made to find a breakthrough was brought to an end by tie.

2.12 It was only when there was a change within CEC with the arrival of a new Chief Executive, that the prospect of mediation on the overall dispute was raised. Following the mediation in March 2011, we successfully entered into negotiations to discuss with CEC and tie, what could be delivered within the budget available to them, and the constraints and other difficulties which would need to be resolved in order for us to proceed.

2.13 This resulted in a renegotiation of the Contract which was finalised in September 2011. This involved a change in governance and management procedures, with CEC effectively replacing tie and a Project Manger being brought in to administer the Project going forward. The scope of the Project was truncated with the tram now terminating at York Place.

2.14 After mediation and this renegotiation of the Contract, there were no further disputes and we managed to deliver the Project ahead of the revised Programme and to the revised total Budget which had by that time been agreed.

2.15 In short, I believe that it was the delay to the preceding utilities diversion works, coupled with tie's fundamental refusal to acknowledge the risk that they expressly retained under the Infraco Contract, and thereafter their inability to properly manage the Infraco Contract, which ultimately led to all of the difficulties which we experienced.

3. BACKGROUND UNDERSTANDING OF THE CONTRACT

3.1 I joined the Project almost 10 months after the Infraco Contract had been signed and work had commenced. I had very little knowledge about the Project at this time. I was requested by my superior in December 2008 to take over the Project Director role in Edinburgh, due to the contractual and commercial difficulties the Project was facing even by this time. It was felt that additional resource was required to help address some of these issues. Colin Brady, who had previously been the Project Director, remained as my deputy and Technical Manager. In late January 2009, I visited Edinburgh for three days to get a briefing about the Project by Colin and Richard Walker, at that time the incumbent Managing Director of BCUK. I was then on holiday for the month of February 2009. Prior to my start I was in general terms aware about the contractual difficulties which had arisen, but not the specifics.

3.2 As I was informed, BCUK were in a consortium with Siemens plc ('Siemens') and Construcctiones Y Auxiliar de Ferrocarriles S.A ('CAF') to build the Edinburgh tram network. BCUK would carry out the civil engineering works, Siemens were the system designers and system providers and CAF were building and providing the trams. Collectively we were known as Infraco. The original consortium and tendering party had been BCUK and Siemens (sometimes referred to as BBS) but at the request of our client, Transport Initiatives Edinburgh ('tie'), CAF had been novated to the consortium at the same time as the construction contract ('the Infraco Contract' or the 'Contract') was signed on 14 May 2008.

3.3 tie was a limited company set up (and wholly owned) by the City of Edinburgh Council ('CEC') to deliver a number of projects, of which the Project was one. Whilst CEC were guarantors of the Project, Infraco had no direct contractual relationship with CEC.

3.4 The design for the Project had been originally procured by tie directly from the SDS Provider (Systems Design Services). The SDS Provider ('SDS') was made up of a number of engineering firms led by Parsons Brinckerhoff. The original tie programme

provided that the SDS design would have been finished by the time that the Infraco contract was awarded. It was not complete and we had concerns at the lack of design detail at tender stage. As a result, the SDS Provider was novated to Infraco, with Infraco completing the design and carrying out the construction of the ETN.

3.5 tie separately contracted with Carillion plc (previously known as Alfred McAlpine plc) to carry out what was known as the MUDFA ('Multi Utility Diversion Framework Agreement') Works. These works were to have been completed prior to the Infraco Works commencing. They were not complete and this was a major issue for us which I discuss throughout this statement.

3.6 When I joined the Project, tie's interim Chairman was David Mackay. He had replaced the previous Chairman Willie Gallagher who had resigned in November 2008. Shortly after I joined (in May 2009), Richard Jeffrey took up the post of Chairman of tie. He resigned in 2011. From the point I joined until the point of mediation, the Project Director was Steven Bell. He was supported by Frank McFadden as Construction Director, and Susan Clark as depute Project Director.

3.7 For BCUK, I was supported by a Contract Manager, Kevin Russell, David Gough as Commercial Manager and by Colin Brady, Technical Manger, until he left the project in 2010. Richard Walker was the Managing Director of BCUK and remained in that position until 2011 when he left the company. We had a large team of additional commercial and technical support.

4. RELATIONSHIP WITH BILFINGER HEAD OFFICE

4.1 I was never employed by BCUK and remained at all times, a German employee of the parent company who was seconded to BCUK for the duration that I was Project Director on the Edinburgh Trams Project. The management team in Wiesbaden were concerned about this Project and I reported back to them, through Richard Walker. We were reporting directly to Mr Joachim Enenkel, who was the Managing Director of the Major Projects Division in Europe and then to Dr Keysberg (when Mr Enenkel moved to a new position within Bilfinger SE) in relation to the key issues which arose on the Project and which I discuss below. In addition, this was a large project for BCUK to be involved in and management had clearly to sign-off on the decision to enter into the Infraco Contract in the first place. It would have been the Bilfinger SE board in Mannheim who provided the final sign-off on the decision to enter into the Infraco Contract.

4.2 Richard Walker was also separately reporting to the German management team. All lines of communication were open at all times, and on occasion I would also report directly to Germany as I was on a direct secondment. We had regular monthly reporting back to Germany, but our discussions with the management team were much more regular than this, particularly at certain critical stages of the Project. The management team in Germany were very much aware of and took part in the decisions which were made on the project. We could not and did not operate independently from Head Office. They did become more heavily involved where they thought it necessary to do so, and there was quite a bit of management and guidance from senior management at the critical stages of the Project. Dr Keysberg in particular engaged in direct communication with David Mackay, at certain times in the Project. I was pleased to have Dr Keysberg's support in relation to the many issues which arose, but at times, this was clearly not appreciated by tie.

4.3 In addition, the Bilfinger in-house legal team in Germany were very much involved in the Project and worked closely with our lawyers in Edinburgh, Pinsent Masons. After the mediation which took place in March 2011, the Project was considered to be back

on track and management were much more 'hands off' in terms of their day to day involvement.

5. THE INFRACO CONTRACT

5.1 As I understood it, BCUK had experienced problems from almost the first day of the Project. There seemed to be a complete misalignment between BCUK and tie, as to the meaning and operation of certain key aspects of the Infraco Contract which the parties had entered into.

5.2 As it was explained to me and as I subsequently came to understand, the Infraco Contract contained some unusual provisions which had been required due to the remaining 'unknowns' at tender stage. Most of these risks were contained in Schedule Part 4 of the Contract. Schedule Part 4 is entitled 'Pricing' and within it, certain assumptions are made about various matters for the purposes of arriving at a Contract Price, even though it was known that these assumptions were not correct. For example, Schedule Part 4 assumes that all of the preceding MUDFA (Multi Utility Diversionary Framework Agreement) Works were completed before the Infraco was to commence its works. It also assumes that the design will be substantially complete, even though it was known at tender stage that this was not the case. These assumptions, and many more, are included in Schedule Part 4. The Infraco Contract is clear that Schedule Part 4 takes precedence over other parts of the Infraco Contract (Clause 4.3 providing that *'Nothing in this Agreement shall prejudice the Infraco's right to claim additional relief or payment pursuant to Schedule Part 4 (Pricing)*'). This is unusual clause because in a design and build contract, the primary obligation is usually to build to the Employer's Requirements.

5.3 As it was explained to me, BCUK had known during the tender negotiations that the MUDFA Works were incomplete and that the design was also incomplete. There were further uncertainties such as the design not having been integrated with the BCUK and Siemens proposal, third party approvals not having been obtained, and concerns about the ground conditions in various locations (these are just some of the issues which I understood had concerned the BCUK team involved in the tender). The problem that this had given the team involved at tender stage was how to arrive at a price for the works. It was because of the need to have a baseline which BCUK and

Siemens (as the other Infraco member at that time) could price, that the pricing assumptions which were included in Schedule Part 4 were arrived at. I had understood that, notwithstanding the uncertainties that continued to exist, tie were insistent that the contract be signed when it was. This was certainly earlier than I would have recommended given these ongoing uncertainties. However, I understood that the Infraco tender team had reassured themselves that the risk allocation and the protection in Schedule Part 4, allowed Infraco to enter into the Contract at the time that it did.

5.4 The price had been arrived at by 'assuming' that certain facts and circumstances were true, when in reality all parties knew that they were not correct. After the Infraco Contract had been signed, and if the facts and circumstances differed from what had been 'assumed', the intention was that this would entitle the Infraco to more time and money. This is explained in the body of Schedule Part 4 itself, as follows:-

"3.2.1 *It is accepted by tie that certain Pricing Assumptions have been necessary and these are listed and defined in Section 3.4 below. The Parties acknowledge that certain of these Pricing Assumptions may result in the notification of a Notified Departure immediately following execution of this Agreement. This arises as a consequence of the need to fix the Contract Price against a developing factual background. In order to fix the Contract Price at the date of this Agreement certain Pricing Assumptions represent factual statements that the Parties acknowledge represent facts and circumstances that are not consistent with the actual facts and circumstances that apply. For the avoidance of doubt, the commercial intention of the Parties is that in such circumstances the Notified Departure mechanism will apply.*"

5.5 There were 43 Pricing Assumptions in total, covering a wide variety of 'unknowns' which Infraco had not been able to price. The key pricing assumptions concerned design and completion of the MUDFA Works: for pricing purposes it was 'assumed' that these matters were completed when in reality, the parties knew that they were not. The key Pricing Assumptions were as follows:

"3.4 Pricing Assumptions are:

3.4.1 The Design prepared by the SDS Provider will not (other than amendments arising from the normal development and completion of designs):

1.1 in terms of design principle, shape, form and/or specification be amended from the drawings forming the Base Date Design Information (except in respect of Value engineering identified in Appendices C or D to this Schedule Part 4);

.....

For the avoidance of doubt normal development and completion of designs means the evolution of design through the stages of preliminary to construction stage and excludes changes of design principle, shape and form and outline specification…

2. Design delivery by the SDS Provider has been aligned with the Infraco construction delivery programme as set out in Schedule Part 15 (Programme).

3. The Deliverables prepared by the SDS Provider prior to the date of this Agreement comply with the Infraco Proposals and the Employer's Requirements…

24. That in relation to the Utilities the MUDFA Contractor and/or Utility shall have completed the diversion of any utilities in accordance with the requirements of the Programme save for utilities diversions to be carried out by the Infraco pursuant to the expenditure of the Provisional Sums noted in Appendix B...."

5.6 The operative clause in Schedule Part 4 is clause 3.5 which provides as follows:

'The Contract Price has been fixed on the basis of inter alia the Base Case Assumptions noted herein. If now or at any time the facts and circumstances differ in any way from the Base Case Assumptions (or any part of them) such Notified Departure will be deemed to be a Mandatory tie Change requiring a change to the Employer's Requirements and/or the Infraco Proposals or otherwise requiring the Infraco to take account of the Notified Departure in the Contract Price and/or Programme in respect of which tie will be deemed to have issued a tie Notice of

Change on the date that such Notified Departure is notified by either Party to the other. For the avoidance of doubt tie shall pay to the Infraco, to the extent not taken into account in the Estimate provided pursuant to Clause 80.24.1, any additional loss and expense incurred by the Infraco as a consequence of the delay between the notification of the Notified Departure and the actual date (not the deemed date) that tie issues a tie Change Order, such additional loss and expense pursuant to Clause 65 (Compensation Event) as if the delay was itself a Compensation Event".

5.7 To unpick some of the terminology here, Base Case Assumptions were defined as:

"The Base Date Design Information, the Base Tram Information, the Pricing Assumptions and the Specified Exclusions".

5.8 The Base Date Design Information was defined as the design as it stood and as it had been issued to Infraco at 25 November 2007. This date had been chosen to freeze the design which Infraco could price, due to the fact that the design was evolving all of the time during the tender phase. The Base Tram Information was really concerned with CAF, and was not so relevant from a BCUK perspective. The Pricing Assumptions were the 43 numbered items which I've referred to above. In addition, clause 3.3 of Schedule Part 4 contained 'Specified Exclusions' being other things which were specifically excluded from the Contract price (the Construction Works Price), and included utility diversions (other than a small amount which Infraco had undertaken to carry out) and ground conditions which could not reasonably have been foreseen from ground conditions reports available pre-tender.

5.9 Notified Departures were defined as being "*where now or at any time the facts and circumstances differ in any way from the Base Case Assumptions save to the extent caused by a breach of contract by the Infraco, an Infraco Change or a Change in Law*". So as clause 3.2.1 envisaged, the price was based on a statement of a factual position (the Base Case Assumptions) which did not reflect the actual facts and circumstances which the parties knew of. In these circumstances, a Notified Departure would occur and this was deemed to be a Mandatory tie Change, to be dealt with via

Clause 80 of the Contract, and requiring tie to issue a tie Change Order (once the cost and time impact of each Notified Departure had been agreed).

5.10 As can be seen from the above, there are some highly unusual clauses in the Contract which dealt with BCUK's concerns about many things including the incomplete design and the incomplete utility works. When I arrived on site, the position in relation to both of these matters was as follows:

5.11 **The position in relation to design**

5.12 The design which had been priced, was the design as it stood at 25 November 2007 – this was the 'Base Date Design Information ('BDDI')' which is referred to above. Any changes in *'design principle, shape, form and/or specification'* from this date, would amount to Notified Departures entitling the consortium to additional time and money (via the mechanism set out in Clause 80 of the Infraco Contract).

5.13 When I arrived on site, there were many Notified Departures and Infraco Notifications of tie Change ('INTCs'), which were not acknowledged as such by tie. For example, in relation to design changes which related to changes of *'design principle, shape, form and/or specification'* tie refused to accept that these were Notified Departures and that they entitled the Infraco to additional payment. tie's position seemed in the majority of cases to simply be that all changes were 'design development' which Infraco were obliged to carry out in any case.

5.14 These BDDI to "Issued for Construction" ('IFC') changes were brought about due to the progression of the design from BDDI status to IFC status. The design had been progressed in this period by SDS and moved on from a preliminary or "Issued for Approval" design status to an "IFC" status. In a lot of instances, the IFC design had changed considerably from that shown in the BDDI information. Examples of these include larger diameter and deeper drainage pipes due to the incorporation of third party requirements necessary for approval; different foundation details following detailed analysis of actual ground conditions and an increase in number or type of

lighting columns following CEC Approval etc. These issues are covered in more detail below in section 10 of my Witness Statement where I discuss design.

5.15 The impact of this was that there were a growing number of disputes at even this early stage in the project. When I arrived, approximately 350 INTCs had already been raised. These related to changes across the entire contract site. Of those which related to design changes, early ones included Carrick Knowe and Gogarburn. I mention these because they are the first matters which dealt properly with the impact of design changes which were referred to adjudication. It was tie who referred these matters to adjudication in an attempt to undermine the position which the Infraco had adopted, which we believed was in accordance with the Contract.

5.16 These adjudications, which commenced in September 2009, dealt directly with whether changes which had occurred between the Base Date Design Information (BDDI) and the Issued for Construction (IFC) information, were properly to be considered as Notified Departures. tie's position was that the identified changes in respect of the design at each of these locations (Carrick Knowe and Gogarburn) were simply the normal evolution of the design which Infraco was obliged to carry out in order to meet its design obligations in terms of the Employer's Requirements. Whilst we acknowledged that we were of course obliged to develop and complete the design and construct the IFC design, that was not the real issue: the issue was whether we were entitled to additional payment for doing so, given the Pricing Assumptions which had been agreed and were contained with Schedule Part 4.

5.17 I summarise the result of these two adjudications, and all 12 adjudications which resulted in a decision, in Appendix 1 to this statement. In summary however, the adjudicator on these two adjudications determined that a distinction had to be made between the general obligation to meet the Employer's Requirements and a commercial agreement that reflects the fact that the detailed design requirement for that obligation had not been completed at the date of the contract agreement, that is, that there was a distinction between Infraco's obligation to design the works and the price that they were to be paid. He also highlighted clause 4.3 of the Infraco Contract

which stated that *"nothing in this agreement shall prejudice the Infraco's right to claim additional relief or payment pursuant to Schedule Part 4 pricing'*. In other words, the provisions of Schedule Part 4 took precedence over any other part of the Infraco Contract, as far as Infraco's entitlement to payment was concerned. He therefore determined both the Carrick Knowe and Gogarburn disputes in favour of Infraco. This was the first real test of the Schedule Part 4 Pricing Assumptions and we were very relieved that it was determined in Infraco's favour, albeit that tie appeared subsequently not to accept that finding. I cover this in more detail below.

5.18 **The status of the MUDFA Works**

5.19 As I've mentioned above, pricing assumption 24 related to the MUDFA Works. In other words, the price for the contract had been based on the MUDFA Contractor having *"completed the diversion of any utilities in accordance with the requirements of the Programme save for utilities diversions to be carried out by the Infraco pursuant to the expenditure of the Provisional Sums noted in Appendix B...."*

5.20 In addition, the Contract also contained Programming Assumptions in Schedule Part 15 b), one of which states *"The programme is based on MUDFA having completed all works and all utilities being diverted that would conflict with INFRACO operations by the following dates"* [there then followed a series of dates by which the MUDFA Works were to have been completed for each of the sections of the Project, being Sections 1A, 1B, 1C, 1D, 2A, 5A, 5B, 5C, 6 and 7A].

5.21 When I joined the Project and was being brought up to speed on progress to that point in time, it was clear that the MUDFA Works were very far from being complete. This was having a real effect on progress on all of the works (in particular the on-street works although large sections of the off street works were also impacted – e.g. Depot, Airport, South Gyle Access Bridge etc) and there were three main aspects to this:

5.21.1 **The physical aspect**: we could not physically proceed with our works where utilities were still in place beneath the ground (in positions that clashed with

the tram infrastructure), when these were supposed to have been removed or relocated by tie's contractor MUDFA before we commenced works.

5.21.2 Our understanding and the position on which the tram infrastructure design was taken forward was based on the assumption that any utilities within the area required for the installation of the tram infrastructure (i.e. the tracks, OLE foundations, ducting and drainage etc.) would be diverted by MUDFA in advance of our works. This would allow Infraco to have a "clear corridor" within which to install the tram infrastructure. Our price and programme was based on this understanding. The "utility free zone" was understood to be the width required to install the tram infrastructure (trackform, OLEs, ducting, drainage etc.) to a depth of 1.2m below finished road level. The exception to this was at the location of tram structures. At structures, the utilities would be diverted clear of the area required for the structure including its foundations. Taking this further, it was assumed at the commencement of the project that the "utility free zone" would be clear of utilities to allow a straight forward installation of the tram infrastructure.

5.21.3 The BCUK works involved initially excavating to a depth of approximately 1.2m below existing ground levels and ensuring the ground conditions at this level met the design requirements. This meant that on occasion ground improvement works were required. This entailed deeper excavations (a further 0.3m to 0.6m) and subsequent reinstatement to formation level with imported granular materials. The width of the excavation differed between on and off-street for various reasons including traffic management requirements; however, the minimum width would be of the order of 8.0m). Following this, the ducting and drainage were installed and the initial track improvement layer constructed. Once the track improvement layer was in place, Siemens would place the sleepers, rails and fixings prior to the track slab works being carried out by BCUK. Following this, the final adjustments to the rails were carried out by Siemens to allow the coverage layer and road

pavement tie in works (where applicable) to be carried out by BCUK. The joint sealant works would then be carried out by Siemens to complete this element of the works.

5.21.4 In simple terms, if the utilities were still located within what was supposed to be the 'utility free zone' we did not have the clear corridor which we needed in order to perform our works. The MUDFA Works were nowhere near completed when I arrived on site and in reality, there were few areas where we had unhindered access to proceed with our works in a sensible and economically viable way. tie were very keen that we work wherever we could, even in extremely small sections, in order to be seen to be making progress, and even where the MUDFA contractor was still present. We believed that working in extremely small sections was not an economic way to proceed and further, that it was not in accordance with the Infraco Contract. In terms of Clause 18.1.2, tie had granted to Infraco *"a non-exclusive licence to ...enter and remain upon the Permanent Land for the duration of the Term and an exclusive licence to ...enter and remain upon the Designated Working Area for the duration of the time required (pursuant to Schedule Part 15 (Programme)) for completion of the Infraco Works to be executed on such Designated Working Area..."*. This meant that we were entitled to exclusive access, with no other contractors present, to the key areas of the site where we planned to carry out works, during the periods noted in our construction programme (which was included within Schedule Part 15). The interpretation of this clause of the Infraco Contract became a real bone of contention between us in relation to an adjudication which subsequently took place (the MUDFA adjudication which I deal with in further detail below).

5.21.5 Despite having this right to exclusive access, and despite the assumption that all MUDFA Works would have been completed by the time we were due to commence our civil works on site, Infraco had tried to be accommodating

and to work around the MUDFA Contractor (Carillion) who was very much still on site. One such area where this occurred was at Leith Walk. As I was arriving on the Project, it was explained to me that in relation to Leith Walk, we had tried to proceed with our works at tie's insistence despite the fact that the MUDFA Contractor was still present and performing its works. It was very inefficient to work around other contractors and large areas of the site were effectively sterilised while utilities were diverted which would allow us to proceed. Working in very small areas of the site at any one time is very inefficient. There is very little working space and hence resources tend to be used in a disruptive and inefficient manner. My predecessor as Project Director (Colin Brady) had written to tie in relation to these particular works on Leith Walk. Ultimately this didn't work and tie instructed us on 6 March 2009 to cease work on Leith Walk in order to mitigate overall delay to the Project. We were told to concentrate efforts elsewhere and that in the meantime, we would be reimbursed our actual costs for the works carried out on Leith Walk at that time (to take account of the disruption).

5.21.6 **The design aspect**: In various areas, the design could either not be completed or constructed due to the incomplete MUDFA works. For example, at the location of South Gyle Access Bridge, tie had not diverted an existing sewer. The IFC design was issued on 23 May 2008 and the design highlighted a clash with an existing sewer. Infraco had planned to commence works in June 2008. This clash was raised to tie by Infraco. tie stated that the sewer was to have been diverted under MUDFA. However, this was not carried out as according to tie, the traffic management would not work. We were informed unofficially that the actual reason was that the tie team responsible for the MUDFA Works wanted to avoid the additional spend within their “budget” and wanted to pass the problem to the tie team dealing with the Infraco Contract to deal with. tie did not then issue a Design Change Order to amend the infrastructure design (as it should have done) and so no tangible Infraco works could proceed at this location. We attended

numerous meetings with tie at various levels in an attempt to resolve the issue. Each proposed solution put forward by Infraco (e.g. a review of traffic management proposal for diversion of the sewer, revised infrastructure design options etc.) was rejected by tie. The sewer was finally diverted by tie in late 2010. Following Mediation in March 2011, the IFC design was subsequently constructed by Infraco.

5.21.7 We were aware that tie had failed to relocate or remove all of the utilities from the "utility free zone". In some instances, tie had merely relocated utilities within the proposed "utility free zone" leaving future issues that would require to be resolved in order to construct the tram infrastructure works. I should note that this information was observed on site by our site teams. This was not advised to Infraco by tie as we would have expected. There was a requirement for tie to provide the MUDFA as-builts to Infraco under the Construction (Design and Management) Regulations. We subsequently requested the MUDFA as-builts from tie. When these were not issued by tie, we formally requested the as-builts in August 2009. These were necessary first and foremost, from a health and safety perspective to ensure that our site teams were informed as to likely utility positions prior to any digging works commencing. Secondly, they were required to allow Infraco and SDS to check for clashes between the tram infrastructure and utilities and attempt to mitigate issues (costs and delay) due to further conflicts by identifying these prior to commencing works. tie responded in March 2010 (some seven months later) and provided only a small percentage of as-builts with limited and inaccurate information contained therein.

5.21.8 **The contractual aspect**: The final reason why we could not commence works when Notified Departures arose as a result of the ongoing presence of utilities, was because of the way in which the Infraco Contract was intended to operate. All Notified Departures were to be dealt with through the tie Change mechanism which was contained at Clause 80 of the Contract.

Having notified of a tie Change via an INTC or having received a tie Notice of Change ('TNC'), Infraco were obliged to submit an Estimate outlining the cost and time implications of the Notified Departure. Clause 80.13 clearly states that, except in the situation where an Estimate had been referred to the Dispute Resolution Procedure for determination, *"the Infraco shall not commence work in respect of a tie Change until instructed through receipt of a tie Change Order unless otherwise directed by tie"*. Accordingly, until there was an agreement in relation to the cost and time implications of a particular Notified Departure and a tie Change Order was issued to reflect that agreement, we were not permitted to proceed and this compounded the delay suffered in relation to both the design changes that I've discussed above, and the delays caused by MUDFA.

5.22 The meaning of Clause 80.13 and the operation of the tie Change procedure, became a major bone of contention between us and tie and remained a significant issue until Infraco's interpretation of this clause was found to be correct at adjudication (the adjudication before Lord Dervaird in relation to the Murrayfield Underpass) in August 2010. Nevertheless tie did not acknowledge the decision up to the Mediation in March 2011.

5.23 The issues associated with incomplete design and incomplete MUDFA Works were exemplified by two issues which were ongoing when I joined the Project in March 2009. These issues were (i) the Depot; and (ii) the Princes Street Works.

6. THE DEPOT AT GOGARBURN

6.1 One of the questions that the ETI posed in their letter to Pinsent Masons of 18 June 2015 concerned whether there was a delay in mobilising the workforce at the start of the Project in May 2008. I was never made aware of such an allegation during my time on the Project and the only thing I can think of is that this may relate to when we could have started work at the Depot.

6.2 The depot at Gogarburn where the trams were to be housed, was one of the first items scheduled for completion in April 2010. As at March 2009, this aspect of the Project had been seriously delayed as a result of both delays to the MUDFA Works and changes to the design of the depot.

6.3 A large water main ran through the location of the depot. It had not been moved in advance of the commencement of our works in this location, despite the contractual assumption that it should no longer have been there.

6.4 Schedule Part 4, Pricing Assumption 21 states: *'(ii) the depot excavation will be handed over to Infraco pumped dry with a firm sound formation'*. This is one of the Pricing Assumptions which I discuss above. tie issued a letter dated 12 December 2008 that stated access had been available to Infraco since 14 May 2008 (the date the Contract was signed). This was not correct because in February 2009, tie was still occupying the site at the west end of the Depot Area, attempting to divert the large water main but at the same time insisting we should commence our works. This issue resulted in an 11 month delay to the Project.

6.5 In addition, the Depot design had significantly changed since BDDI stage, due to the design being incomplete at this stage. There were design changes required due to third party requirements being received after 25 November 2007. For example, Scottish Water requirements resulted in changes to the external drainage design. I discuss the Development Workshop process in further detail below.

6.6 The works at the Depot were further impacted by tie not agreeing Notified Departures. Furthermore, tie had to come back to site to carry out remedial works to utility diversions as the initial works as installed by MUDFA (under tie's management) were not accepted by Scottish Water.

7. THE PRINCES STREET WORKS MARCH 2009 TO NOVEMBER 2009

7.1 The original programme which had been included in the Infraco Contract, showed that the works to lay the tram tracks on Princes Street, were to be carried out between January and August 2009. This time period was chosen because it was period between the winter festivals and the Festival in August. The programme duration for Princes Street assumed that all MUDFA works had been completed by this date and did not have any allowance therein for utility diversions or impacts to the construction work due to utility conflicts.

7.2 The Contract Programme had slipped at the point the Contract was signed. That was because Infraco had based its price on the Design Programme, version 26. However, by the time of contract execution, the design programme was at version 31. Infraco was already entitled to an extension of time of almost two months at the point of signing the Contract - again Schedule Part 4 provided Infraco with this right (Pricing Assumption 4).

7.3 tie initially disputed Infraco's entitlement to an extension of time which was a typical example of the way in which they approached the Contract. An extension of time would be a 'bad news' story and so their initial position had been that we could mitigate to mean that there was no delay. By the time I joined the Project, they had conceded this point however (I believe an award of an extension of time of slightly over 7 weeks was made in December 2008).

7.4 Although the Programme slipped, the dates for Princes Street were maintained due to the importance of carrying out these works at a time that would be least disruptive for the city.

7.5 However, by the time that the start of these works was approaching, it was clear that the MUDFA Works were not and would not be completed on time in advance of our works.

7.6 There were also ground condition issues at Princes Street due mainly to the poor condition of existing utilities (i.e. leaking water mains). This resulted in some sections with poor ground conditions requiring deeper excavations and extensive ground improvement works prior to installation of the tram infrastructure (a tie risk). This also had an impact on Programme as well as cost. There were also other Notified Departures which related to changes, the impact of which had not been agreed, and some elements of the design which affected Princes Street had not yet reached IFC stage or had reached IFC stage, however, the change from the design on which we had priced hadn't been agreed with tie. Although I wasn't involved in it, I understood that the continued presence of the utilities on Princes Street and these design changes, had led to Infraco raising INTCs which tie refused to accept. As noted above, at this time tie's approach was not to acknowledge how the Contract operated at all as regards Notified Departures.

7.7 In addition, tie refused to accept that the Notified Departure mechanism, and clause 80.13 of the Contract, meant that until tie had issued a tie Change Order in respect of the Notified Departure (reflecting the time and cost implications of the Notified Departure), Infraco was prevented from commencing work in respect of that change. The point about Princes Street was that we were going to have to commence works when the MUDFA contractor was still present. We were going to have to work around each other and carry out the works in much smaller sections, when in fact we were entitled to exclusive access to Princes Street. It is clear to see that this was going to be much more difficult and also that it would delay the period available to us to carry out those works. tie continued to refuse to accept the Estimate reflecting that situation. tie was also refusing to agree the value of the Notified Departures which related to BDDI to IFC design changes. Our concern was that if we proceeded to carry out all of these works, without agreement on the quantification of the impact of these changes, we would very quickly end up in a very bad situation financially. We were not obliged or permitted to start these works until the value of these Notified Departures had been agreed (with reference to clause 80.13). At this point, tie used the media to state that BCUK was refusing to proceed with the works because we had demanded £80 million

from tie before we would start. This was not true. In reality, BCUK was only doing what it was contractually required to do. This was one of the first major examples of tie using the media against BCUK in a very public way (dealt with in more detail below).

7.8 However, shortly after I joined the Project, we attended a meeting with tie to see if we could find a way through the impasse. By this point in time, Princes Street had been closed but no work was progressing and this was attracting a huge amount of media attention. We had a meeting with tie, at which Siemens and CAF were also represented and at which the senior members of tie were presented. We also had Pinsent Masons in attendance to assist with drafting if we reached any agreement. This meeting went on until after 10pm at night but we managed to reach agreement. We signed the first version of what became known as the Princes Street Supplemental Agreement ('PSSA') on 20 March 2009. The first version of this document referred to works having to commence on Monday 23 March 2009 which we achieved. This first version of the PSSA also only dealt with the work required in the first week thereafter. There were various subsequent iterations of this document to deal with comments from others, including I believe Siemens and CAF, and some Appendices etc had to be added. The final version was signed on 29 May 2009 (albeit the works had actually commenced on 23 March). I had only been in my post for three weeks when we had the first negotiation which led to this agreement being struck. It was part of my remit and my intention on arriving on the Project, that we would find a way through the difficulties which had arisen. This was a good first step.

7.9 In terms of the PSSA, Infraco were entitled to be paid on a Demonstrable Cost basis for the works to be carried out on Princes Street. What that meant was that we would be paid for all of the work carried out by our subcontractors (BCUK's subcontractors for the Princes Street Works were Crummock and MacKenzie Construction) on the basis of actual time spent carrying out the work, at rates which were agreed and were set out in the PSSA.

7.10 This was a workable agreement which would allow works to proceed, even though we didn't have agreement with tie on the consequences of the Notified Departures which

affected every element of these Works (being the ongoing presence of the MUDFA Contractor and the fact that the MUDFA Works were far from complete, as well as BDDI to IFC design changes and the other ground condition issues).

7.11 Although the Programme which was submitted with the PSSA showed works commencing on 23 March 2009 and going all the way through to March 2010 without a break for either the Festival or Christmas, tie and it's stakeholders made it clear early on at the project management panel meetings (meetings of the Parties' senior management the purpose of which was to address issues impacting the delivery of the project as a whole, not just the Princes Street Works) that Princes Street would need to re-open to traffic on 29 November 2009. We were therefore instructed to use whatever resources we needed in order to make this happen, including working twenty four hours a day, seven days a week. This is what we ended up doing towards the end of that period. Even then, works were not fully complete in November 2009 and so we had to return in January 2010 to complete the Princes Street Works and to carry out certain remedial works.

7.12 It is worth noting how difficult the Princes Street works were to perform. Areas of Princes Street, particularly The Mound junction were not made available to Infraco at the outset of the works as the MUDFA works were incomplete. This section when eventually handed over to Infraco still had incomplete MUDFA utility works and was subject to considerable disruption during our works as outlined below.

7.13 It proved very difficult to assess the incomplete MUDFA works as tie were not particularly open when advising of outstanding works, unresolved issues or reviewing programmed MUDFA works or completed MUDFA works. At the commencement of the Infraco works on Princes Street, it was clear that there were considerable MUDFA works still wholly incomplete. Examples include:

7.13.1 Scottish Power infrastructure transverse crossings were not at the correct height to accommodate the track slab at various locations (e.g. Frederick St, Castle St, South St David St).

7.13.2 BT infrastructure transverse crossings were not at the correct height to accommodate the track slab at various locations with major works not completed at The Mound. In addition there were other longitudinal locations impacting the construction of the carriageway works (e.g. South St David St to Waverley Bridge Junction).

7.13.3 Scottish Gas Networks Infrastructure works were not completed at various locations with major works not completed at The Mound impacting track slab construction.

7.13.4 Scottish Water Infrastructure works were not completed at various locations with major works not completed at The Mound and other longitudinal locations impacting track and carriageway construction works (e.g. South St David St to Waverley Bridge Junction and a water main running the length of Princes St).

7.14 The ongoing MUDFA issues also impacted the infrastructure design and hence the infrastructure construction works. As an example, during the works, once Infraco obtained access to the area of Princes Street at the junction with The Mound (late handover due to delayed MUDFA works), the Crawley Tunnel was uncovered. This was an existing tunnel with a live water main running through it and it clashed with the tram infrastructure. Whilst everyone was aware of the tunnel prior to the works, the exact dimensions, depth etc. were unknown. It was not until Infraco (BCUK) uncovered the tunnel that we could see that there was a clash with the tram infrastructure. This proved to be a major issue requiring identification and redesign to come up with a design solution which could be approved by Scottish Water. This element was overlooked by the MUDFA work scope. It relied on Infraco to develop options, design and implement the preferred solution to which Scottish Water subsequently agreed. From a site perspective, Infraco seemed to be caught up in outstanding MUDFA/Scottish Water issues which complicated and protracted the design and construction process. Indeed this element of the Princes St works was the last to be completed.

7.15 I cannot answer why during the MUDFA works, a survey of the tunnel was not undertaken and those details then not provided to the designer so that the clash with the infrastructure design could have been resolved prior to commencement of the Infraco works on site. This issue resulted in further delay (and cost) to the programme.

7.16 Despite carrying out the Princes Street works in these difficult circumstances, tie subsequently refused to honour the PSSA agreement. They refused to pay us monies which we were entitled to in respect of the Princes Street works, that totalled in excess of £2 million. This matter had been referred to adjudication at the point at which we went to mediation in March 2011 (I discuss the mediation in more detail below). This seemed typical of tie to find reasons not to pay us what we were contractually entitled to, even where they had previously reached a written agreement with us. The reasons they relied upon for not paying us in full for the Princes Street works included arguments which were just not sustainable. For example, they stated that the PSSA only covered our works up until when we handed Princes Street back over to the Council on 29 November 2009 (when there is no such cut off); and arguments that they would not pay for staff who were *'not seen on site'* even although all of the records submitted showed that those individuals were present. On such a large and busy site, it is ridiculous that all staff need to have been 'seen' by tie representatives before their costs were payable (particularly given that the tie representatives were not on site all the time). Although we referred this matter to adjudication, in the end no decision was reached by the adjudicator as this was swept up in the agreement reached following the mediation in March 2011. We had had a separate mediation on Princes Street alone in November 2010, as part of the dispute resolution process, but this had not resulted in an agreement on what was due to us. I deal later in my statement with the individual mediations we had on various disputes (which was a pre-requisite before we could go to adjudication).

7.17 I now move on to deal with issues of the quality of the works at Princes Street. One of the questions posed to me by the ETI in the letter to Pinsent Masons of 18 June 2015 relates to what steps were taken to exercise control over the quality of work

undertaken by sub-contractors and why did the tram track on Princes Street require to be re-laid [see question 9 of ETI letter 18 June 2015].

7.18 I would first respond by advising that the wording of the question is not correct. The tram track on Princes Street did not need to be re-laid. I deal with this further below. However, in relation to the issue of quality control, BCUK had full ISO 9001 certification in place prior to and for the duration of the Project. By way of background, ISO 9001 is a certified quality management system (QMS) for organisations who want to prove their ability to consistently provide products and services that meet the needs of their customers and other relevant stakeholders. This is audited internally and externally and we fully complied with and met the requirements of ISO 9001 throughout the Project. In accordance with any good and competent main contractor, we had in place through our Integrated Management System, robust quality control procedures to ensure that all works were carried out properly by our sub-contractors. On each and every Bilfinger job, we have processes in place to make sure that we appoint the right subcontractors who also have ISO 9001 certification and a similar approach in regards to quality. MacKenzie and Crummock are well known subcontractors in the Scottish market. They have worked for City of Edinburgh Council on many other jobs (before and after Trams) and are competent and experienced subcontractors. We had ISO 9001 compliant management structures in place within BCUK including quality control procedures and guidelines to make sure their works were carried out to the required standards: this included good site management and presence, daily control meetings, interface meetings, inspection and test plans and records and quality inspections and audits. Where necessary, Non-Conformance Reports (NCRs) would be raised that identified works or elements of works that, for example, were not constructed in line with the required standards. In order to close out the NCR, the sub-contractor would be required to carry out remedial works. I would refute that there was any mismanagement by BCUK of its subcontractors. In any case, defects are part of construction contracts – there will also be some corrective action to take before the Project would be considered as complete. The fact that there were defects on Princes Street does not mean that Infraco was in breach of contract.

7.19 In addition and in relation to our subcontractors generally, there were of course problems (which would be expected due to the complex nature of the project) but we managed to avoid major disputes with all of them, and this was despite the fact that we were aware that they suffered because of the nature of this job – in particular its stop / start nature. For example, Crummock geared up for work on Leith Walk, only for the work to be stopped before it had properly started for the reasons I have dealt with above (the continued presence of the MUDFA Contractor). Barr Construction were similarly disrupted with their work at the Depot. I would say that all of our subcontractors were understanding of the difficult situation we found ourselves in with tie. They were on board and were part of our team. This can be seen by the fact that many of them came back on board after the majority of works had been suspended, following the settlement which we reached with tie/CEC following the mediation. If relationships had not been as good, I don't think they would have agreed to return to finish the works. We did have some issues with our subcontractors along the way but we managed to negotiate a way through with them, following mediation and after the works restarted.

7.20 As regards why an element of the Princes Street work had to be redone by BCUK, part of the problem was the pressure we came under to meet the requirement that Princes Street reopen on 29 November 2009 (in advance of completion of the works). The month of November 2009 was extremely wet and cold (frosty) and this is not ideal for laying tarmac, particularly with 24/7 working. In addition, the work was finished very early in the morning of 29 November and tie/CEC allowed buses to run on the newly completed surface just hours later (and contrary to our advice).

7.21 We had a long debate with tie over the reasons why the road-rail interface on Princes Street was subject to cracking.

7.22 It should also be remembered that at time of handover on 29 November 2009, the works to the trackform were incomplete. Due to programme pressures instigated by tie, the final surfacing works (primarily the coverage layer) were rushed, completed in poor weather conditions and then not afforded the necessary standing time to achieve

strength prior to loading (i.e. driven on by buses too early). The above reasons contributed to the cracking at the road-rail interface.

7.23 It should also be noted that the cracking as displayed on Princes Street occurs on the majority, if not all, of the tram systems that use this trackform system (which is called 'Rheda'). The cracking was also exacerbated by the volume of buses that utilise Princes Street and in particular the turning forces of the bus axles brought about by the constant requirement of buses having to pull out onto the tram tracks to pass other stationary buses.

7.24 Ultimately, however, we reached a position at Mediation where Infraco agreed to redo Princes Street at our own cost and to an enhanced trackform design (i.e. concrete shoulders rather than asphalt). This work was successfully carried out post mediation.

8. OTHER ISSUES THROUGHOUT DURATION OF THE PROJECT

8.1 As was well known, the Project suffered from many problems and was severely delayed as a result. In this section of my Witness Statement, I deal with the major issues as I recall them. It is not possible to deal with these issues in much of a chronological manner, because many of them were ongoing throughout the period March 2009 (when I joined the Project) to March 2011 (the mediation). Before getting in to this, it is worth explaining the relationship which existed between BCUK and tie.

8.2 **Bilfinger Relationship with tie**

8.3 The relationship which we had with tie was not at all good. Everything was a battle and to my mind, seemed to stem from a basic disagreement about the background to and interpretation of the Infraco Contract.

8.4 When I arrived on site in March 2009, I was aware that relationships even by this time, were not good. Kevin Russell, BCUK Contract Manager, had not long joined the project at this stage (he joined I believe a month before me). I thought that with the change of personnel on the BCUK side, this was a good opportunity to turn the relationship around. We tried very hard to make this happen, even having a joint team ten pin bowling night. It quickly became apparent that there was no good relationship, and not even an acceptable working relationship. This was throughout the whole of the tie organisation, from management down. Even at a design or a construction level, the relationship was terrible. For example the construction section managers in BCUK who worked under Jim Donaldson (our Construction Manager), had terrible relationships with their opposite numbers in tie. At no level at all was the relationship acceptable or appropriate. Even at social events, there was a real sense of tension.

8.5 In the beginning I tried to work closely with Steven Bell and Frank McFadden, thinking I could build a working relationship with them. This quickly proved to be impossible. We had very intensive meetings with them. My approach is always to try and find solutions. We never managed with tie or with these individuals to find working solutions. Even when we thought we had made some progress on a particular issue,

tie would then come back in writing refuting that any agreement had been reached. The result of this was that there was no level of trust between us at all.

8.6 Even by the end of 2008 prior to my arrival, and thereafter into 2009, tie started sending letters which were very accusatory in tone, extremely lengthy and referred to BCUK's 'behaviour' which is unusual for the kind of large infrastructure contracts that I am used to dealing with. The people we were dealing with seemed to be very confrontational and rather than looking at ways in which we could resolve the issues between us, they continually looked at ways to block our progress whilst seeking to blame us for everything which was wrong with the project.

8.7 At various times, we thought there might be scope for some progress. For example, following reaching agreement on the PSSA as described above (in March 2009) we attempted mediations with tie to see if we could unlock issues which were separating us. We had a mediation before a mediator called Eileen Carroll at the end of May (29 May 2009, the same day we signed the final PSSA) which was about the percentage uplift to cover overheads and profit which was to be applied to the Actual Cost associated with the value of Notified Departures and sums due to us via Appendix G to Schedule Part 4. We reached a settlement which was recorded in a Minute of Variation dated 3 June 2009 that we would get an uplift of 17.5% in respect of the civil element in valuing these changes. We attempted a further mediation from 29 June to 3 July 2009 which was much more ambitious in scope. This dealt with 12 issues identified by the CEOs of Infraco and tie (following a meeting on 22 June) covering all of the major issues then in dispute, including: the valuation of extension of time ('EOT') 1 (which was the 2 month initial delay due to the SDS programme moving from version 26 which was what the price was based on, to version 31 by the time of signature of the Contract); the time due to us in respect of EOT 2 (MUDFA delays as at March 2009); how to interpret Schedule Part 4; the valuation of BDDI to IFC Changes etc. This was also the start of the discussions on what became known as the 'On Street Supplemental Agreement' which was a proposal that all On-Street Works be dealt with on a similar basis to the PSSA. I deal with this in further detail below.

Unfortunately, we were unable to reach agreement with tie at this mediation because it became clear that we had fundamental disagreements on the interpretation of key aspects of the Contract. We followed the mediation up with a 'Without Prejudice' offer to tie on 8 July 2009. In this letter, as well as making proposals in relation to many of the things discussed at mediation, I also urged tie to *'abandon its passive behaviour in favour of an active decision making process'*. By this I meant that the issues between us were only likely to get much worse if decisions on how to proceed were not taken early. In response in a letter dated 9 July 2009, Steven Bell took the position that tie remained open to taking decisions but it was Infraco's failure to provide information which was making this impossible. It was clear that we were very far apart on many issues.

8.8 At other times, there were proposals made by tie, which, had they stuck to the original intention, might have helped to unlock the position we found ourselves in. For example, it was originally a tie proposal (I think Richard Jeffrey) to send some of the bigger issues of contractual interpretation to adjudication. The idea was that if we had 3-5 decisions from adjudicators on some of the key issues, such as the proper interpretation of Schedule Part 4, that would unlock the dispute and give us a template for moving forward. However, when tie lost all of the adjudications which dealt with these significant matters of principle (from late 2009 and into 2010), they then refused to accept the adjudicators' decisions, or interpreted them in an obtuse way which could not be supported. Our whole relationship with tie was like this. As I've said, we really tried to make the relationship work but it was just not possible. I didn't join the Project to end up in adjudications and court cases. From our side, and despite the abuse we received, we were always trying to be open and to look for ways of making the Project work: for example, I mention in greater detail below, our proposals in relation to On-Street Working, Project Carlisle I and Project Carlisle II and Project Phoenix (which was the basis of our mediation proposal and the agreement with CEC post mediation). All of these proposals were aimed at simplifying contractual procedures and allowing us to build to the budget that tie had available to it, mainly by reducing the length of the tram line. Everything we tried and offered was killed by tie. It

is perhaps worthwhile mentioning that we always tried to find solutions to the problems for example, because of the high running costs the delays were causing, none of which we were being paid for. It is always wiser to avoid additional costs than try to recover them later.

8.9 My feeling was that everyone in tie was following orders. It is not clear to me who might have been issuing those orders but it was clear that they were being followed by everyone we dealt with. The orders mainly centred around refusing to accept what the Infraco Contract said, and insisting that this was a lump sum, fully fixed price contract which it clearly was not. The opening paragraphs of Schedule Part 4 make that abundantly clear. Steven Bell in my opinion was not the right person to be heading up the Project on behalf of tie. You need to be open and professional in order to lead on a project like this and Steven Bell was neither of these things - although I accept that he may also have been following Orders (perhaps from David Mackay or Richard Jeffrey). His whole attitude was not solutions orientated which is what we needed, but was completely confrontational. He even was like this for the short period that he remained involved, after mediation (although by this time, the presence of Colin Smith and the new role of CEC meant that he was brought into line much more quickly).

8.10 We had a very poor relationship with David Mackay who openly called the Project 'hell on wheels' and used the press against us, including when he resigned and used the media to call us a 'delinquent contractor'. Richard Jeffrey was his replacement and we hoped that he would take a different approach. My feeling was that he was less of a confrontational person by nature. However, it was his decision to bring in Tony Rush as a consultant, who was extremely aggressive and confrontational and used very inappropriate language in meetings. He used to say things like he would 'push us to the wall' so that we had to accept tie's position. After the mediation in March 2011, when we had signed the heads of term which were the starting point of the detailed renegotiation of the Contract, Tony Rush approached me to apologise for his behaviour. He told me that he had been asked to behave in the way he had, and assured me that I wouldn't be hearing from him again.

8.11 I would say that until Sue Bruce, the newly appointed Chief Executive of CEC and Colin Smith of Hg Consulting became involved (at and post mediation), we never dealt with anyone in tie who was prepared to take a reasonable attitude. tie seemed to either employ people who were of a similar mind-set or who they could control to be the same as them. At one stage, there was some media attention on a survey which had been carried out and which had identified how unhappy tie employees were. They had a very high staff turnover. Willie Gallagher, who was the Chairman of tie, didn't last long after the Contract had been signed. Some individuals who were employed by tie and who were very difficult to deal with in the period before mediation (e.g. Andy Scott and Tom Cotter) had a notable difference in attitude post mediation when they were subsequently employed by Turner and Townsend. This would indicate that it was tie management who were dictating the behaviour of all of their employees, and that when tie were taken out of the picture altogether, things became much easier. Generally tie's approach seemed to be to bully and apply very aggressive tactics, with very little (or no) room for compromise.

8.12 Furthermore, I would note that tie also appointed persons into roles for which the person did not appear to have the appropriate skills, knowledge or experience.

8.13 Whilst we were not directly involved in the MUDFA contract, tie appeared to, from our position, treat this as a wholly separate project and not as advance works for the tram. What I mean by this is that they diverted utilities without full or due consideration of the purpose of the diversion. I was informed of services being diverted from a clash with one piece of tram infrastructure into the location of another element of tram infrastructure without any discussion to determine the impact to the tram infrastructure. It was evident that the tie MUDFA team and the tie Infraco team did not work as "one tie team". Again, whilst we were not directly involved, there was clear tension between the two tie teams. When this approach is compared with the approach by CEC to deal with the utility clashes after Mediation it was night and day. The approach by CEC was open, collaborative with the most appropriate solution developed to minimise cost and impact to the overall programme.

8.14 If I was asked what drove tie's behaviour, I would say that it seemed they had an entirely different interpretation of the Infraco Contract to us. Perhaps they understood that they were not in a good position contractually and financially, and this was why they had to be so aggressive and unreasonable. Willie Gallagher had reported to the Council that this was a lump sum, fixed and final Contract Price and as I've said above, this was simply not correct, as the top page of Schedule Part 4 makes clear. It seemed that tie were trying to defend that position from day 1 of the Project. It was a position which was not defensible.

8.15 tie's attitude meant that we did have to employ our lawyers, Pinsent Masons, to assist with reviewing the Contract and advising us on our position on the various things we were being accused of. Moving into the latter part of 2009 and thereafter, Pinsent Masons ran and defended the 12 adjudications we were involved in, as well as assisting with many other disputes in the background which didn't reach the adjudication stage. In addition, we ended up with a large Change Management team of around 10 Quantity Surveyors, whose job it was to notify of Notified Departures and to subsequently evaluate and quantify the Change. This was approximately three times larger than the team that I would normally have expected to see employed on a job of this nature. It was not how the job had been planned and all of these people were not employed from the very beginning. Instead, they had to come on board due to the way that tie were driving the Contract, refusing to deal with Notified Departures, insisting on more information from us continuously and generally refuting our contractual entitlements. We also employed an additional planner full time (albeit he was a consultant and not a BCUK employee) Stephen Sharp, in addition to our day-to-day planner (James Cowie). Steve's job was to help us assess the delay being caused as a result of the significant level of Change on the Project, but in particular, the delays caused by the delay to the preceding MUDFA Works. The team on this Project was therefore significantly bigger than we would normally assemble for a job of this size and nature which meant we were incurring higher costs.

8.16 tie, until their demise, persisted in characterising the Project problems as being solely of Infraco's making. As documented in brief above, this is clearly not the case. Had tie recognised and accepted their role and obligations at the start of the Project, the Project would have incurred fewer delays, been built for substantially less than the final outturn cost and perhaps delivered a greater scope.

9. OTHER ISSUES FROM MARCH 2009 TO MARCH 2011

9.1 Ongoing delay

9.2 As I noted above (in relation to my comments on Princes Street), the Infraco Contract was based on certain pricing assumptions and some of these related to both programming and the MUDFA works. The relevant pricing assumptions are found in Schedule Part 4 to the Contract and include:

"no 24: That in relation to Utilities the MUDFA Contractor and/or Utility shall have completed the diversion of any utilities in accordance with the requirements of the Programme save for utilities diversions to be carried out by the Infraco pursuant to the expenditure of the Provisional Sums noted in Appendix B.

no 25: That the Possessions (as defined in Clause 16.1) shall be available as noted in the Programme at Schedule Part 15 (Programme).

no 32: That the programming assumptions set out in Schedule Part 15 (Programme) remain true in all respects"

9.3 Further, more assumptions were made in the body of Schedule Part 15 (Programming) including:

"*3.1: The Programme is based on MUDFA having completed all works and all utilities being diverted that would conflict with Infraco operations by specified dates which are in advance of commencement by Infraco of any of its Works in any Designated Working Area.*"

9.4 In short, what this meant was that the Programme was based on the Utility Works in any Designated Working Area being complete before Infraco commences the Infraco Works in such Designated Work Area, and that no works were required to be undertaken by Infraco to enable the MUDFA Contractor to proceed. If the Utility works carried out by the MUDFA Contractor and/or other utilities works had not been completed in accordance with the requirements of the Programme, and/or the

Programming Assumptions were not met (the MUDFA and utilities diversion works are not completed by the dates shown in the Programming Assumptions document included at Schedule Part 15 b of the Agreement), then a Notified Departure had occurred which entitled Infraco to additional time and money.

9.5 As I've mentioned above, delay by the preceding MUDFA Contractor was the major contributing factor which delayed the Infraco Works. Under my comments on Princes Street, there was a delay of almost 2 months to the Contract Programme, at the time that the Contract was signed [as a result of the change in revision to the SDS programme]. The situation only got worse from there. The Infraco had no contractual relationship with the MUDFA Contractor. tie controlled that relationship entirely. We struggled to get updated information from tie as to when the MUDFA Works would be completed. We needed that information in order to be able to properly programme the Infraco Works.

9.6 As I mention above, the original MUDFA Contractor was Carillion plc. tie replaced Carillion with Farrans Construction and Clancy Docwra but gave the Infraco no notice of this. At no point did tie provide the Infraco with notice of a) the reasons for the delay to the completion of the MUDFA Works, b) when tie became aware of such delays and c) reliable anticipated completion dates for the MUDFA Works (which would have allowed us as Infraco to know when we could expect reasonable access dates for the commencement of our Works). Had tie provided us with this information, it would have made our job much easier. The closest we got was sporadic marked up drawings from tie's sectional Project Managers on site regarding anticipated completion dates for certain MUDFA activities in various locations. There was no formal communication of this information from tie.

9.7 In a report to Council dated 12 March 2009, tie reported that the MUDFA works were *"on target to be substantially completed by July 2009"*. In the Edinburgh Tram MUDFA Update Report dated 22 March 2010, tie reported to the Council's Tram Sub Committee that *"The majority of the utilities works are complete (97%) with the remaining work being concluded by September 2010."* In the corresponding report

dated 24 June 2010 tie reported *"The utility diversions are now substantially complete"*. In the Edinburgh Tram Update Report dated 14 October 2010 tie reported that the utility diversions were *"over 95%"* complete. The Audit Scotland Report of February 2011 states *"Utilities work is now 97 per cent complete"*. The substantial utilities diversion works carried out post Mediation (including planning, design and approvals) indicate that the above percentage completion rates were inaccurate. The utility diversion works were finally completed in late 2013. Clearly, the reports issued by tie to CEC reporting MUDFA completion percentages could not be relied on. I believe that it is clear from the above (assuming that tie did not deliberately report inaccurately to CEC) that tie did not at any stage have a grasp of the full scope, cost, timescale or impact of the utility diversions required.

9.8 As it was, half the time we were acting in a vacuum and simply had to make assumptions about when the MUDFA Works might complete in the absence of any concrete information coming from tie. Any dates from any information we did get (e.g. from the site managers) or assumptions we made on that information about anticipated completion dates for the MUDFA Works, repeatedly lapsed (that is the dates were missed), without any explanation from tie. The majority of the time, we had no reliable information on when the MUDFA Works would be completed and when we could get access to the various areas of the site to enable our works to proceed. This made it impossible to plan works or engage meaningfully with subcontractors.

9.9 Not only were there Programming and Pricing Assumptions about the MUDFA Works having been completed before we commenced our works, as I've noted above, Clause 18.1.2 also provided that we were granted *"an exclusive licence to..enter and remain upon the Designated Working Area for the duration of the time required (pursuant to Schedule Part 15 (Programme)...for completion of the Infraco Works to be executed on such Designated Working Area."* The Project was broken down into 7 Sections and many intermediate sections within those main sections. We had programmed on the basis that each of the intermediate sections was a 'Designated Working Area'. On the on-street sections of the Works, the continued presence of utilities and the MUDFA

Contractor meant that we did not have exclusive access to really any area of the Site which curtailed our ability to work in the on-street areas.

9.10 As a result of the ongoing MUDFA delays, it meant that we were continually working to outdated programmes. We had various obligations in relation to Programming and were required to produce updated monthly Programmes to tie (clause 60 of the Contract contains our obligations in relation to progress reporting and providing updated programmes). Where there was to be a change to the Programme (by which I mean the main Programme for the whole of the works which we were working to), we were to submit that to tie's Representative for their acceptance of any change (which could include the revised order or manner in which the Infraco proposed to carry out the Infraco Works). As noted, even Revision 1 to the Programme (which related to delays which had happened even before the Contract was signed) was difficult to get agreement on. This was despite the fact that tie were supposed to respond to an updated Programme within 5 days of receiving it.

9.11 Early on, and in fact before I had joined the Project, I understood that our programmer, Stephen Sharp, had started a series of meetings with tie's Tom Hickman (tie's programmer), to try and agree a revised programme which took account not only of MUDFA delays, but also late design and tie Changes etc. The approach that they took to this exercise was to analyse the impact of these delays on each Section of the work. This exercise was stopped after a while as tie required that Stephen instead work on recovery programmes (i.e. how we could make up lost time).

9.12 After that, and in my time on the Project, we continued to try and get agreement with tie on a realistic Programme. tie seemed to refuse to accept what we were telling them. They refused to accept that we couldn't mitigate the delay and they had a very different approach to us as to what they believed mitigation would involve. The Infraco Contract does require us to mitigate delay. However, tie seemed to believe that mitigation also included acceleration, by which I meant they thought that we should introduce a huge number of additional resources at our own cost and do all that we possibly could to pull back the delay caused by MUDFA. It also appeared that tie didn't

really want to agree a revised Programme because if they did, they would have to go public with the truth that there was no way that the Project would be completed by the original completion date for the final section of 16 July 2011. This was yet another example of tie refusing to accept what reality was telling them, and refusing to accept the mechanisms built into the Contract to deal with these matters.

9.13 On 30 April 2009, tie issued 'MUDFA Programme Revision 8' which was the first time that they had formally communicated anticipated completion dates for the Utility Works across the project. As I explained, until this point in time Infraco had not been made aware of the extent of the delays to the Utility Works in any reliable detail.

9.14 The Project was to be completed in four Sections (described as Sectional Completion A, B, C and D). By showing the effect of these MUDFA dates on the Programme we were then working to (Revision 1), it was clear that these dates were going to have a huge impact on our completion dates for each of the four Sections. We considered this was a Notified Departure and in July 2009, we issued INTC 429 in respect of the MUDFA delays. This intimated that a Notified Departure had occurred to the extent that the completion dates provided by tie in the 'MUDFA Programme Revision 8' were at variance with Pricing Assumptions 3.4.24 and 3.4.32. The notice intimated that the Notified Departure mechanism therefore applied.

9.15 On 3 September 2009, tie formally confirmed that it agreed that a Notified Departure in respect of the effect of the 'MUDFA Programme Revision 8' had occurred. However, tie fundamentally disagreed with our assessment of the effect of the delays to the MUDFA Works.

9.16 In August 2009 and in accordance with the procedure for Notified Departures which I've outlined above, we provided an Estimate to tie to show the effect of these MUDFA delays. We reserved the matter of cost to after the time elements had been determined. The Estimate showed slippage to the completion dates as follows:

(a) Planned Sectional Completion Date for Section A: 187 Calendar Days (to 13 December 2010)

(b) Planned Sectional Completion Date for Section B: 185 Calendar Days (to 10 January 2010)

(c) Planned Sectional Completion Date for Section C: 251 Calendar Days (to 22 November 2011)

(d) Planned Sectional Completion Date for Section D: 257 Calendar Days (to 20 May 2012)

9.17 This programme included all mitigation measures which Infraco considered to be reasonable (and which complied with the contractual obligation to mitigate). This was a 9 month delay to the Programme, and only reflected delays to the MUDFA works. There were other delays associated with BDDI to IFC design Change etc, but we were hoping at least to make some headway.

9.18 Ultimately tie would not agree the impact on the programme of these MUDFA delays. We referred the matter to adjudication in May 2010. tie took many technical points in defence: that the Estimate we had submitted was inadequate; that we should have accelerated (that is by spending our own money to add additional resources to the job); that as well as being a Notified Departure, this was also a Compensation Event under a different clause of the Contract (clause 65) and that the method we had used to evaluate delay was wrong. The matter was referred to Robert Howie as Adjudicator and tie failed on all of these points. We were awarded an extension of time for Section A, although the Adjudicator found against us on one important issue - namely that he didn't agree with the way that we had approached the issue of what was a Designated Working Area ('DWA') (we had equated this with the intermediate sections in our Programme when the Adjudicator held that it was not as wide as this and that we should have looked instead at the DWA being the area of ground at any particular point which Infraco needed to do the work safely and reasonably economically). We didn't get as much as an extension of time as we had wanted, but this decision provided some very important points of principle, decided in Infraco's favour, which we

were able to take forward to prepare a subsequent claim for even more delays caused by the MUDFA Works.

9.19 Although the first adjudication was based on the MUDFA Revision 8 programme which we received in May 2009, in February 2010, and at our insistence, tie started to provide on a monthly basis, access maps showing where Infraco had access to areas of the site and forecasting when Infraco would get access to other areas of the site. However, even this information was misleading and differed from other information we received. By doing a cross-check against other documents, letters, Change Orders etc, we prepared another INTC (no. 536) which was submitted in January 2010, and followed that up with a further Estimate which this time included costs (of circa £40 million plus Euros 4 million) on 17 September 2010. This new Estimate approached matters entirely in line with the adjudicator's decision in the first adjudication on MUDFA ('MUDFA 1'). By September 2010, we were reporting a delay of almost 15 months to the final completion date (for Section D) and this was in respect of MUDFA delays alone. Even at this stage we were reporting against Programme Revision 1 as tie had steadfastly refused to acknowledge the delay we were reporting and had not agreed an updated Programme. We were reporting against a very out of date Programme. Again, tie refused to accept our Estimate and raised many of the points they had raised in the MUDFA 1 adjudication. It is worth putting some of this into context. By the time we went to mediation in March 2011, the MUDFA Works were still not complete in accordance with the MUDFA Programme. This was 34 months into the original 38 month Infraco Contract period. Even at that stage, tie could not provide any certainty as to the sequence and timing for completion of all of the MUDFA works. This had such a massive effect on our ability to progress the works which cannot be underestimated. tie's refusal to even acknowledge the effect this was having, and continually stating that we could mitigate any delay, was simply exacerbating an already very difficult situation.

9.20 tie's failure to acknowledge principles which had been already determined at adjudication, and its failure to properly administer the Contract (which I touch on in

greater detail below) was exemplified by the fact that the first time we received a formal response to our Estimate for these further delays, was in the mediation papers submitted by tie's lawyers in February 2011. tie suggested that we were entitled to not a single day of extension of time despite the massive delay to the MUDFA works and all of the problems this had clearly caused us. In addition, the grounds tie relied upon for not awarding us any time, were matters which had already been decided against them at adjudication. For example, tie's main argument was that the MUDFA delays were not a Notified Departure, but a compensation event and that we had applied for the extension of time under the wrong clause of the Contract. This was simply wrong - it flew in the face of the decision we had received at adjudication in relation to the operation of Notified Departures (clause 80) against Compensation Events (clause 65). This was a key issue between the parties and by this time, had been decided in Infraco's favour (in an adjudication before Lord Dervaird associated with the Murrayfield Underpass which I discuss below). Another complaint was that we had impacted the wrong Programme because we were showing delays against the contract Programme Revision 1 and not any updated programmes. We could not believe this - the reason there was no updated Programme showing actual progress was because tie had continually refused to accept any Programme which showed delay. Their whole approach in this document showed a complete disregard of points of principle which had already been decided in the MUDFA 1 adjudication before Robert Howie QC.

9.21 It should be remembered that although our approach in these two applications for an extension of time was to focus on the MUDFA delays, there were also other delays caused as a result of design changes and failures by tie to obtain third party approvals which they were contractually obliged to obtain. In the end, we never received an extension of time to the completion dates because the Infraco Contract was entirely renegotiated following the mediation.

10. DESIGN

10.1 **Design – Background to the Design in relation to the Contract:** The original concept of the Infraco Contract was to essentially be a “Build only” contract with the SDS design already completed in advance of the main construction works. It should be noted that there was always a requirement for the Infraco proposals (i.e. systems design) to be integrated into the SDS design; however, this was envisaged to have been carried out in parallel to the initial civil construction works. If the SDS design had been complete as planned, this would have allowed for the construction works to be accurately priced and for the contractor to carry a much greater proportion of the risk. However, quite early on it was clear that the SDS design would not be complete and the contract effectively became a “Design and Build” Contract, whereby Infraco was also to take on the obligation of completing the design and constructing the works. As an aside, but for completeness, I would surmise that the reason for the “Design and Build” Contract was to move the risk of design from the client to the Contractor. This is fairly standard in construction and is the most common way in which an Employer will seek to ensure that a contract is a fixed price, lump sum, with the obligation on the Contractor being very much to do all that is required to deliver what the Employer wants (as reflected in a document which is usually called the Employer's Requirements – as it is in the Infraco Contract). I would also note that subsequently the maintenance of the constructed works was bolted on to the Infraco Contract.

10.2 As I've noted above, tie had engaged SDS (Parsons Brinkerhoff) to develop the preliminary and detailed design and this design was based on the initial outline design carried out by others to inform the Parliamentary Process required to obtain the consent to construct the Edinburgh Tram Network. SDS was constrained by the Limits of Deviation that had been set by the initial designers and agreed to at the Parliamentary stage and included within the Tram Acts.

10.3 SDS was instructed by tie in 2006 to develop the design and the initial design programme showed the SDS design being completed prior to award of the Infraco Contract. This design clearly did not progress as initially programmed. I am unable to

comment on why this occurred; however, I would speculate that perhaps the design was delayed for the same reasons as occurred during the Infraco Contract and which I explain as follows.

10.4 Under the Infraco Contract (i.e. post novation of SDS), SDS would continue to develop a design based on the design and requirements included within the Tram Act. Once this was at a preliminary design stage, it would be issued for initial consultation to tie and the approval body. This was to obtain an early understanding of any requirements the approval bodies or third parties would have, such that these requirements could be incorporated into the detailed design and avoid unnecessary re-work of the detailed design. SDS would then develop the detailed design incorporating the necessary requirements. SDS would issue the detailed design for formal consultation and approval. Following formal approval, SDS would finalise the design and issue this for construction (i.e. 'Issued for Construction' ('IFC') status). The entire process from initial consultation to issue of the IFC design should take no more than 90 days. It was the obligation of tie to ensure third parties and approval bodies provided their comments in line with the design programme (with reference to Clause 10.1 of the Infraco Contract).

10.5 I have already described how we had to price against a baseline design (BDDI as of 25 November 2007) in order to attempt to "fix" an initial Contract Sum. However, the design had not been completed to a sufficient degree that would have allowed Infraco to accept the novation of the designer's contract from tie and all of the risk for the development and evolution of the remainder of the design. In addition a large proportion of the third party approvals required to deliver the Project had not been obtained by tie. Schedule Part 4 included for a number of Design related Pricing Assumptions some of which I reference further below. However, I note below an extract from Clause 3.4.1.2 of Schedule Part 4. It is clearly evident that this Contract was and never could be a "fixed price lump sum" Contract.

10.6 Clause 3.4.1.2 and 3.4.1.3 state that *"The Design prepared by the SDS Provider will not….be amended from the Base Date Design Information and Infraco Proposals as a*

consequence of any Third Party Agreement" or "*be amended from the drawings forming the Base Date Design Information as a consequence of the requirements of any Approval Body*."

10.7 **Design Status at May 2008**: At Contract signature, SDS were novated to Infraco and it was Infraco's obligation to both complete the design of the Project and carry out all construction works. However, this obligation is tied to Schedule Part 4 and the other risks that still remained with tie.

10.8 The Edinburgh Tram Acts (Line 1 and Line 2) were passed with a number of third party requirements to be addressed. There were brought about due to impacts on a third party due to the tram – for example, loss of land, loss of access etc. The third party agreements were the obligation of tie to obtain and then ensure the third party requirements were included for within the design.

10.9 However, at the time of Contract Award, third party input into the design had not been completed and the detail of Accommodation Works required to meet third party requirements had not been fully defined (e.g. Forth Ports, Network Rail etc.). Furthermore, a significant number of approvals were outstanding. tie were responsible for the approvals and also for the costs (and time) associated with changes to the design brought about by late issue of the third party requirements. Pricing Assumption 3.4.1 of Schedule Part 4 as quoted above clearly demonstrates that this risk sat with tie.

10.10 In addition, the design at Contract award was the original SDS design only and required the incorporation of the Infraco proposals. The Infraco proposals included a different trackform (Rheda), a new Overhead Line Equipment (OLE) system, different substation equipment, increased size of duct chambers, and different Depot equipment (tram wash, wheel lathe etc.).

10.11 In addition, the tram vehicle procured by tie through CAF differed from the assumed vehicle on which the SDS design was based. The CAF vehicle was a larger tram vehicle with a different and larger Dynamic Kinematic Envelope (DKE). The change in

DKE impacted the tram stop, roads and OLE location design. As a result of the late addition of CAF to the Infraco Consortium, the new vehicle was also an Infraco proposal. It is worth noting the Pricing Assumptions from Schedule Part 4 which dealt with these issues.

10.12 Pricing Assumption 7 states *"That the tram meets the DKE parameters mentioned in the track alignment criteria document (ULE90130-SW-SPN-00001 v2.1)"*. This means that the CAF tram DKE should be the same as the SDS "assumed tram" DKE. Pricing Assumption 9 states *"Except for the normal development and completion of designs….there shall be no changes to the design resulting from the impact of the kinematic envelope of the Trams on the civils design"*.

10.13 The process by which the Infraco Proposals would be integrated into the SDS design was through the Development Workshop Process.

10.14 The Development Workshop Process (defined within Schedule Part 23 of the Infraco Contract) involved holding workshops to identify misalignments. The workshops were to be held as soon as reasonably practicable and attended by all parties. At time of Contract award, it was known that misalignments existed between the SDS design and the Infraco Proposals. The workshops were held to determine the development of the Infraco Proposals and any consequential amendment to the design deliverables. A Misalignment Report would then be prepared and signed off by all parties identifying the misalignments, detailing the conclusions in respect of each matter and payments to be made to SDS in respect of the work to be carried out by SDS as a result of the conclusions set out in the report. The work to be carried out by SDS to address the misalignment was a Mandatory tie Change. tie should then have issued a tie Notice of Change requesting an Estimate from Infraco to carry out the necessary design works. Following receipt and agreement of the Estimate, tie would then issue the corresponding tie Change Order. tie also had the option to instruct the design in advance of agreement of the Estimate through the appropriate contractual mechanism (see Clause 10.18 of the Infraco Contract).

10.15 The ability of SDS to complete the design was being frustrated by a number of issues, the vast majority of which were out with the control of Infraco and SDS and were with tie (directly or at least contractually in terms of risk) to resolve. At a high level, the issues included CEC and Third Party Approvals, uninstructed design changes and conflicting requirements. I take the opportunity to highlight some of these issues in more detail below. I would add that of course there were some delays to the design programme due to late issue of design by the designers; however, these were much fewer in number and of less significance in comparison with the delays caused by the failure of tie.

10.16 **Approvals Process**: There were numerous delays in receiving third party (mainly CEC approval) for the design, this being a matter in respect of which tie has retained the risk in terms of the Infraco Contract (under Clause 10.1, it was tie's contractual obligation *"to procure that CEC reviews the Deliverables in accordance with Schedule Part 14"*). The approval delays were due to two main reasons. The first was the delay in receipt of comments or approvals for sections submitted to CEC. The second was that within comments received as part of the approval process or comments post approval, CEC sought changes that constituted scope changes and hence become Notified Departures. Infraco/SDS were entitled to recover costs to amend the design. The design change process then became "locked up" within the contractual change mechanism and impacted the completion of the design to IFC status, the corresponding approval and ultimately the construction works. This is before we even consider Infraco's entitlement to recover costs due to BDDI to IFC changes.

10.17 tie had no control or management of CEC Approvals Authorities with resultant continual scope changes (some that constituted Notified Departures) without any recognition of additional costs, programme impacts etc. Throughout the Project, there were also instances of CEC raising additional requirements post Approval that tie did not manage or control appropriately. This led to additional costs and delays to the Project.

10.18 tie's failure to programme manage the approval process meant that some design packages which were expected to be finished by May 2008 (prior to contract signature) remained outstanding beyond March 2011 through a lack of approval by third parties. Examples are contained within the early Design & Consent Control meetings dated April and May 2011 that followed Mediation.

10.19 The Infraco design (e.g. OLE design, track design etc.) was subject to the approval of tie under Schedule Part 14 - the contractual Design Review Process. This was envisaged as a tie-led, 4 week review process as set out at Section 2 of the Design Management Plan (Part C of Schedule Part 14 to the Infraco Contract). This required the design to be submitted to tie who would then review and either approve (Level A), approve with comments (Level B) or reject (Level C). However, tie also mismanaged this design Approvals Process. tie did not manage this process in accordance with the programme and comments were provided late or after the design had been issued at IFC status resulting in requests for further (at times “superficial”) changes that then become “tied up” in the contractual change process. Furthermore, tie attempted, contrary to the provisions of the Design Review Procedure, to “downgrade” the level of approval given to design deliverables, preventing work being progressed which had previously been approved by tie. tie’s role as a design reviewer and approver was halted following mediation. Schedule Part 14 was amended as part of the Settlement Agreement in order to streamline the Approvals Process.

10.20 **Conflicting Planning and Technical Requirements**: In many instances there were conflicting planning and technical requirements or conflicting requirements between the approval authority and a third party. These were outwith the control of Infraco or SDS to manage. I provide a couple of examples below to illustrate this issue.

10.21 Picardy Place: The design for Picardy Place was delayed due to conflicting requirements within CEC’s Technical and Planning departments. The Planning Department wanted to minimise the impact to the existing footway widths; however, the traffic modelling element (CEC Technical) could not be approved without taking some existing footway to provide additional junction capacity. tie failed to manage

CEC in this regard leading to delays in completion of this design package and this element of work was not approved or completed during the duration of the project. This is despite numerous meetings between the CEC and SDS as well as considerable money being spent by the project on numerous iterations of design.

10.22 Airport Canopy and Kiosk: This element of design could not be completed prior to mediation due to tie's failure to manage the approvals and third party requirements. At the time of Mediation, tie had still to issue to Infraco a clear and defined scope to allow the Airport Kiosk and Canopy design to be finalised. This had knock-on impacts to the completion of Gogarburn Retaining Wall W14C. At this time, tie had still to agree the interfaces between BAA and the Airport Tram Stop to allow the design to be completed. Only when a design change was instructed by tie on 16 February 2011 were the Airport Kiosk and Canopy and W14C deemed sufficiently acceptable to CEC Planning for them to recommend the design to the Planning Committee for Approval.

10.23 In addition to conflicting requirements, comments were often provided after approvals had been obtained as mentioned above. This constituted a contractual change as SDS were entitled to recovery of the costs to amend the design to reflect the late comments. However, tie rarely agreed the valid changes and when they did, this was generally after a protracted period that impacted the completion of the design and ultimately the construction works. This can be evidenced by review of the minutes of the Design Change Meeting held fortnightly between tie and Infraco. When compared with the Control meetings held post Mediation and the progress made therein, the lack of progress made within the Design Change Meetings is all the more startling.

10.24 **Betterment and Preferential Engineering**: CEC through its Technical and Planning Departments sought additional improvements to the city centre (new road pavements, higher specification materials etc.) that, in other projects, would not normally have formed part of the core tram works or tram budget. Usually, additional requirements to be carried out at the same time (for cost efficiencies) would be funded by separate budgets. Examples include high specification OLE poles and street lighting columns, setts, etc. Whilst Infraco did not have sight of the original tram budget, it would be

highly unlikely for it to have allowed for the high specification materials ultimately requested through the Planning Process. tie made few if any attempts to “reign in” or control CEC or seek to value engineer any of the high specification items.

10.25 For example, in regards to road pavement works, Infraco’s initial proposal for certain areas on-street was to only remove and replace the wearing course on the on-street sections [refer Pricing Assumption 12 of Schedule Part 4]. tie and CEC did not accept this and a design was developed for full depth reconstruction of all of the associated roads on which the tram tracks were to be installed. This resulted in contractual entitlement to Infraco to claim the additional costs and time due to the increase in scope. This was subsequently changed post mediation in a value engineering exercise and brought back to the concept behind Infraco’s initial proposal.

10.26 **Third Party Issues**: I would acknowledge that tie were frustrated by a number of third parties that contributed to the delays and additional costs. tie failed to acknowledge or recognise that this was their risk under the Infraco Contract and delays due to third party issues entitled Infraco to additional costs and/or time. For example:

10.27 Scottish Water: There are numerous examples of Scottish Water ('SW') impacting the project through either not providing approvals in line with the design programme, or altering their position on what the approval constituted. The difficult approach of SW during tram infrastructure meetings was, in the opinion of my team, due to the numerous unresolved MUDFA issues and tie’s unwillingness or inability to resolve these issues to the satisfaction of SW. I do have some sympathy with tie with regard to SW as even when CEC took over the management of the project, SW was the most difficult third party to deal with. It had been reported to me that at times it felt more like a Scottish Water Asset Improvement Project with the potential of a tram at the end of it rather than a tram project.

10.28 **BDDI to IFC**: The design changed substantially from BDDI due to the late issue of approvals and comments from the approval bodies (CEC, SW etc). The comments that were eventually provided with or prior to the approval required the design to be

substantially amended from that priced by Infraco in the majority of instances. As had been flagged to tie at the time by Infraco, the level of design at BDDI stage was lacking detail and there was considerable risk that in finalising the design, there would be significant additional costs. Once the IFC design was issued to Infraco, this needed to be reviewed against the BDDI design to understand the changes and assess whether the changes constituted a Notified Departure and the cost and time impact of these changes. Due to the size, scale and complexity of the project, this was a time consuming exercise.

10.29 **tie's involvement**: There are numerous examples of tie's failure to manage the elements of the design process which they had the obligation to manage under the Infraco Contract. I think part of this failure was a lack of understanding of their contractual obligations as well as their fundamental need to keep the design "open" in order to allow them to (incorrectly) maintain their positions that ""Infraco was not managing SDS" or "the Infraco works could not commence as the design was not complete" and deflect attention from the fact that they had insufficient funds to complete the entire project.

10.30 tie did not seek to drive any Value Engineering or Cost Engineering measures during the design process post novation. Rather they effectively sat back and pushed everything back to Infraco stating it was our obligation to secure all consents (whether it was core tram scope and regardless of the additional costs) and to construct what was consented to. An example of this is Roseburn Viaduct.

10.31 **Roseburn Viaduct**: This was a key element in the Programme and tie failed to manage the Approval process (as described above) to allow the completion of the design of these structures. This resulted in a delay of over 30 months. Infraco were unable to mitigate this delay by issuing an instruction to SDS to develop the design as it was not known what CEC and tie wanted or what they could afford. tie's approach was that this was for Infraco to resolve regardless of the costs or impact to the Programme.

10.32 The Roseburn Viaduct was a five span viaduct structure in the original SDS design. Infraco offered a Value Engineering ('VE') solution with a saving to tie of approximately £1.3 million during preferred bidder status. The VE Design encompassed 3 No. earth retaining walls, a small portal structure and one bridge over Roseburn Street. This solution was preferred by the Scottish Rugby Union ('SRU') and encompassed into their third party agreement. The solution was put forward by Infraco on the basis that tie obtained the saving provided that the revised design was approved and issued at IFC status to meet the Programme. Should the design not be approved and issued IFC by the required date, Infraco would construct the original design and tie would pay the additional £1.3 million.

10.33 Infraco instructed SDS to carry out the design in accordance with the VE proposal, following Contract award. However, during the initial consultation with CEC Planning, CEC Planning stated that they would not approve the VE design as it was not in line with their vision for Murrayfield. They advised that there was no point in issuing this for approval as it would be rejected. This was then raised to tie for them to step in to resolve. Despite assurances from tie that a second informal consultation would ensure the design could be taken forward, the result was essentially the same. It was in a third informal consultation that some progress was made. CEC Planning stated that cladding the structure and some other additional aesthetic measures would allow CEC Planning to potentially grant approval. CEC Structures had granted Technical Approval during this time for the VE structures.

10.34 This however was a departure from the agreed scope of the VE design and the additional measures proposed by CEC Planning resulted in considerable additional costs. The departure from the scope of the VE design constituted a Notified Departure. tie did not agree that this was a Notified Departure and no Change Order was issued to progress the design. Despite the efforts of Infraco and SDS to seek a compromise solution to resolve the issues, tie merely stated that this was an Infraco issue to resolve. It was in our opinion madness to finalise a design that whilst obtaining CEC Approval, would cost the project approximately an additional £0.5

million, particularly when it was clear that the project was already well over budget and with limited if any additional funds available at that time. The issue remained unresolved until after mediation.

10.35 After mediation the approach by CEC (in the role as Project Manager) was to develop the most cost effective solution. The matter was resolved expediently post mediation once tie had been removed from the discussions and highlights the different approaches as to how the project was managed by tie between May 2008 and March 2011 and CEC between March 2011 and project completion in May 2014.

10.36 **Design Completion:**

10.37 **Development Workshops**: tie departed from the Development Workshop process contained within the Contract. As described above, the Development Workshop process was necessary to identify misalignments between the SDS Design and the Infraco Proposals (i.e. trackform, overhead line equipment etc.) and amend (through a Mandatory tie Change under the Contract) the Deliverables in order to achieve an Integrated Design. Unfortunately, in the majority of cases, these Mandatory tie (Design) Changes were neither acknowledged nor instructed by tie. A Mandatory tie Change is contractually a deemed Change and is automatic. By rejecting the Infraco entitlement, tie effectively prevented Infraco from carrying out any of the changed works. This is due to the fact that by Clause 80.13 of the Contact, Infraco is not permitted to carry out any Works which constitute a Notified Departure until such time as Infraco's Estimate has been agreed or until the matter has been referred to the Dispute Resolution Procedure. I expand on this issue below.

10.38 In a lot of instances, tie did not issue the Mandatory tie Change Orders for all civils design changes required as a result of the Development Workshops. Of the nine items identified through the Development Workshop process as requiring a civil redesign, tie had agreed to 1 No item only at the time of Mediation. Infraco decided to progress the design in 2010 at Infraco's cost and risk for the benefit of the Project.

10.39 For example, an Integrated Substation design incorporating Systems design was required. Infraco requested instruction from tie on 28 September 2009 following the Development Workshop process. As at Mediation (March 2011), no instruction had been issued by tie (18 month delay). Infraco instructed SDS (at Infraco cost and risk) to commence work on this change on 15 January 2010 to mitigate further delay.

10.40 **Civil Design Completion**: Infraco and SDS attempted to progress the completion of the design to mitigate the delay to the programme and ensure that once the other issues with tie were resolved (i.e. MUDFA, BDDI to IFC changes etc.), the construction works could commence as soon as practicable. Infraco and SDS engaged in a separate agreement which entailed SDS being paid additional monies to progress the design in the absence of valid Change Orders and payment from tie. The benefit that this process would have provided, was ultimately frustrated by tie due to the lack of resolution of third party issues.

10.41 **Design Assurance Statements**: Whilst perhaps not the biggest of issues in comparison to others detailed within my statement, I believe it is necessary to mention Design Assurance Statements (DASs). These were requested by tie (pre-novation of SDS) when tie realised that it could not review the design in a timeframe that would meet the design programme. The DAS was created as a statement of assurance from the Designer that the final design met the Employer's Requirements, the required standards etc. It was not possible to provide a completed DAS until the design was complete (including the incorporation of all design changes). However, tie continually tried to hold it against Infraco that the design was not fully integrated or assured as the DASs had not been issued.

10.42 Whilst not a contractual requirement, Infraco and SDS issued draft DASs to tie to demonstrate as much as possible that the design was as integrated and assured as it could be notwithstanding the significant amount of design changes to be instructed by tie.

10.43 **Infraco Relationship with SDS**: Whilst there were a number of issues between Infraco and SDS (as would be expected in a project of this size, scale and complexity), there were no disputes between the parties. SDS always managed to provide sufficient design information so as not to delay the Programme.

10.44 **Design Changes**: between the novation of SDS in May 2008 and March 2011, over 300 design changes were raised by or issued to the SDS Provider. Whilst some changes were raised by Infraco, the majority of the changes were raised to address additional CEC comments, new third party requirements or changes by tie or Transdev (tie's tram operator). This demonstrates the lack of control of the overall project by tie and their inability to manage CEC and other Third Parties in a timely manner in line with the Programme. The design changes impacted the completion of the design to IFC status and in some instances directly prevented the commencement of the construction works.

11. THE OPERATION OF CLAUSE 80

11.1 As noted above, tie and Infraco had a very different view and understanding of the operation of the Infraco Contract. To summarise that difference, Infraco's position was that where any of the Pricing Assumptions were found not to reflect reality (e.g. the design did change between BDDI and IFC in any of the stated ways (design principle, shape, form and/or specification) or the MUDFA Works were not complete in accordance with the programming assumptions), then a Notified Departure occurred and clause 80 of the Infraco Contract applied. This is clear from the wording of Schedule Part 4 and from the wording of clause 80. Under Schedule Part 4, a Notified Departure is defined as being "*where now or at any time the facts and circumstances differ in any way from the Base Case Assumptions save to the extent caused by a breach of contract by the Infraco, an Infraco Change or a Change in Law".* In turn Base Case Assumptions means *"the Base Date Design Information, the Base Tram Information, the Pricing Assumptions and the Specified Exclusions.*"

11.2 Clause 80.24 under the heading 'Notified Departures' states that:

"Where pursuant to paragraph 3.5 of Schedule Part 4 (Pricing) or pursuant to Clause 14 (tie Obligations), tie is deemed to have issued a tie Notice of Change as a result of the occurrence of a Notified Departure, the provisions of this Clause 80 (tie changes) other than Clause 80.19 shall apply".

11.3 Clause 80 is titled tie Changes and sets out the procedure to be followed in respect of tie Changes. This includes the duty on Infraco to submit Estimates within 18 Business Days of receiving a tie Notice of Change (deemed to have been issued on the date that either party gives notice to the other of the occurrence of a Notified Departure - clause 3.5 of Schedule Part 4). We could apply for longer to submit an Estimate where it was considered to be too complex to submit within 18 days. Clause 80 also sets out the detail of what should be included within an Estimate including cost and time implications as well as proposals about how we could mitigate the impact of the tie

Change. The Clause goes on to set out in detail how Estimates are to be agreed between the parties and what is to happen where agreement cannot be reached etc.

11.4 The crucial part of Clause 80 as far as BCUK were concerned was clause 80.13 which provides as follows:

"80.13 Subject to Clause 80.15, as soon as reasonably practicable after the contents of the Estimate have been agreed tie may:

80.13.1 issue a tie Change Order to Infraco, or

80.13.2 except where the Estimate relates to a Mandatory tie Change, withdraw the tie Notice of Change, in which case Infraco shall be entitled to claim the reasonable additional costs incurred by the Infraco in complying with this Clause 80 in relation to that tie Notice of Change including the cost of any abortive works where tie has instructed Infraco to commence works prior to the agreement of the Estimate.

Subject to Clause 80.15, for the avoidance of doubt, ***the Infraco shall not commence work in respect of a tie Change until instructed through receipt of a tie Change Order*** *unless otherwise directed by tie."*

11.5 I have highlighted the key words in bold above. In our view (and Lord Dervaird in his August 2010 Decision), this prohibited us from proceeding with Works which were the subject of a tie Change until we had received a tie Change Order from tie.

11.6 In contrast, tie's position was that matters such as delay to the MUDFA Works and design changes from BDDI to IFC were Compensation Events and could be dealt with by Clause 65 of the Contract. Alternatively they argued that Infraco were in breach of contract by failing to submit Estimates in time and to the correct standard. This was a big area of disagreement and one which was already ongoing by the time I joined the project in March 2009.

11.7 What cannot be overlooked on this Contract was the sheer volume of change that we encountered from day 1. From very early on, and before my arrival, the team were dealing with a huge volume of Notified Departures, which covered both MUDFA delays and a huge amount of (BDDI to IFC) design change. Each of these Notified Departures required to be progressed in accordance with the clauses of Clause 80 which I've identified above. It was impossible for the on-site team to progress this volume of change in accordance with the tight timescales which were contained within clause 80 (18 days for the Estimate), or if we did produce Estimates within this time period, to make them as fully encompassing as the clause requires. As a result of this, the team had repeatedly sought agreement from tie (in accordance with the provisions of clause 80.3) that we would get longer to submit Estimates. tie generally refused these requests. They repeatedly made complaints about Estimates lacking detail or being late and how this was hampering progress of the project. There was little or no recognition of the sheer volume of change we were having to deal with or the fact that some estimates first required the design to be completed that was also subject to the change mechanism and also required SDS to submit an estimate (within 18 days) and receive instruction prior to commencing the design works.

11.8 One of the very first letters that I signed dated 3 March 2009, deals with this specific issue. This letter was issued in response to a letter from Steven Bell dated 12 February 2009 [PD CORR 145]. In response to criticism about Infraco's approach to Estimates, we stated the following:

"Your description of how BSC are dealing with change estimates is inaccurate and misleading. The extraordinary number and magnitude of changes being processed clearly demonstrates both (the) incomplete state of design and the impact upon our works of issues you should have already resolved through your enabling works contractor.

BSC are required under the contract to notify you of changes, and are doing so as quickly as possible. It is usually impossible to provide estimates within the required period because the level of detail required is considerable. We are making significant

efforts to inform you when estimates will be provided: for you to claim that you receive no coherent explanation of why estimates are subject to delay is simply disingenuous..."

11.9 It is not usually my approach to write letters in such terms or to use such accusatory language. However, this is a good example of the tone of all of our correspondence with tie. We were continually being accused of 'bad behaviour' and refusing to get on with what we were there to do. tie used the media continually to this effect as well and we were restricted by the Infraco Contract from being able properly to answer these accusations. However tie's accusations were unfounded. They would not accept how the Infraco Contract was intended to work and so everything became a battle.

11.10 The letter that I sent to tie on 3 March 2009, also went on to deal with the specific issue of whether we could commence work which was subject to a Notified Departure, without a tie Change Order or without the matter having been referred to the dispute resolution procedure. On this issue the letter states:

"You note in particular BSC's "stated position of refusing to commence work directly on activities affected by notified changes." BSC's true position is strictly in accordance with the contract, which clearly describes the process for managing change. We have repeatedly attempted to agree alternative methods with you for progressing urgent works in key areas on an acceptable reimbursement basis, but are unable to obtain your agreement to interim procedures that fairly compensate us. To be absolutely clear, we are not refusing to work, even if there is no contractual obligation to do so, but simply request an appropriate instruction."

11.11 The reference in this letter to repeated attempts to agree alternative methods for progressing urgent works, references an acknowledgement by both parties that the processes contained within clause 80 were slowing down our ability to proceed with works. However, despite this, we did proceed with works which were the subject of Notified Departures, even where there was no agreement of the Estimate, and no tie Change Order. Examples include large portions of the off-street works (where we

were less affected by the continued presence of the MUDFA Contractor) and the Haymarket Yards.

11.12 In the letter to Pinsent Masons of 18 June 2015 which contained questions which the Inquiry would like to put to me, question 12 was in the following terms:

"Why did Bilfinger insist on all variations being estimated and agreed in advance of work starting? In the event of disputes on one particular aspect of the project why was work not moved elsewhere pending resolution of the dispute?"

11.13 I do not agree with the wording of this question at all which misunderstands the mechanisms in the Infraco Contract and which implies that we refused to do work where the value of 'variations' was not agreed. First of all, the Infraco Contract does not recognise 'variations' in this context. There are Notified Departures to be dealt with under Clause 80 and also Compensation Events (clause 65). In terms of Notified Departures, these can only be dealt with under Clause 80 and by virtue of Clause 80.13, we were precluded from proceeding with work which was the subject of a Notified Departure (and therefore a Mandatory tie Change) where a tie Change Order had not been issued or the matter had not been referred to the dispute resolution procedure. For the duration of the Project until Mediation, this was a key issue of dispute between us and tie repeatedly refused to recognise what the Infraco Contract said. We were ultimately proven to be correct in our interpretation of how Notified Departures were to be dealt with and I refer to this below.

11.14 Along the way we had tried to agree different mechanisms with tie which would allow urgent/ priority works to proceed, even though there was no agreement on outstanding Estimates in respect of Notified Departures. Before I arrived on site, tie had proposed a Protocol which would allow them to instruct works which they deemed to be 'priority works'. This would have allowed tie to instruct works to proceed immediately, at the same time as a process got underway to agree cost and time implications.

11.15 As a company, we could not agree to what was proposed by tie. This wasn't done out of obstinacy or a hope on the part of BCUK of holding tie to ransom somehow (which

is what tie tried to portray in the press). Rather, it was because there was little belief that we could ever agree Estimates with tie where they fundamentally refused to acknowledge the importance of the Pricing Assumptions under Schedule Part 4. I understood from discussing matters with my colleagues and reviewing the relevant correspondence (including our letter of 4 November 2008 - 25.1.201/CHBB/837) that we wanted at least the reassurance of a cap on the level of work which could be instructed in this way, and a commitment by tie to respond to the outstanding Estimates which they were then sitting on. tie's Protocol had also suggested that they could 'instruct' works to be carried out under Clause 80.13, and we did not agree with that interpretation. However, it is simply incorrect to say that Infraco were not continuing with works without instructions. We did so and even looking at the letter I've referred to of 4 November 2008, this is clear. The penultimate paragraph of that letter provides:

"We have, notwithstanding this uncertainty (about the approach to clause 80.13 being proposed by tie) and following assurances given at the aforementioned Gallagher/Walker/Flynn meeting, continued with the works for which a relevant valid instruction has not yet been received. However, we are not willing to allow this situation to continue. It is therefore crucial that you and we reach urgent agreement on a mechanism for urgent instructed change that does not rely on clause 80.13...."

11.16 We never managed to reach agreement with tie on this. We continued with what were called the 'goodwill works'. tie never changed their opinion on how the Infraco Contract was to be interpreted on key issues. Ultimately, as tie got more and more entrenched in their position, we took the decision to cease good will works but this was not until September 2010 (I refer to this further below).

11.17 It should be noted that there was always a contractual remedy for tie if it wished to have Infraco proceed with works which it considered to be urgent. In these circumstances, it was open to tie to refer a disputed Estimate to the Dispute Resolution Procedure, in which case it could instruct Infraco to progress with the works which were subject to Change (including which were considered to be a Notified

Departure) with Infraco being entitled to be paid its 'demonstrable cost' for such work (this is with reference to Clauses 80.15 and 80.16 of the Contract). It was always therefore open to tie to use this mechanism to have Infraco proceed with works where Estimates were not agreed.

11.18 **Murrayfield Underpass Adjudication (INTC 109)**

11.19 Ultimately, we took the decision in mid 2010 to refer this whole issue to adjudication. We did this in the hope of unlocking this particular dispute and in the belief that we were right in our interpretation of the Infraco Contract.

11.20 This dispute referred to the Murrayfield Underpass which was a reinforced concrete structure at Murrayfield. tie had been notified that a Notified Departure had occurred because the Design shown on the Issued for Construction drawings differed from the Design shown on the Base Date Design Information. This was notified by way of INTC 109 in September 2008. The cost of this tie Change was estimated by Infraco at £134,296.71. On this issue, tie accepted that a Notified Departure occurred, but disputed this value. However, tie had then issued us with a letter on 19 March 2010, instructing us to proceed with these works under Clause 80.13 of the Infraco Contract. We believed that this was an instruction which tie were not permitted to give us, and moreover, that we precluded from proceeding with these works until the Estimate had been agreed.

11.21 This was referred to Lord Dervaird, one of the adjudicators named in the Contract. He issued his decision on 7 August 2010 and found entirely in our favour. In short, what he determined was that in the absence of an agreed Estimate, Infraco is not obliged or permitted to commence or carry out works associated with a tie Change (Mandatory or otherwise). I expand on the key principles established by this adjudication in Appendix 1 to my statement.

11.22 Unfortunately, and as with the majority of adjudication decisions issued in our favour, tie refused to accept what this adjudication decision determined. They continually came up with arguments which ran contrary to this decision and continually insisted

that we must proceed with the Works, whether or not they were connected to an Estimate which had not yet been agreed by them. This continued right up until mediation. It was also typical of tie's whole approach to any adjudication decision which went against it (as they mainly did on all points of principle) – tie simply stuck to its position and the parties became more and more entrenched.

11.23 tie issued a letter to us on 10 August 2010 as a result of Lord Dervaird's decision. This letter intimated that tie believed they could still rely upon clause 34.1 which provides that:

'The Infraco shall construct and complete the Infraco Works in strict accordance with this Agreement and shall comply with and adhere strictly to tie and tie's Representative's instructions on any matter connected therewith (whether mentioned in this Agreement or not) provided that such instructions are given in accordance with the terms of this Agreement and will not cause Infraco to be in breach of this Agreement…"

11.24 tie's position was that where it disputed a Notified Departure had occurred and either there was an Estimate (provided by Infraco) or there was not, it was entitled to rely upon Clause 34.2. We did not consider that to be correct and it was not in accordance with Lord Dervaird's decision. He makes the point that the question here is whether an instruction given by tie under Clause 34.1 would 'be in accordance with this Agreement'. He concluded (paragraph 21 (v)) that it would not i.e. that parties were directed to clause 80 where there was a Notified Departure and that in terms of clause 80.13, tie could only issue an instruction where an Estimate had been agreed (the last part of 80.13) or where Clause 80.15 applied. tie's interpretation of Lord Dervaird's decision was wrong.

11.25 I am concerned that this question posed by the ETI seems to indicate a misunderstanding of the Contract [this is question 12 of the ETI letter to Pinsent Masons dated 18 June 2015]. If Clause 80.13 and Lord Dervaird's decision is properly examined, it should be clear that we were correct that as far as Notified Departures

were concerned (which is what we are talking about, rather than 'Variations'). We were not obliged to proceed with works unless there was an agreed Estimate and tie had issued a tie Change Order (or an order, where applicable, under Clause 80.15).

11.26 In terms of the second part of this question, where works were not held up by tie's refusal to accept what the Contract said and to apply its provisions correctly, we did proceed with works. What must be understood however is that the whole site was generally held up by delays caused by a lack of agreement to critical changes, late completion of design and incomplete MUDFA works. There were large stretches where there was very little that we could do at all. In advance of the mediation which I refer to below, two drawings were produced which showed the extent to which the whole site was affected by INTCs which were either not agreed, or had been specifically rejected. These drawings [ULE90130-SW-DRG-00803 and 804] were shown to tie, although not produced with the mediation documents. They show that there were only very small sections of the works which were not affected by non-agreed INTCs. I would dispute that we didn't try to mitigate delays where we could by proceeding with work that we could do.

12. ADJUDICATIONS AND THE DISPUTE RESOLUTION MECHANISM

12.1 There were 12 adjudications in total between the Infraco and tie during the Project. There were other disputes which didn't quite make it to adjudication stage. As noted, there was also an adjudication on Princes Street which never reached the stage of a decision being reached by the Adjudicator, because it settled after the mediation in March 2011.

12.2 As I mentioned above, we had discussed early on with tie that it would be good to get clarity on the interpretation of the Infraco Contract and resolve the disputes between the Parties, by referring certain key and important issues to adjudication. By way of explanation, the dispute resolution procedures in the Infraco Contract were contained within Schedule Part 9 to the Infraco Contract. This provided that where a dispute had arisen, the Parties were to follow a staged process to try and resolve the issue. This staged process included:

12.2.1 a meeting between tie and Infraco's Representatives to be held within 3 business days of either party notifying the other of a dispute;

12.2.2 if that meeting either didn't take place or didn't resolve matters, the parties were to serve a written Position Paper on each other within 7 days of the notification of the dispute. That Position Paper was to state in reasonable detail that party's position and what it was looking for, from the dispute, as well as commenting on the other party's position;

12.2.3 Once the Position Papers had been exchanged, the Chief Executives of Infraco and tie were to meet to seek to resolve the dispute in good faith;

12.2.4 If that didn't work and there was no settlement of the dispute within 20 business days of the original notification of the dispute, then the Chief Executives of both companies had a further 5 days to agree how to resolve the dispute. That could be by

(a) mediation as set out in Schedule Part 9

(b) adjudication again as per Schedule Part 9 procedures; or

(c) litigation in the Court of Session

12.2.5 If they couldn't agree how to resolve the dispute, then mediation became mandatory, before the party wishing to raise the dispute could refer it to adjudication. There were many mediations which took place on issues which I have discussed elsewhere in this Statement, including the dispute we had in relation to the sums due to us under the PSSA, MUDFA 1 etc.

12.3 Normally, we would have welcomed a stepped dispute resolution procedure like this because if parties can properly air their differences, there is always a possibility that the dispute can be resolved without having to resort to formal adjudication or court proceedings. However, here, because relations were so bad, there was never any agreement at meetings, nor was there even an agreement of which method of dispute resolution the parties wished to adopt to resolve the issue. It is perhaps understandable why this came to be the case. As I've stated throughout this statement, tie refused to accept what the Infraco Contract said, and in particular refused to accept the risk allocation as per Schedule Part 4 of the Infraco Contract. This was a point of principle and a point of contractual interpretation, and not something where concessions could be made in a meeting between the Chief Executives.

12.4 The result of all of this was that the proposed meetings were merely perfunctory in order to get to the stage of mediation. The mediations were almost exclusively before Eileen Carroll who I mentioned above and who was the mediator in the mediations which took place in summer 2009. Again and unfortunately, these mediations were a waste of time because tie refused to concede that our interpretation of the Infraco Contract was correct and we could not compromise on our clear contractual entitlements. The mediations which took place never lasted the whole day they were set down for and were really only held in order to allow the party wishing to refer the dispute to adjudication to do so. The adjudications themselves were 28 day

processes, which could be extended by up to another 14 days with the approval of the party referring the dispute or longer with the approval of both parties. The adjudicators were obliged to issue reasons for their Decisions.

12.5 In Appendix 1 to this Witness Statement, I have inserted my understanding of the importance of these adjudication decisions. On major points of principle, some of which I've already covered above, the decisions without exception were in favour of Infraco. It was very frustrating for us that right up until mediation, tie refused to accept the validity of these Decisions and refused to implement them, both on an individual basis and by refusing to accept that they set broader precedents for how other disputes would be determined. Had they done so, I believe that this would have unlocked the ongoing battles and disputes, and should also have led to tie identifying and confirming to CEC at a much earlier stage, that it did not have sufficient funding to complete the whole of the planned Edinburgh Trams Network.

13. **CORRESPONDENCE**

13.1 From around early 2010 until mediation, tie ramped up the amount of correspondence we received on a daily basis. On occasion we were receiving up to 50 letters a day. These letters continuously made unsubstantiated allegations that we were failing to perform and failing to comply with our contractual obligations. It took an enormous amount of time, effort and manpower to respond to this correspondence. Our commercial team, led by Kevin Russell who reported to me, took on board the task of responding to these letters. At the heart of almost all of it was the same disagreement about the way in which the Infraco Contract was intended to operate. These letters dealt with a huge number of issues, many of which I refer to elsewhere in this statement.

13.2 For example, on 1 April 2010, we received a 10 page letter from tie [INF CORR 4648] which covered a large number of issues and which was intended to provide a response to letters which the Infraco had sent to tie which were listed at the end of the letter. I've read this chain of letters to remind myself of the issues which were being discussed at that time. The letters which we were receiving from tie showed fundamental disagreements on how the Infraco Contract was intended to operate. The sheer volume of correspondence which we were receiving from tie at this time made it a real challenge administratively to respond to everything appropriately. For example, in our response to this 10 page letter [letter 25.1.201/KDR/5689 dated 21 May 2010], I made reference to the fact that we were having to respond to over 100 letters received from tie in the space of one week alone.

13.3 The issues covered in this chain of letters included the following:

13.3.1 The complete inability to agree a workable Construction Programme with tie. I mention above the fact that we worked with tie to try to agree a revised Programme for the Works but it was impossible to get any agreement to this with tie because of their failure to accept the delay which we were reporting. tie's position remained throughout that we could do more to mitigate delays

or that our programmes were in some way inadequate. We refuted this. In reality, we believed that the real reason tie would not accept a revised Programme was that they would then have to report to CEC and others that the Project was at least 2 years in delay (for reasons which were not Infraco's responsibility);

13.3.2 Continuous disagreement about the operation of Clauses 65 and 80 and their interaction. As noted above, Infraco was subsequently found to be correct in its interpretation of the Infraco Contract on these key issues;

13.3.3 Following on from this, tie continually insisting that we were obliged to comply with instructions they issued to carry out works, either under Clause 34, clause 80.15, 80.16 or based on other interpretations of clause 80.13. Again, tie were subsequently held to be wrong in their interpretation of the Infraco Contract (with reference to the Lord Dervaird adjudication decision on Murrayfield Underpass);

13.3.4 tie continually alleging that Infraco's interpretation of Clauses 65 and 80 made 'no commercial sense';

13.3.5 Continuous allegations that Infraco would have to prove that delay had not been caused by its own mismanagement of the SDS Designer;

13.3.6 Allegations that one of the reasons tie could not issue the tie Change Orders that were required by Clause 80.13 was because Infraco was inflating the amount it was looking for as contained within Estimates;

13.3.7 tie stating that it could not issue tie Change Orders because of the absence of competent Estimates submitted by Infraco. We disputed this strongly and I have made reference to this ongoing debate on Estimates (which again was ultimately determined in Infraco's favour). Notwithstanding this, it is rather obvious that if tie rejected the principle of a change having occurred, then the subsequent matter of an Estimate is irrelevant;

13.3.8 By this point in time, tie was repeatedly referring to Infraco as a 'delinquent contractor' and was accusing us of responding to their letters in 'abusive and inflammatory language'. I accept that the wording of the letters going back and forth between tie and Infraco was more aggressive that I am used to using in contracts of this nature. However, our need to respond robustly was driven by the very aggressive position adopted by tie and its complete refusal to accept what the Infraco Contract said.

13.4 I believe that a letter which I sent to tie on 1 March 2010 [25.1.201/KDR/4836] accurately sums up why we were obliged to enter into correspondence of this nature, and expresses the frustrations we were experiencing:

"It would appear from this letter [reference to tie's letter of 19 February 2010 [INF CORR 4032] which was part of this chain] *and from others received by us over the past few days, that there has been a deliberate decision by tie to focus on areas where it is alleged that Infraco is failing in its contractual obligations. The continued focus on Estimates is one such area. We are of course acutely aware of our obligations to assist you with audits and to assist you in complying with your own statutory duties, and will continue to oblige in this regard. However, if this project is to move forward in any meaningful way, there must be a corresponding acknowledgement by tie of its contractual obligations. This includes an acknowledgement that this contract (which was negotiated at arms length by large organisations over many months and with considerable legal advice) is clear it its terms. tie cannot now complain that certain conditions are not to its liking and therefore de facto seek to set them aside. tie must accept that this is not a fixed price contract and that the convenanted pre-requests for the execution of the Works, have not been fulfilled. Once this is acknowledged, we would hope that the project can be administered in such a manner as to achieve real and substantial progress by permitting Infraco to comply with its obligations under the contract."*

13.5 Unfortunately and as narrated elsewhere, tie never got to the stage of accepting what the Infraco Contract stated, nor did it acknowledge the contractual risks stated therein.

It was another year (mediation in March 2011) before we seemed to get any breakthrough at all in terms of tie/ CEC finally accepting that we had been in the right in terms of our stated position on the Infraco Contract throughout. It was also a few days after I sent this letter, that Richard Walker wrote to CEC on behalf of the Infraco, again expressing our frustration (letter dated 8 March 201 referred to in section 14 of this statement). I refer to this letter as it is a good summary of all of the issues which were ongoing at that time.

14. LETTER TO THE CITY OF EDINBURGH COUNCIL MARCH 2010

14.1 One step which we did take was that the Infraco consortium, all three members, wrote to the City of Edinburgh Council in a letter of 8 March 2010. This letter is referred to in the document which we prepared in advance of the mediation in March 2011. CEC was the Financial Guarantor to the Project. The reason for sending this letter, at that point in time, was to try and go above tie who we felt were not taking a pragmatic approach to the Project at all, and who we suspected were not properly reporting matters to CEC.

14.2 The letter references the following issues:

14.2.1 the ongoing MUDFA delays which were having a significant impact on our works and where tie continued to be unable to tell us when the MUDFA works would actually be complete;

14.2.2 tie's intransigence and its refusal to address the realities of where we found ourselves in a constructive manner;

14.2.3 reference to tie's misleading correspondence which made serious accusations and representations of fact which we believed were demonstrably incorrect;

14.2.4 that tie was wrong to continue to insist that it had signed a lump sum, fully fixed price contract with the consortium as evidenced by the pricing assumptions which formed an integral part of the contract. We stated that tie had to accept the risks enshrined in Schedule Part 4 and that having done so, tie either needed to make arrangements to have appropriate funds made available or review the project scope with a view to agreeing a reduced scope which could be performed within the available budget;

14.2.5 details of the points of principle which had been established by the adjudication decisions which had taken place by that time and which were entirely decided in Infraco's favour on the points of principle before the

adjudicators (Gogarburn, Carrick Knowe and Russell Road Retaining Wall) and the fact that tie refused to acknowledge what those rulings meant to the Project;

14.2.6 the fact that tie had accused Infraco of 'delinquent behaviour' for not proceeding with works which were subject to a change without prior agreement of tie and the fact that Infraco was only complying with the Infraco Contract in this regard which tie failed to acknowledge;

14.2.7 unfounded and publicly made accusations of tie in relation to the alleged inflation of Infraco's cost estimates (with specific reference to the Russell Road Retaining Wall 4 Dispute which I refer to below);

14.2.8 the reason why Schedule Part 4 existed and the agreed risk allocation in the Infraco Contract;

14.2.9 the fact that Infraco had proposed an On-Street agreement for the remainder of the On-Street Works (similar to the Princes Street Supplemental Agreement which I discuss above) but tie unilaterally terminated those discussions;

14.2.10 We also informed CEC I that the Project was at least two years in delay and that we estimated additional costs in excess of £100 million;

14.2.11 We referenced the fact that we were concerned that tie was considering terminating the Infraco Contract and that we did not believe that there was a legal basis for doing so;

14.3 This letter was sent by Richard Walker but was prepared by the wider team for BCUK and I would have reviewed and approved it before it was sent. It is a very good and accurate record of the issues ongoing at that time and I think expresses well the frustration we felt with tie. The conclusion of this letter was however that we were committed to finding a consensual approach with all project parties which would enable the project to proceed with a defined scope and within an appropriate and

available budget. It is very unfortunate, I believe, that CEC did not take the opportunity at this time to discuss these matters with us. Tom Aitchison, the Chief Executive of CEC at that time, sent a letter to Richard Walker on 21 April 2010 which stated that he did not agree with the statements of fact in Richard's letter of 8 March, that he was extremely concerned about lack of progress on the project but that the issues would need to be resolved between the principal contracting parties. I believe that this was a missed opportunity for CEC to step in and resolve the mess that the Project was in by this time – this only happened once Sue Bruce joined CEC as Chief Executive in place of Tom Aitchison.

15. **USE OF THE MEDIA BY TIE**

15.1 Clearly we had some very substantial disagreements with tie on many points of principle including the interpretation of the Infraco Contract.

15.2 Clause 101 of the Infraco Contract deals with Confidential Information and provides obligations on both parties (tie and Infraco) to treat all Confidential Information belonging to the other Party as confidential and to safeguard it accordingly. Confidential Information concerned information which had been designated as confidential by either party, including matters such as commercially sensitive information and intellectual property rights.

15.3 Clause 101.14 provides that *"Any public relations material, press releases, public presentations or conference engagements in relation to this Agreement planned by the Infraco requires tie's prior approval"*.

15.4 There is no such similar clause requiring Infraco's agreement to any such public relations material or activities planned by tie. This was often referred to in the press as a 'gagging clause' which prevented Infraco from telling its side of the story in the constant media campaign launched by tie and its individual members, which was aimed at portraying BCUK in a very bad light in the Scottish press and beyond.

15.5 Throughout the Project, tie sought to portray us as the party who were creating all of the delays and the problems and who were wrongfully refusing to carry out works and holding the Project to ransom (usually expressed as demanding increased payment before we would start any work). We felt we were unable to respond to this to explain the truth – that we were only doing as expressly set out in the Infraco Contract by seeking agreement of Estimates and the issue of a tie Change Order before we were permitted to start work which was subject to a Notified Departure. This came to a head when David Mackay, the Chairman of tie, resigned from his post in November 2010. In an article in the Scotsman newspaper on 3 November, Mr Mackay described BCUK as a *"delinquent contractor who scented a victim, who probably greatly under-bid and who would use the contract to make life extremely difficult for the city."* This resulted in

BCUK for the first time feeling the need to respond to what was arguably a defamatory statement. A decision was made by the Board of Directors of Bilfinger to commence legal proceedings against David Mackay personally, in respect of this defamatory statement. Although this action was withdrawn for commercial reasons and to prevent escalation of the problems faced by the Project, it is another example of how poor our relationship with tie was by this time.

15.6 At other times, rather than accepting that they had lost adjudications, tie used the press to state that it had been necessary to take the dispute to adjudication in order to push back on the exorbitant amounts of money which the Infraco were looking for, for individual changes. One such example is in relation to the Russell Road Retaining Wall Two adjudication (which I have summarised in Appendix 1 to my statement). tie were entirely unsuccessful in this adjudication, but still sought to portray this as a 'victory' of sorts, claiming that the Infraco had been looking for an additional £5 million and had only been found entitled to payment of an additional £1.4 million. This was a complete misrepresentation of the truth. The total value of the Notified Departure (which including for removing contaminated materials and other matters) was in the region of £5 million. However, the whole Notified Departure was not referred to adjudication. The section that we did refer was only to do with the direct costs of the changes to the piles and foundations. Our claim was for £1.8 million and we were awarded £1.4 million in relation to that claim - a substantial win. For tie to claim this as a victory and that they were “protecting the public purse” when compared with the delay and legal costs to achieve a determination is frankly absurd.

16. **FURTHER DISRUPTIVE TACTICS BY TIE IN THE PERIOD LEADING UP TO MEDIATION IN MARCH 2011**

16.1 Rather than focus their energies on managing the delivery of the Project and finding a way through all of the issues and disagreements, tie continually sought ways in which to bring pressure on Infraco, with a view to forcing us to accept a compromise in relation to our contractual position and contractual entitlements. We had rarely seen such aggressive behaviour from an Employer on any project we had worked on worldwide.

16.2 tie's approach was reflected in a number of campaigns to bring pressure on us. These included the following:

16.3 **tie's use of Audits**

16.3.1 In my opinion, tie sought to abuse the audit process provided for in the Infraco Contract, for the purpose of trying to find evidence which it could use against Infraco.

16.3.2 Clause 104 of the Infraco Contract is headed 'Information and Audit Access'. Clause 104.2 provides as follows:

'The items referred to in Clause 104.1 (all Deliverables, and invoices, timesheets to support claims for reimbursement....) shall be kept in good order and in such form so as to be capable of audit (including by electronic means) by tie's Representative, tie, CEC, tie's auditors or CEC's auditors or any other third party. The Infraco shall make such records available for inspection by or on behalf of tie's Representatives, tie, CEC, tie's auditors or CEC's auditors or any other third party at all reasonable times during normal working hours on not less than one Business Day's notice...."

16.3.3 The frequency of such audits was to be reasonable. Clause 104.2 also stated:

"In addition to the requirements of Clause 104.1 and 104.2, the Infraco shall provide to tie's Representative, tie, CEC, tie's auditors, CEC's auditors of their successors, any other information, documents, records and the like in the possession of, or available to the Infraco (and to this end, the Infraco shall use all reasonable endeavours to procure that all such items in the possession of the Infraco Parties shall be available to it) as may be reasonably requested by tie's Representative, tie, CEC, tie's auditors of CEC's auditors for any purpose in connection with this Agreement and/or the Infraco Works.."

16.3.4 From mid-2009, tie started to request a high frequency of audits and audit meetings. From the start, the way in which tie managed the Audit process was confrontational. It engaged a plethora of outside consultants at further expense to the Project, to attend these meetings. The audits were also attended by lawyers, and we instructed Pinsent Masons to attend on our behalf. In my opinion, the approach which tie adopted at these audits was entirely unreasonable. They were not looking for information to aid the Project in any constructive way; instead they were looking for evidence which they could use against us in their ongoing campaign to deny our entitlements under the Infraco Contract. In the Audits held in 2010, there was a clear design slant to the issues raised by tie. They were trying to find evidence to prove that Infraco was not managing the design process or fully integrating the design.

16.3.5 I have reviewed a couple of the letters issued during this process, including a letter from tie to me of 30 June 2010 (INF CORR 5464/RB) and my response of 5 July 2010 (ETN(BSC)TIE$Q&ABC#051041). In tie's letter of 30 June 2010, they accused Infraco of not co-operating and engaging in the audit process. Attached to the letter was a schedule of additional information required. This was all very much focused on our dealings and discussions (commercial and otherwise) with the designers SDS. The list is huge, it was

taking days and days of our time to pull information together and even where we stated that we did not have some of the information tie were looking for (such as hand written notes of commercial meetings between SDS and Infraco), they would not accept this as an answer. It is clear to me that tie were looking for ammunition to use against us in their continuing allegations that we were not progressing with the Infraco Works and were not managing the design process properly. tie had also been asking for information about compensation events. Through Pinsent Masons we had confirmed that we would be following the procedure in the Infraco Contract in relation to Compensation Events, that is, Clause 65. The general tone of this letter was to complain about our lack of reactiveness to the audit request. My response of 5 July 2010, sets out our position on a lot of these issues. We pointed out that there did not seem to be any clear audit objective and that the time spent in trying to comply with these audit requests, was time which would have been better spent in progressing the Project. In addition, the schedule that tie produced of the documentation they were looking for, made it clear that they must already be in possession of this information they were asking for. My conclusion in this letter sums up Infraco's position in response to these audit requests - we thought that the time that it was taking us to comply with the audits was excessive and unnecessary and that tie were trying to interfere and disrupt our ability to perform our contractual obligations. I referred tie to clause 6.3.4 of the Infraco Contract whereby under the partnering obligations, neither party was to interfere with the rights of the other party or hinder or prevent the other from performing its obligations under the Contract. I also referred to the duty contained in Clause 118 which stated:

"Wherever in this Agreement a Party is required to make any determination or give any decisions, instructions, opinions or consents or to express satisfaction or approval or otherwise take any action, that Party shall act fairly and reasonably within the terms of this Agreement (save where the

Agreement expressly states that tie is to have absolute discretion), and having regard to all the circumstances."

16.3.6 We definitely did not believe that tie were acting reasonably in relation to these audit requests, but rather, were looking for ammunition to use against Infraco in its ongoing attempt to wear us down and to persuade us that we were incorrect in our interpretation of the Infraco Contract and our attempts to pursue our contractual entitlements.

16.4 **Permit to Work**

16.4.1 Before starting work on any particular site, we required to obtain a Permit to Work which was to be issued by tie. The requirements for obtaining a Permit to Work were that we had to submit certain documents as set out in Schedule Part 3 to the Infraco Contract (the Code of Construction Practice, clause 3.4 thereof). In the areas where we were able to progress works, we had been operating this system successfully and obtaining Permits to Work from tie.

16.4.2 In around March 2010, tie started to change the basis of what it required from Infraco before it would issue Permits to Work. This came to a head in the section of work between Shandwick Place and Haymarket. This area had been badly affected and held up by ongoing MUDFA Works. However, in early 2010, we understood that the works which by that time were being carried out by Clancy Docwra, would shortly be completing.

16.4.3 tie's position was that we had failed to provide all of the documents we were obliged to submit in order for the Permit to Work to be issued. They insisted on the proposed work site being divided into smaller packages and required additional documents (including Method Statements which we did not consider required tie approval). They also stated that they would not issue Permits to Work where we could not produce executed subcontracts to which all three of the Infraco members were party. We did not believe that

any of this was a condition which was required before we were able to commence our works in this area. There was a series of correspondence between us and tie which dealt with this issue [see tie's letters of 8 April (INF CORR 4736 and 24 May 2010 (INF CORR 5133) and Infraco letters of 22 April 2010 (25.1.201/BDo/5499)] and 29 April (25.1.201/DG/5564)

16.4.4 At around this time, I received a marked up drawing of the Haymarket area, which showed that although the utilities works were shortly to come to an end, there were a large number of utilities still below the ground in the area where we would be carrying out our civil works. In addition and without advising us in advance, we learned through the press that tie were intending to reopen the Haymarket area to traffic to give drivers respite from the utilities diversion work which had been going on and which had been planned for completion by the end of 2008 (see Scotsman article of 30 March 2010). It therefore seemed clear to us that the reasons tie were giving for refusing to grant us a Permit to Work in the Haymarket area were entirely spurious. This was an area which had already been subject to a great deal of design change (changes from BDDI to IFC) and where there were many Notified Departures which had not been agreed with tie, including in relation to the delays caused by MUDFA. Nevertheless it was one of the areas where we were prepared to carry out work on a 'goodwill basis'. Given that the Project was so far behind schedule at this time, it was absurd for tie to introduce spurious reasons (for not issuing the Permits to Work) which would not have prevented us from progressing (such as subcontracts not signed by all three Infraco members) with the physical works. It seemed clear to us that tie's real reason for refusing us the Permits to Work was that as soon as we opened up the road to start carrying out our works, we would discover utilities which had not been diverted which would mean notification of more Notified Departures and a physical inability to proceed with our works. tie had in any case decided that the road should be reopened to the public and we were not therefore to be permitted access.

16.4.5 Given that we were receiving so many letters at this point from tie complaining about our refusal to carry out work where tie Change Orders had not been issued, and complaining about our performance generally, if tie had truly wanted us to progress with the works, they would not have put barriers in our way in this manner. tie's position was also totally inconsistent in this regard - there were other works underway elsewhere on the Site where the absence of a subcontract signed by all three parties had not prevented us from progressing (e.g. Barr's work at the depot, Expanded, and MacKenzie). There was an adjudication on the issue of Subcontracts (which I explain in Appendix 1 to this statement) and whilst tie were found to be correct on the issue that all subcontracts required to be signed by all three Infraco members, it still was not a condition precedent to the issue of a Permit to Work.

17. ALTERNATIVE PROPOSALS MADE BY INFRACO

17.1 Richard Walker's letter of 8 March 2010 to CEC, also introduced the fact that we had been looking at alternative ways that the Project could be delivered. As I said above, I came to Edinburgh to deliver the Project, not to get involved in protracted disputes many of which were of a very legal nature. Also as a company, we wanted to finish this Project as soon as we could and find a way to resolve the intolerable situation we found ourselves in. We therefore made a series of proposals to tie, about what we might be able to deliver for them for the budget that was available to them.

17.2 The first of these was called the On Street Supplemental Agreement. The basis for this agreement was almost identical to the PSSA which had allowed the works on Princes Street to proceed. This had been prepared by us but based on a jointly proposed strategy to try and overcome the effect of the very delayed MUDFA Works which were badly affecting the on-street sections of the Project, as well as the changes (Notified Departures) which remained unresolved and which were therefore holding up our ability to progress with the Works. In fact, this continuation of the PSSA to all other On-Street works, was one of the issues which was part of the mediation before Eileen Carroll at the end of June 2009, which I refer to above. Although we didn't reach agreement on such a revised deal at that time, we agreed to continue the discussions and proceeded to work up a proposal. We got so far with this proposal and we believed that it would be a good workable agreement which would allow works to progress even where the cost of changes and the impact of the MUDFA delays were not agreed. The basis for this agreement was that all of the on-street works would be paid for on a 'demonstrable cost', 'open-book' basis (the 'On Street Supplemental Agreement' or 'OSSA'). Our final proposal was sent to tie on 19 February 2010 [25.1.201/KDR/4740].

17.3 The On Street works could have proceeded under this arrangement in early 2010. However, after six months of negotiations, and after receiving our final proposal on 19 February 2010, tie responded by way of letter dated 26 February [INF CORR 4262/RJ] referring to 'our OSSA' proposal (when in fact it had been a joint initiative) and

declaring that the OSSA would have been a breach of its obligations under EU procurement legislation. Discussions on such a proposal were therefore abandoned at the end of February 2010. It was frustrating that we had put so much effort into this for tie subsequently to cut the proposal dead, on the basis of EU legislation which, if correct, was something that they should have been aware of six months earlier.

17.4 **Project Carlisle**: In May 2010, the parties entered into discussions to reach an agreement whereby the scope of the works would be reduced, a new programme agreed, risk re-allocated in the Contract and a new price agreed. This followed on from discussions which had taken place between Tony Rush, tie's consultant, and Siemens' Michael Flynn. The discussion took place in Carlisle, hence the name of the initiative. Infraco produced two proposals on this basis ("Project Carlisle 1" and "Project Carlisle 2") which were followed by detailed discussions on how the Project might be completed. The proposals were based on delivering a reduced scope for the funding which was available to tie, and seeking to simplify the contractual procedures which had been at the heart of many disputes between the parties.

17.5 For BCUK, we brought in Mr Ed Kitzman to lead the discussions with tie on our behalf. He mainly dealt with Tony Rush and his colleague, Jim Molyneux (they were both from the Gordon Harris Partnership). Our original proposal was submitted on 29 July 2010. tie's request had been for us to propose a Guaranteed Maximum Price ('GMP') based on a reduced scope and an accelerated programme. Our proposal envisaged that the tram line would run from Edinburgh Airport to the East end of Princes Street. At this time, tie was discussing bringing in a replacement contractor for civil works east of Princes Street. We proposed an amended change mechanism whereby work in respect of a change could progress even where it was not agreed. However, there were still many uncertainties and although tie wanted a fully fixed and final GMP, there still remained risks which we could not accept. We therefore proposed retaining certain Pricing Assumptions: the key ones being in relation to the discovery and replacement of utilities, and ground conditions. However, the majority of the other pricing assumptions would go, including those that related to design change. Our

accelerated programme envisaged completion of construction and commissioning in August 2012 (Section C Completion).

17.6 tie responded by way of a letter on 24 August 2010 which seemed to take us backward rather than forward: this letter proposed an alternative GMP proposal but the proposed GMP was entirely unrealistic and all Pricing Assumptions were removed. Rather than looking at an achievable programme, tie went back to asserting that Infraco had not proved an extension of time but that tie would allow the time already awarded by Robert Howie QC and a 9 month extension of time which tie had 'offered' previously etc. tie's proposal would have meant that Infraco took all remaining risk for utilities which might still be present. Schedule Part 4 would effectively be deleted. It was an entirely unrealistic proposal and one that could not be accepted by Infraco. tie had also expressed a request for BCUK not to do any further civil engineering works, except the remedial works on Princes Street. In discussions, tie had stated that it was reflecting CEC's desire 'not to have Bilfinger Berger in Edinburgh Streets."

17.7 However, discussions continued and on 11 September 2010 we submitted Carlisle 2 ('Project Carlisle – Revised Infraco Full and Final Proposal') to tie. This letter made reference to attempts to incorporate tie's requirements but that we had not been able to incorporate all of them (for example, tie had made assurances about Third Party Approvals being resolved but they had not managed to resolve a single outstanding issue). There were therefore remaining risks which again, we could not take ownership of. I also confirmed in this letter that tie's 'Counter Proposal' would not be considered by us further as we considered it to be *'wholly and totally unrealistic both in terms of it's pricing structure and level of risk transfer back to Infraco'*. Our new proposal was to stop work at Haymarket. We took the transfer of risk in relation to matters which we considered were quantifiable, but again, could not take other risks as we still believed that these could potentially increase our costs substantially.

17.8 tie responded with a letter dated 24 September 2010. It was as if they continued to refuse to believe what we were telling them about not being prepared to give a truly Guaranteed Maximum Price, given the risk that remained. This letter in essence

repeated much of tie's previous counter-proposal and continued to insist that any agreement must provide price certainty for tie and its stakeholders. tie also wanted complete veto over who Infraco's Representative would be going forward, and to request that only Key Personnel as approved by them be allowed to have day-to-day responsibility for the Contract. Unhelpfully, tie also never provided a detailed breakdown which would allow us to see where their numbers came from. Their proposed GMP Price remained entirely unrealistic. I made this clear in a response to tie on 1 October 2010 when I concluded that *'Until such time that tie formally proposes increased amounts, we feel that Project Carlisle will most likely fail.*'

17.9 Following this, we received a further letter from tie on 12 October 2010 with further proposals in relation to Project Carlisle. We received this on the same day that we received yet another Remediable Termination Notice. After this, relationships deteriorated very quickly. Our letters to tie of 14 and 29 October 2010 show that we believed that there was very little point in continuing the discussions: on our analysis and based on tie's proposed GMP, tie were asking Infraco to 'donate' (that is, lose) around £45 million if we entered into the type of agreement tie was proposing. tie had also stated in conversations that *'Infraco must reduce its price by £45 million to avoid termination'*. tie's approach was entirely unacceptable and we saw no point in continuing with these discussions. My letter to tie of 29 October 2010 referred to the impasse between the Parties which I described as:

"...*Infraco will not agree to reduce its price, tie's non-payment of Preliminaries to which Infraco is entitled, tie's non payment of £3Mio for the demonstrable costs on Princes Street to which Infraco is entitled, tie's non payment of other parts of agreed changes or Clause 80.15 instructed works to which Infraco is entitled, tie's constant threat to Infraco of termination and tie's general failure to act in a fair and reasonable manner in administering the Contract. Clearly tie has difficulty accepting the entitlements arising for Infraco therefrom.*

Each month tie continues to prevaricate and to not accept our Project Carlisle Proposal, the cost of the Project increases, making the gap between available funding and the cost to complete even greater…."

17.10 The Remediable Termination Notices referred to are dealt with in the following part of my Statement. Reference to tie's failure to pay our Preliminaries was another 'tactic' devised by tie in roughly March 2010. We subsequently took this matter to adjudication (and won) and the background is explained in Appendix 1 to this Witness Statement.

17.11 Perhaps not surprisingly, discussions on Project Carlisle came to an end at about this time. However, when the decision to proceed to mediation was announced, we further developed the Project Carlisle proposal. Internally we referred to this as Project Carlisle 3. It was submitted to tie on 24 February 2011, which was shortly before the mediation, and had by this point been christened 'Project Phoenix' by Richard Walker.

17.12 **Project Phoenix**: As noted, this was a continuation and amendment of the previous Project Carlisle Proposals. Infraco proposed amending the Infraco Contract on the basis of a truncated Project scope that could fit within a budget that was available to tie, finding a sustainable solution to the matters which divided the parties, and proceeding on a new agreed basis. The key advantages of Project Phoenix which were outlined to tie included not wasting CEC's £400m invested to date; providing greater price/time certainty to CEC, providing revenue earning service to CEC and avoiding a costly and very protracted public dispute.

18. **REMEDIABLE TERMINATION NOTICES AND UNDERPERFORMING WARNING NOTICES**

18.1 On 9 August 2010, we received the first 3 (of 10 Remediable Termination Notices) and the first of 3 Underperforming Warning Notices from tie. The letters continued up until late October 2010. This was happening at the same time as we were trying to negotiate a solution with tie through the Project Carlisle I and II proposals. It was also happening at the same time as the flood of correspondence, audits and ongoing adjudications occurred. I believed then, and still do, that tie was trying to exert as much pressure on Infraco as they possibly could, to force us to agree to a compromise arrangement with them.

18.2 The remediable termination notices covered the following issues:

18.2.1 2 letters dated 9 August 2010: Both dealing with defects on Princes Street;

18.2.2 Letter dated 9 August 2010: Clause 10.4 and 10.16 - Failure to Provide Extranet and Information in respect of Infraco Claims;

18.2.3 Letter dated 16 August 2010 – Infraco Default (a) : Clause 60 (Programming issues);

18.2.4 Letter dated 1 September 2010 – Bilfinger Berger/ SDS Provider Minute of Agreement

18.2.5 Letter dated 8 September 2010 – Design: Trackworks

18.2.6 Letter dated 21 September 2010 – Failure to Progress Demolition Works at Plots 97 and 102 Russell Road

18.2.7 Letter dated 29 September 2010 – Clause 80 – tie Change

18.2.8 Letter dated 30 September 2010 – Breaches Evincing Course of Conduct

18.2.9 Letter dated 12 October 2010 - Failure to Manage Design at Gogarburn Retaining Wall W14C and W14D.

18.3 The Underperformance Warning Notices we received were as follows:

18.3.1 Letter dated 9 August 2010: Defects on Princes Street;

18.3.2 Letter dated 7 September 2010: Clause 60 (Programme)

18.3.3 Letter dated 12 October 2010: Trackworks

18.4 It is worthwhile explaining the contractual context for these letters. Clause 90 of the Infraco Contract gave tie a right to terminate the Contract for an Infraco Default. The Infraco Defaults were as defined in Schedule Part 1. All of the Remediable Termination Notices we received were in relation to Infraco Default (a) which is defined as:

"a breach by the Infraco of any of its obligations under this Agreement which materially and adversely affects the carrying out and/or completion of the Infraco Works"

18.5 Having served the Remediable Termination Notice, Infraco had 30 days (clause 90.2) to submit a comprehensive rectification plan setting out how it intended to rectify the Infraco Default. Once that rectification plan had been submitted, tie had 10 days to indicate, at its absolute discretion, whether it accepted the rectification plan or not. If it did not accept the rectification plan, then after giving a further 5 days notice, tie could terminate the Infraco Contract.

18.6 Under Clause 56.7.1 of the Contract, tie was entitled to issue an Underperformance Warning Notice to Infraco if *"at any time the Infraco has committed any material breach of its obligations under this Agreement."* After receiving an Underperformance Warning Notice, Infraco had 10 days in which to submit a plan on how it intended to deal with the issues raised in the Notice. Our view was that these Underperformance Warning Notices were really envisaged to be used during the Maintenance Services, not the main construction period. There were rules about how many

Underperformance Warning Notices could be served in a particular period, and if a threshold was reached, tie was entitled to increase its monitoring of the Project at Infraco's expense. If four Underperformance Warning Notices were issued within any 12 month period, this gave rise to another Infraco Default (item (g) under this definition in Schedule Part 1) and tie could then serve a Remediable Termination Notice on this basis as well.

18.7 The first Remediable Termination Notices and the Underperformance Warning Notice received on 9 August 2010, all related to defects on Princes Street. We treated the receipt of these notices very seriously – the consequences of a contract termination could have been extremely expensive for Infraco given that, if it were right in its decision to terminate, tie would have ultimately been entitled to bring in another contractor to complete the Project and Infraco would have been liable for all the additional costs incurred in having to do so, as well as being required to pay the difference between what tie would have to pay to that new Contractor, over and above what it would have been obliged to pay Infraco. It could have been very costly indeed, but either way, would have lead to a huge and complicated dispute. We did not accept the basis for any of the Remediable Termination Notices served on us and we would have disputed tie's entitlement to terminate had it subsequently gone on to do so.

18.8 On 17 September 2010 (letter reference 25.1.201/KDR/6729), we responded to the first of the Remediable Termination Notices. This response was drafted in conjunction with our internal team and our lawyers. In fact, we established a group to keep track of all of the Notices we received and to make sure that we took a consistent approach in these responses. This group also looked at the consequences of immediate steps we would need to take to protect our position in the event of a termination. It was a matter which senior management in Wiesbaden were heavily involved in. Termination of such a large and important contract would have been a major issue for BCUK and therefore the line we took required Board involvement and approval.

18.9 In the letter of 17 September 2010, we refuted that there had been a breach of contract in relation to the defects on Princes Street (which we considered at that time,

were due to the manner in which the works were carried out and the road being opened prematurely to traffic). We also made the point that although it was denied that there was a breach, it did *not 'materially and adversely affect the carrying out and completion of the Infraco Works'*. This was on the basis that the timetable that we proposed in the Rectification Plan also submitted at this time (without prejudice to our position that there was no breach), showed that rectification of the Princes Street works would not affect the carrying out and completion of the Works as a whole. We disputed the validity of the two Remediable Termination Notices which related to Princes Street and we made clear that we did not consider that tie had any grounds to terminate on the basis of these Notices. However, and as noted, we did submit a Rectification Plan on the basis that it was without prejudice to our position that the Notices were not valid. My letter of 17 September 2010 also contained the following statement:

"As at the date of writing you have served Remediable Termination Notices in respect of another 4 matters. None of these matters have been the subject of referrals to dispute resolution. It appears to us that tie has abandoned the contractual mechanism for resolution of disputes. This may be because every major issue of principle has been decided against tie in adjudication. However that is no justification for now abusing the termination provisions of the contract. It is clear that tie is now pursuing a policy of serving a Remediable Termination Notice in respect of each and every grievance it may have, regardless of the significance of each grievance and its implications for the Infraco Works. Whilst we will respond to each Remediable Termination Notice in turn, we object to tie's adoption of this policy"

18.10 The letter also concluded:

"In conclusion, such matters as require attention in Princes Street are being attended to. In no way do these merit the instigation of a process to terminate the Infraco Contract. Such a course of action is wholly disproportionate to the matters in question. We assume that the Notices have been served to advance a tactical position on tie's part, rather than any genuine belief that these matters merit the termination of the

Infraco Contract. This is entirely contrary to the parties' obligations at clause 6.1 of the Infraco Contract."

18.11 Some of the Remediable Termination Notices were for trivial matters, others related to matters which were at the very heart of the disputes between the Parties. For example, the other Remediable Termination Notice of 9 August 2010 related to Infraco's alleged failure to keep documents in an orderly fashion and to allow tie access to those documents; and to set up an Extranet. This seems an entirely trivial reason to seek to terminate the contract. The Remediable Termination Notice of 16 August 2010, dealt with allegations that Infraco had failed to update the Programme and had failed to take all measures to mitigate the effects of any delay. I have already described above, the extensive process we had gone through with tie to try and get agreement on a contract programme which would actually reflect the delay being experienced. It was through no fault on the part of Infraco that we had not managed to achieve this - rather it was tie's refusal to accept the extent of the delay being experienced. By this point we were recording progress against Programme (Revision 3A) as being the most realistic programme against which to record progress. tie had refused to accept that programme for reasons we did not agree with. In addition, by this time, we had had Robert Howie's decision in the MUDFA 1 adjudication which was very clear on what we were and were not obliged to do by mitigation measures - once again, tie seemed to be refusing to acknowledge the effect of that Decision.

18.12 Another example of a Remediable Termination Notice which reflected a dispute which went to the heart of the Infraco Contract was the Notice sent on 29 September 2010 which dealt with Clause 80 and tie Changes. tie repeated all of its arguments about Infraco allegedly submitting INTCs without detail, not submitting Estimates in time, not delivering Estimates at all, submitting incomplete Estimates and again refusing to comply with mitigation measures. We were also accused as we had been before, of over-valuing estimates. The biggest bone of contention was Infraco's refusal to carry out work before a tie Change Order had been issued. By this time we had already had a series of adjudications which dealt with Clause 80 issues, not least the decision of

Lord Dervaird on Murrayfield Underpass of 7 August 2010 which made it clear that Infraco was both required and entitled to refuse to carry out Changes where there was no tie Change Order issued. In our response of 9 November 2010, we made it clear that tie's refusal to even acknowledge that matters were Changes (let alone acknowledge the delay caused by them) had rendered the process unworkable and frustrated production of Estimates. We did not submit a rectification plan in response to this letter because we believed that we were complying with the Infraco Contract. tie were simply wrong to keep insisting on an interpretation of the Infraco Contract which had already been determined to be wrong through the decisions in several adjudications.

18.13 Perhaps the most extreme Remediable Termination Notice we received was on 30 September 2010, being the allegation of breaches *'evincing a course of conduct'*. It appeared that someone had sat with the Infraco Contract doing a page turn. Whenever an Infraco obligation was found, we were accused of being in breach of that obligation: this ranged from allegations of a lack of supervision, disregard for contractual mechanisms, an unwillingness to resolve difficulties or the Infraco's breaches, non delivery of the works (with no reference of course to the reasons why we were delayed), to disregard for the client's public accountability and best value. Attached to this letter at Appendix A, was a schedule which listed out 100 clauses of the Infraco Contract we were said to be in breach of. If the consequences of receiving a termination notice had not been so serious, this would have been laughable. The breaches we were accused of included lots of matters already the subject of other notices or already decided elsewhere. For example, paragraph 2.5.2 again repeated that we were in breach of contract for failing to *'continue with any works which are the subject of a tie Change or Notified Departure prior to the issue of a tie Change Order or the referral of the relevant estimate (if there is one) to the Dispute Resolution Procedure'*. This was just another example of a refusal to accept Lord Dervaird's decision in the Murrayfield Underpass dispute. This letter also continued to accuse us of 'delinquency' which had by this time, become tie's term of choice for describing

Infraco's 'behaviour'. Again, we did not submit a rectification plan in respect of this letter.

18.14 Where we did submit rectification plans in response to receiving these letters, they were never accepted by tie on any occasion. As this was all happening at around the time that we gave notice (on 29 September 2010) that we would be stopping all goodwill works (see below), we were fully expecting tie at any moment to terminate the Infraco Contract. We had contingency plans in place as to how we would deal with this, from the practical (including how we would extricate our documentation and belongings from the site office) to the legal and contractual (with various letters and responses prepared in draft should we receive a termination notice). Our head office in Germany was fully expecting that termination would follow as we really could see no way out of the predicament we were in. We had proposed solutions to tie (Carlisle I and II) but they seemed incapable of accepting or even discussing sensible solutions - at the route of this I believe was their fundamental inability to accept what the Infraco Contract provided for, in particular to accept the risk allocation set out in the contract and that the risks which fell with tie, were what was delaying and holding up progress (e.g. MUDFA delays, and design changes from BDDI to IFC in particular). As with all other matters at this time, a huge amount of senior management time and resources were tied up in responding to the letters and much money no doubt spent (in both tie and Infraco) on outside consultants and lawyers. All of this time, effort and money could more usefully have been engaged in delivering the Project.

18.15 Against this background where we were anticipating termination almost daily, it was a surprise when the suggestion of mediation was made in November 2010.

19. **CESSATION OF GOODWILL WORKS**

19.1 By late September 2010, and with no sign of any change on the part of tie to accept what the Infraco Contract said and to agree Estimates which they were currently sitting on, we reluctantly took the decision to cease all goodwill works. Our letter of 29 September 2010 set out the Infraco's position in this regard. This decision was made reluctantly and against the backdrop of all of the other correspondence and communication we were having with tie at this time, as discussed in this statement and as should be evident from the correspondence provided to the Inquiry. We had come to build a tram system for Edinburgh, not to get embroiled in disputes. However, faced with the intransigence of tie, we felt we had no other option but to minimise the risk to Infraco of proceeding with Works where tie were refusing to recognise our contractual entitlement to payment and extensions of time.

19.2 Attached to the letter was a list of the INTCs where we had been carrying out works on a good will basis and where work would now stop. This wasn't the entire site but it was a large proportion of it. This is best shown by the 2 drawings which I refer to at paragraph 11.26 above.

19.3 As a result of this decision, we had to make many of our staff redundant and terminate our subcontractors. We made about 35 out of 80 Bilfinger employees redundant and stood down 10 subcontractors with about 300 workers and employees. It was not a decision taken lightly but we felt we had no option.

20. **MEDIATION IN MARCH 2011**

20.1 As I've noted above, having received the Remediable Termination Notices, and having made the decision to cease all good will working, we fully expected that tie would terminate the Contract. We were therefore surprised when tie suggested mediation, albeit that I believe this may have been driven by a Council Leader's Emergency Motion dated 18 November 2010, rather than by tie themselves. By this point in time, Sue Bruce had been appointed as CEC's new Chief Executive. I first met her at the Mediation and I believe she was a key driver behind the disputes being unlocked at the mediation which took place at Mar Hall in March 2011. She was assisted by Colin Smith of Hg Consulting. We understood that Colin had worked with Sue on previous projects.

20.2 Our approach to the mediation remained solutions orientated. We had not come to get into disputes on this Project. We had come to build the Edinburgh Trams Project for the City of Edinburgh. If this couldn't be achieved, which was looking increasingly likely in the latter part of 2010, then we wanted to agree an amicable separation from tie.

20.3 We worked as an internal team (Infraco and SDS) to prepare our Mediation Statement along with our legal team. We could have made this a very accusatory document, and gone on at length about how we had 'won' at adjudication and how unreasonable tie had been. However, we decided that the document should be far more open and forward looking. Whilst we were reassured that our interpretation of the Contract was correct, as had been determined at adjudication, we recognised that neither party could continue as matters currently stood. We recognised that tie and CEC had budgetary constraints. If they could not afford to build the entire Network at this time, we came up with a proposal of what could be built for the budget that we believed was available. This was Project Phoenix which I refer to above. If tie could not agree to this or some form of amended deal, then we wished to discuss how we could best extricate ourselves from the Contract (referred to by tie as Project Separation).

20.4 In contrast to the position adopted by Infraco in its Mediation Statement, tie took the approach of submitting a document which was very contractual, very confrontational and accusatory, and which presented many contractual arguments (some with a slightly different slant) which had already been progressed in adjudication, and where on the whole and on all major issues of principle, tie had not been successful. The Mediation Statement was also accompanied by 31 exhibits which were obviously prepared by tie's lawyers, and which covered issues such as their view of how Clause 80.13 should be interpreted and so on. We then had to work with our internal team and external legal team to prepare detailed responses to each of these exhibits. Infraco was fully prepared to present the evidence to the Mediator and tie/CEC at Mediation to demonstrate the inadequacies of tie's arguments; however, as it turned out, this was not necessary.

20.5 The mediation started on Tuesday 8 March 2011. The mediation was probably attended by up to 60 people, all of whom had had to sign personal confidentiality agreements prior to even being present. The fact that the mediation was even happening had attracted a huge amount of media attention. Following on from initial opening statements by both parties, the Mediator went with tie and CEC first to discuss their position. The Mediator came back some hours later and stated that CEC were looking for a solution to progress and deliver the project. It was evident that CEC were taking the lead in the Mediation talks rather than tie. The subsequent talks were between CEC and Infraco with limited contributions from tie.

20.6 Although there was discussion around some of the issues which had divided the parties, the focus through Mediation quickly became about how to deliver the project (subject to funding), using Infraco's Project Phoenix submission as the basis for the discussions. The key issues and blockers were discussed and pathways to resolution set out. The new approach by CEC (led by Sue and Colin) was to repair relationships, build trust and work in a spirit of partnership. The challenge set at Mediation was to turn the Project around and to jointly deliver the project under a new governance structure that would be a success and could ultimately be a model for other projects.

This was the challenge communicated to me following discussions between Sue Bruce and Dr Keysberg at Mediation.

20.7 Ultimately, a way forward was found with CEC at Mediation. Heads of Term were agreed on Saturday 12 March 2011 at the end of the week long mediation (the mediation had by this time moved from Mar Hall to another hotel near by with far fewer parties involved). The Heads of Term covered the agreement reached at Mediation: we would enter into immediate further discussions with CEC to get agreement of what were to be known as the Prioritised Works. The tram line would end at St Andrews Square. The price for the Off-Street Works portion was negotiated and reflected in the Heads of Term. This price was based on the Project Phoenix drawings with some exceptions. The remaining On-Street section (Haymarket to St Andrew's Square) was to be further negotiated but was to be based on a Target Sum. Clauses 65, 80 and Schedule Part 4 would be renegotiated. tie would retain the risk associated with the removal of the utilities in the on-street section. CAF were to leave the consortium and be novated back to tie. Everything beyond the Prioritised Works was conditional on tie/ CEC securing additional funding and so there was a cut off date. If additional funding to complete the truncated scope could not be found, the Infraco Contract would automatically terminate on 1 September 2011, and Infraco would be entitled to all sums due to be determined by 1 July 2011, including sums in respect of materials etc purchased for the section of the line which was not now going to be build (St Andrew's Square to Newhaven). There was to be a concerted effort involving CEC to clear all outstanding technical and planning approvals required, and for all other barriers to progression and completion of the design issues, to be removed. The design for the full line (to Newhaven) would be completed, albeit the St Andrew's Square to Newhaven section would not be built. Clause 13.1 of the Heads of Term provided:

"There will be a cultural shift in the behaviour of all parties including interaction, co-location and empowerment."

20.8 This change in attitude and behaviour was crucial to how matters then progressed. Infraco was very keen to see a change of the tie personnel and in fact, tie were then phased out with CEC taking over the running of the remainder of the Project.

21. PROGRESS FOLLOWING MEDIATION

21.1 Period March 2011 to September 2011

21.1.1 Immediately following mediation, we then got into negotiations on Minute of Variation No. 4 (MoV 4). This was finalised by 20 May 2011. MoV4 dealt with the Prioritised Works which we were to start immediately, subject to certain payments being made and approvals issued etc, which were required to allow the Prioritised Works to progress. MoV4 essentially fleshed out the deal reached as reflected in the Heads of Term agreed at mediation. A revised programme for the Prioritised Works was agreed. MoV 4 envisaged the need to enter into MoV5 which would be the full amendment to the Infraco Contract which was required. Timescales were laid down for when that should happen by. The cut off points if funding could/ could not be found by tie/ CEC were also outlined. MoV 4 also provided that as long as MoV5 was entered into, tie would not terminate the Infraco Contract on the basis of any of the Remediable Termination Notices or Underperforming Warning Notices, and also that Infraco would not pursue any claims under the Infraco Contract (which related to events occurring before the mediation). All existing disputes were to be frozen until 2 July 2011, by which time it was hoped that MoV 5 would be entered into at which point all claims would be finally settled. A new Governance Structure was attached to MoV4.

21.2 Settlement Agreement (MoV 5) and Schedule Part 45

21.2.1 What was intended to be known as Minute of Variation 5, was effectively the Settlement Agreement which finalised the agreement reached at mediation in the Heads of Terms and as further detailed in MoV 4. At this point, funding was in place for the remaining construction work to York Place. This Settlement Agreement also introduced the full contract amendment which was necessary to reflect the agreements reached. The timetable for it slipped slightly but it was eventually executed on 15 September 2011.

21.2.2 The key points to note about the Settlement Agreement are as follows:

(a) The Infraco Contract was 'unpicked' to remove CAF as a party to the Infraco consortium. The Tram Supply and Maintenance Agreements were effectively novated back to CEC as Employer, with various indemnities and waivers of claims which could have arisen being dealt with. The Agreement held that CAF was to have no further liability under the Infraco Contract, and tie and CEC waived any claims against CAF accordingly.

(b) The Tram Supply and Tram Maintenance Agreements required to be amended to deal with the fact that CAF would now be carrying out its obligations under these Contracts, directly for CEC.

(c) Clause 3 of the Settlement Agreement dealt with the fact that it was entered into by all the parties to it in full and final settlement of *"all Disputes claims and entitlements, whether past, present or future, of any kind whatsoever and howsoever arising…."* with a few exceptions (including in relation to disputes in relation to the Prioritised Works which had been carried out under MoV 4, third party claims, claims by tie in respect of systems integration and claims in relation to the underlying construction of the Project (i.e. latent defects etc)). This meant that by signing up to the Settlement Agreement, all of the adjudication decisions previously issued became finalised. It was not open to either Infraco or tie to revisit or challenge those Decisions by taking the underlying disputes to Court.

(d) Schedule A to the Settlement Agreement, dealt with all of the amendments required to individual Parts and Schedules to the Infraco Contract, to reflect the renegotiated deal. It was a major

task to reach agreement on all of this and I deal here with some of the major changes:

(e) Schedule Part 2: the Employer's Requirements were amended to deal with the truncated scope of what would now be delivered by Infraco.

(f) Schedule Part 4: this now contained an Off Street Works Price which was genuinely a fixed price (of circa £362.5 million), and the On-Street Works Price (circa 47 million) which was dealt with by a new Schedule to the Contract – Schedule 45 (On Street Works). A Schedule of Rates was inserted for arriving at the value of tie Changes (other than those that related to the On-Street Works), and a process was detailed for agreeing the value of those Changes.

(g) Schedule Part 45: this was the mechanism for dealing with the Pricing for the On-Street Works Price. This was where some of the terminology and concepts which had previously been in the unamended Schedule Part 4, could still be found. This was to deal with remaining uncertainties in respect of the On-Street Works where tie retained the risk, i.e. the fact that it was known that utilities remained to be diverted and a number of other matters required to be finalised such as third party approvals and outstanding consents etc. This meant that Clause 6 of Schedule Part 45 still had the concept of Pricing Assumptions but there were now far fewer of them. Although clause 80 remained in the main Infraco Contract, all changes to the price and programme for the On-Street Works were only to be dealt with through the Schedule Part 45 mechanism, which effectively meant that Clause 80 was no longer relevant for changes to the On-Street Works. The changes

were now known as Pricing Assumption Variations and not Notified Departures.

(h) The other very important change introduced by Schedule Part 45 was that the prohibition on proceeding with On-Street Works before the value of the Change was agreed, was removed. The concept of an On-Street Works Trigger Date was introduced. This meant that if changes occurred as a result of the Pricing Assumptions (i.e. the facts and circumstances differed from the remaining Pricing Assumptions), and Infraco applied for time and money, which was then not accepted by tie/CEC so that the gulf between what was applied for and what was certified rose to more than 21 days in time, or £750,000, then the Trigger Date occurred. What that meant was that the Joint Project Forum was to meet within 4 weeks of the Trigger Date to discuss the claim. If those differences rose to more than £1.5 million outstanding, then by clause 8.1, Infraco could suspend the On-Street Works and would only be obliged to recommence once the difference got back to £750,000 or below.

(i) Schedule Part 45 also introduced a detailed Variation Mechanism and a Schedule of Rates and Prices for calculating what was due in respect of Pricing Assumptions Variations. It was a far more workable mechanism that the previous Schedule Part 4 and Clause 80 mechanism which had been at the centre of so many of our disputes with tie.

21.2.3 There were many other parts of the Infraco Contract which required to be amended to reflect the agreement reached. Some other issues which relate to management and the clearing out of remaining issues are worth noting as follows:

(a) Following on from Mediation, a new Governance Structure (agreed at Mediation) was put in place. The new Governance Structure and changes from the pre Mediation situation are briefly outlined below.

(b) The project would be led by CEC and directly overseen by the Council CEO. tie would in effect take a step back prior to being phased out. There were clear lines of communication set up between the parties with a commitment at the highest levels to work together in an open manner and spirit of partnership. It was agreed that an Independent Certifier (Colin Smith) would be appointed and would be charged with making determinations on issues that could not be resolved swiftly by the parties.

(c) A series of Control Meetings chaired by the Independent Certifier were set up for each of the key work streams (i.e. Utilities, Design & Consents, Construction, Commercial, Princes Street etc.). The Control meetings encouraged and allowed open and frank discussions on any and all issues. The meetings were held in “the room without corners” as phrased by the Independent Certifier. The expectation was that any issues were to be aired in this forum rather than through formal correspondence. The aim was two-fold: to reduce the amount of project correspondence and to allow for issues to be raised, discussed and resolved face to face. The Control Meetings were attended by the key Project representatives of each party.

(d) Key stakeholders (e.g. Network Rail, Scottish Water etc.) were also invited to all or parts of the relevant Control meeting. This was a positive move to create a spirit of ownership of the project by third parties and for them to understand the challenges faced by or from the perspective of the tram project team as well as outline the issues from their perspective. This greatly assisted in unlocking a

number of key issues and encouraged open communication between all the parties.

(e) Any issues that could not be resolved in a timely manner through the Control meeting process were then escalated. The escalation process, whilst non-contractual, was agreed to by the parties to ensure swift and cost-effective resolution of issues. For any issues that could not be resolved through the Control meeting, briefing papers were prepared by each party and issued to the Independent Certifier. The Independent Certifier would then make his decision promptly thereafter. Should the decision of the Independent Certifier not be accepted, the issue could be escalated to the Joint Project Forum. The Joint Project Forum was chaired by the CEC CEO and attended by the senior representatives of each party including Transport Scotland. Whilst items and updates were reported to the Joint Project Forum, all issues were resolved by the Independent Certifier and no issues were taken to the Joint Project Forum for a decision. I recall that there were only a handful of issues that necessitated briefing papers being prepared – the vast majority of issues were resolved through the Control meetings.

(f) The formal contract dispute mechanism remained in place and available for any party to use; however, this was not required post Mediation.

21.2.4 In addition, a number of initiatives were set up immediately following Mediation. This included the following:

(a) **Prioritised Works**: A number of Prioritised Work areas were identified to be started as soon as possible after Mediation. These included the Depot and mini test track and Haymarket Yards. The

intent was to make a start on key areas (i.e. Depot) as well as demonstrating that the parties could work together and in turn support the case for the additional funding that was required to deliver the truncated line as far as St Andrew Square. The Prioritised Works were completed on or ahead of programme and within the allowable budget.

(b) **Co-location of CEC and Project Stakeholders**: The CEC Project Management team as well as Planning and Technical Officers re-located to the Consortium Project Office. Additional CEC resources were added to the Project allow for the outstanding approvals to be progressed as quickly as possible.

(c) New office space was added to accommodate CEC as well as the Network Rail team who were brought in to allow for open and immediate dialogue to resolve issues quicker and face to face without unnecessary correspondence or through intermediary parties. The same offer was made to Scottish Water; however, they declined to take office space.

(d) The CEC Approval bodies and Infraco worked seven days a week during April 2011 to progress and resolve the vast majority of design approval issues. tie were excluded from these meetings and the CEC and Infraco teams were charged to resolve the issues which they did successfully. This was clear evidence of the new spirit of working and partnership. There was a clear "re-energisation" of the project at this time.

(e) **Post Mediation Changes (PMCs):** A new approach was taken forward to changes post Mediation. Changes were identified, discussed and agreed in a timely manner through the Control meeting or separate ad-hoc meetings were necessary. Where a

change was agreed, the correct contractual process was followed to allow the works to proceed and mitigate any impact to the programme.

(f) As an example, “time sheet” PMCs were taken forward to allow some design changes (i.e. due to the considerable utility conflict issues still to be resolved) to be progressed. Coming out of Mediation, a number of design changes were identified that could not at that time be fully quantified. In order to avoid any delay to the completion of the design, Clause 80.15 Change Orders were issued by CEC with a not to exceed value to allow the design works to progress. The costs were then tracked through submission of weekly time sheets and costs agreed and tracked on a weekly basis.

(g) The aim of Infraco at Mediation was for tie to be removed from the Project to ensure a successful delivery. This was due to the fact that Infraco and SDS did not have any belief that the project could be delivered with tie as Project Manager. Between March 2011 and September 2011, tie were phased out and Turner and Townsend were brought in to assist CEC in managing and delivering the project.

(h) **Utilities** – there were still substantial utilities diversion works to be carried out (e.g. refer Utilities Control meeting dated 30 June 2011 – tie stated that 600 – 700 potential conflicts identified with further information to be checked). CEC led the new approach which was all parties working together to identify clashes and determine the most appropriate solution (i.e. diversion of the utility, dispensation from the statutory utility authority or amendment of the infrastructure design). The period following Mediation involved desktop review of the utilities issues and trial holes to inform the

next steps. It was a surprise to CEC at this time the extent of the utility works still to be carried out.

(i) **Value Engineering**: A thorough review of the project was undertaken and value engineering opportunities identified and taken forwards by the Project. The focus post mediation was to deliver the tram project. The value engineering opportunities taken forward included removal of the Crew Facility at Haymarket Viaduct, removal of the Canopy and Kiosk at Edinburgh Airport, deletion of significant quantities of setts and deletion of the requirement for full depth road construction.

21.3 **Period September 2011 to Project Completion**

21.3.1 Following the signing of the Settlement Agreement on 15 September 2011, with the project funding secure the project moved forwards under the same Governance Structure.

21.3.2 Whilst there were still a number of issues to resolve (as would be expected in a project of this size, scale and complexity), the new levels of trust built up with CEC and the new project management team as a result of the governance structure put in place by CEC, and expertly led by Colin Smith, overseen by the Council CEO meant that these issues were resolved in a timely manner and without any impact to the Programme. As the issues reduced, the number and frequency of Control meetings reduced.

21.3.3 **Approach to Utility Conflicts and Diversion works:** The strategy for the utility diversion works was also changed moving forwards. The intent was the new Utilities Contractor would go in just ahead of Infraco to excavate down to formation level and resolve the utility conflicts just ahead of Infraco coming on site. This was a more cost effective way to deliver the works.

21.3.4 The CEC leadership team following Mediation were more open and honest about the scope of incomplete utility works. This allowed for a more creative and dynamic environment where ideas and Value Engineering for both parties (CEC and Infraco) could be expanded. The more open 'partnering' approach led to better planning of resources and ultimately less abortive works.

21.3.5 The CEC/Turner and Townsend team, from my perspective, had a better relationship with the Utility providers resulting in faster turnaround on any issues. The process of CEC taking possession of work sites prior to Infraco showed continuity of work streams to all stakeholders (as well as cost savings for CEC as not all works required reinstatement). Furthermore, CEC were more open and realistic when programming the utility works and upfront on the issues and constraints.

21.3.6 **Approach to Traffic Management:** The approach to Traffic Management was much more robust under CEC compared with tie. Following Mediation and the signing of the Settlement Agreement a fresh review of Traffic Management schemes was carried out with the emphasis now on 'getting the job done'. With tie, the priority was very much on minimising disruption. The approach from tie failed and in the majority of cases resulted in increased disruption. Post Settlement Agreement we were allowed to explore and demonstrate that larger work sites were a positive for the Project overall, and these were better promoted by CEC. This also extended to all aspects including City centre embargos and extended site hours with CEC Utilities Contractor (McNicholas) taking site possessions at weekends and nights to reduce the impact to the Infraco Programme.

21.3.7 Under tie, a number of traffic management proposals put forward by BCUK were rejected due to a perceived disruption factor to local stakeholders. The proposals taken forward through tie resulted in longer protracted works that impacted on the local stakeholders for longer. The approach by CEC post

mediation was very much short term pain for long term gain and delivering a more cost effective works plan that ultimately reduced programme durations. A number of the traffic management proposals developed by BCUK for tie, whilst rejected by tie, were taken forward by CEC post Settlement Agreement.

21.3.8 CEC utilised Clause 80.15 effectively to ensure changes were progressed ahead of agreement of an estimate. This ensured that there was no impact to the Programme and the works progressed. Valuation meetings were held each period and the Independent Certifier ensured that no issues dragged on beyond two periods unless by prior agreement of both parties (perhaps where the full extent of the issue could not be determined within that timeframe). There were no disputes or estimates not agreed within an acceptable timeframe.

21.3.9 **Internal Infraco relations and Infraco – SDS relations**: During this period, whilst there were issues to be resolved between the Infraco parties as would be expected in a project of this size, scale and complexity, the relationships between the parties remained strong and the issues were worked through and resolved in a professional manner and without impact to the Programme. There were no disputes between the Infraco parties.

21.3.10 The Project was completed ahead of the revised Programme and within the revised Budget with no disputes between the parties.

22. **SUMMARY**

22.1 It is difficult to adequately summarise the above but it still amazes me that tie should have adopted such a fundamentally different view to the contract risk distribution since a plain reading of the contract clearly placed the risk of large types of changes with tie. It further amazes me that despite clear judgments in the adjudications from eminent lawyers that tie continued to reject these clearly established principles. I have no rational explanation for this behaviour by tie.

I believe that the facts stated in this witness statement are true.

Signed: [redacted] .....

Martin Heinz Foerder

Date: 10th December 2015

Appendix 1 to the Witness Statement of Martin Foerder

1. ADJUDICATION PROCEEDINGS

1.1 As described elsewhere in my Witness Statement, there were 12 adjudications between Infraco and tie which proceeded all the way to a decision being issued on the merits of the dispute. There were many more disputes between the Parties, some of which did not reach formal adjudication. There was one adjudication underway at the time of mediation (Princes Street), which was put on hold and subsequently settled following the Parties entering into the Settlement Agreement.

1.2 In terms of the Settlement Agreement, all of the disputes between tie and Infraco were settled for all time. As I understand it, this means that the adjudication decisions are final and binding and cannot be revisited by either party.

1.3 On all major issues of principle, Infraco were found to be correct in their interpretation of the Infraco Contract in the course of the adjudications. .

1.4 In order to assist the Inquiry, I have included here a summary of all of the adjudication decisions and their importance to the issues described elsewhere in my Witness Statement.

2. EDINBURGH HILTON HOTEL CAR PARK WORKS

2.1 tie brought adjudication proceedings in respect of the commencement of the Hilton Car Park Works in September 2009. tie wanted Infraco to proceed with these works, and we believed that the works in question fell within the ambit of Schedule Part 4 and therefore required the agreement of an Estimate (under clause 80) before we were obliged to proceed with the works.

2.2 The real issue in question was whether the works to be carried out at the Hilton Car Park were Accommodation Works (as Infraco maintained) or whether the works were Third Party Obligations (as tie maintained).

2.3 Accommodation Works were defined as:

"**Accommodation Works**" means any works arising out of the compulsory purchase process (including the reinstatement of boundary walls, fences) or any other works **tie** are obliged to procure are carried out for third parties associated with the Edinburgh Tram Network."

2.4 Third Party Obligations were defined as:

"**Third Party Obligations**" means the obligations which Infraco is obliged to comply with under Clauses 18.17A and B and set out in Schedule Part 13 (*Third Party Agreements*) as that Schedule Part 13 may be amended from time to time as a result of a **tie** Change"

2.5 If these works were Third Party Obligations, then Infraco was obliged to make sure that it didn't do anything to cause tie to be in breach of Third Party Agreements etc. However, if in complying with third party obligations and requirements, Infraco incurred additional costs or had to do additional work, then that was to be dealt with as a Compensation Event (clause 65 which would potentially entitle Infraco to time and money).

2.6 Accommodation Works were an Undefined Provisional Sum and were contained within a table to Appendix B to Schedule Part 4. Essentially, these Provisional Sums were items where tie may or may not instruct the work, where Infraco had been asked

to provide a price up front. In respect of Undefined Provisional Sums, no allowance had been made for planning or programming of these works, and no inclusion had been made for Preliminaries. Therefore, if tie was to instruct these works, this would amount to a tie Change under Schedule Part 4, which would lead to the requirements to comply with Clause 80 and to get an agreement on the Estimate and a tie Change Order issued, before Infraco were obliged to carry out the works (again with reference to Clause 80.13 which I have dealt with elsewhere in this Witness Statement). If this was not correct and the additional work was to be dealt with as a Compensation Event (as per tie's argument), then Infraco could not hold off from carrying out these works pending agreement of the value of the Compensation Event.

2.7 Unfortunately I have not been shown all of the background papers to this adjudication and so this is my recollection of the issue (I have only seen the Referral Notice). In his decision dated 13 October 2009, the Adjudicator (Robert Howie QC) found in tie's favour and records a declaration that Infraco were obliged to proceed with the Car Park Works without further instruction. There were no reasons given for the Adjudicator's decision. I assume he must have made a decision that these works were Third Party Obligations and not Accommodation Works but this cannot be determined by his reasons.

2.8 In any case, this was a very minor matter particular to its own facts and of low value (circa £30,000 I believe) and did not provide guidance on general points of principle for use elsewhere in the Project.

3. CARRICK KNOWE AND GOGARBURN BRIDGE

3.1 These are two adjudication which ran simultaneously before John Hunter as Adjudicator. The decisions were issued on 16 November 2009.

3.2 These adjudications were commenced by tie in order to get clarity on an Infraco Notice of tie Change ('INTCs') raised by Infraco in relation to changes between BDDI and IFC at these two locations.

3.3 As mentioned above, one of the pricing assumptions in Schedule Part 4 (clause 3.4.1.1) is that:

"*The Design prepared by the SDS Provider will not (other than amendments arising from the normal development and completion of designs):*

1.1 in terms of design principle, shape, form and/or specification be amended from the drawings forming the Base Date Design Information (except in respect of Value Engineering identified in Appendices C or D to this Schedule Part 4)...."

3.4 That meant that the price assumes there would be no design changes of this nature between the Base Date Design Information (the design as it stood at 27 November 2007) and the Issued for Construction Drawings. As I've explained in the main body of my statement, the design was developing as Infraco were pricing the Contract. The only way that Infraco could provide a firm price, was to freeze the design at a particular date, and price the changes which might come thereafter.

3.5 Clause 3.5 of Schedule Part 4 provided that:

"*The Contract Price has been fixed on the basis of inter alia the Base Case Assumptions noted herein. If now or at any time the facts or circumstances differ in any way from the Base Case Assumptions (or any part of them) such Notified Departure will be deemed to be a Mandatory tie Change requiring a change to the Employer's Requirements and/or the Infraco Proposals or otherwise requiring the Infraco to take account of the Notified Departure in the Contract Price and/or programme in respect of which tie will be deemed to have issued a tie Notice of Change on the date that such Notified Departure is notified by either Party to the*

other. For the avoidance of doubt tie shall pay to the Infraco, to the extent not taken into account in the Estimate provided pursuant to Clause 80.24.1, any additional loss and expense incurred by the Infraco as a consequence of the delay between he notification of the Notified Departure and the actual date (not the deemed date) that tie issues a tie Change Order, such payment to be made by tie following evaluation, agreement or determination of such additional loss and expense pursuant to Clause 65 (Compensation Events) as if the delay were itself a Compensation Event."

3.6 In respect of both Carrick Knowe and Gogarburn, our position was that a number of design changes constituted Notified Departures, being changes between BDDI and IFC which were not simply normal development and completion of designs. At Carrick Knowe, tie accepted one element only as a Notified Departure (a change to the Galleries). tie did not accept that any of the changes at Gogarburn constituted Notified Departures.

3.7 These were very important adjudication for Infraco as this example underpinned the entire issue of the meaning of Schedule Part 4 (Pricing Assumptions). If we did not succeed on this adjudication, then we had a major issue in that the Contract Price would be totally unworkable for Infraco. By this I mean that we believed that Schedule Part 4 had carved out of the 'lump sum fixed price' (which tie continually referred to), those items where Infraco had not been able to provide a price, and where the risk remained with tie. In particular, this included the risk of the preceding utilities diversion (MUDFA) works not being completed, and changes to the design given that the design had not been finalised at the point at which the Infraco Contract was signed (May 2008). If Schedule Part 4 did not operate as we believed it did, and we were obliged to carry out work as per the amended design (for example), then we would lose a lot of money on this Contract.

3.8 Likewise and from tie's perspective, this was also a very important adjudication. If they lost on this issue, then they could not maintain that this was a lump sum fixed price contract.

3.9 tie's argument in this adjudication was as follows. They considered that all of the alleged design changes at Gogarburn, and all of those at Carrick Knowe (except those that related to the galleries) were not Notified Departures but rather were simply part of Infraco's obligation to complete the design of the Edinburgh Tram Network including, but not limited to, the achievement of full compliance with the Employer's Requirements for the deliverables to enable the Edinburgh Tram Network to be procured, constructed and commissioned. They maintained that all other items of work which flowed from the Infraco Notification of tie Change, came about through normal development and completion of the designs.

3.10 tie referred to Infraco's general obligation to carry out and complete the detailed design obligations set out in the Contract, and made much of the fact that the design of the Works had been novated to the Infraco. We did not dispute any of this and fully acknowledged our obligations to complete the design. Where we had a dispute was in relation to how we were to be paid for carrying out these works.

3.11 In addition, tie took the view that in order for an entitlement to payment to arise in respect of a Notified Departure, it was not enough for Infraco to simply identify a change between BDDI and IFC. Infraco would need to:

3.11.1 demonstrate and prove that the evolution and completion of the design to Issued for Construction stage exceeds normal development and completion of the designs.

3.11.2 demonstrate and prove that a Notified Departure has occurred; and

3.11.3 provide a sufficient, adequate and competent estimate.

3.12 This latter point references the issue which tie continually took with us in relation to the Estimates which we were to submit under Clause 80. They argued that if the Estimates were late/ inadequate/ lacking in detail, then they were not obliged to consider them and no entitlement to payment in respect of an alleged Notified Departure could arise.

3.13 Both we and tie had appointed expert engineers to review the changes between BDDI and IFC and provide a view on whether these changes were 'normal development and completion of design' or whether they amounted to Notified Departures, being a change of '*design principle, shape, form and/or specification'* outside of this concept of 'normal development and completion of design'.

3.14 In reaching his decision on both adjudications, the adjudicator looked at why Schedule Part 4 had been included in the Contract. He concluded that it wouldn't have been necessary if the Infraco obligation was simply to meet the Employer's Requirements. He stated at paragraph 7.17 of both decisions:

"*My finding is that Schedule Part 4 was included because the design was incomplete and therefore some unknowns existed that were beyond the capabilities of the Responding Party to include within their price. In other words how the BDDI was to be developed to IFC could be known in respect of certain factors but not all factors and the unknown or insufficiently developed elements were captured by the provision of the wording in Schedule Part 4.*"

3.15 He also had to give meaning to the design development obligation which the Infraco were to include within their price. In this regard he held that:

"My finding is that (the) position is best summed up as follows. The risk which ought properly to be transferred to the Referring Party is where development and completion of designs is outside of the normal course of development of the detail shown in the initial design i.e. the Base Date information, into the detail needed to construct the works as described all to meet the Employer's Requirements. I would go one step further and clarify that the Employer's Requirements have to be sufficiently well developed within the BDDI procedure as a baseline for proceeding in such a manner. I include this further step as it is clear to me that the Employer's Requirements have in terms of the price for the works been limited by the BDDI and the Schedule Part 4 agreement in respect of the agreed price. I find that to arrive at any other conclusion would, in my view, make Schedule Part 4 meaningless."

3.16 He then applied a series of steps to work out whether something was a Notified Departure or was normal design development. An example at Carrick Knowe was that the Specification (part of the Employer's Requirements) called for bat boxes. The performance specification stated that requirements for bats were to be taken into account. The BDDI drawings showed nothing at all in relation to bat boxes. He concluded therefore that there was nothing that Infraco could have priced in relation to the requirement to provide bat boxes and therefore that this was a Notified Departure (essentially, we couldn't 'develop' a design which did not exist in the first place).

3.17 He then went on to apply a test:

3.17.1 The first step was to establish whether any Pricing Assumption could be shown to have occurred. Here the issue was whether the design prepared by the SDS designer had or had not changed *'in terms of design principle, shape, form*....' etc.

3.17.2 Then the issue was whether the simple fact of a change in design principle, shape form etc, meant that a Notified Departure had automatically occurred. This was Infraco's position. tie instead maintained that Infraco could have to prove that that change was outside of the evolution and completion of the design to IFC in a way which was outside of normal development and

completion of designs. In response to this, the Adjudicator came up with a two stage test:

(a) A comparison between the BDDI and IFC drawings would reveal whether the facts and circumstances had changed. The changes would need to be changes in design principle, shape, form or specification to fall within Pricing Assumption 3.4.1.1.

(b) Secondly, the change had to be assessed to conclude whether they are categorised as design development in which case they would not constitute a Notified Departure.

3.17.3 He then applied a third test to make sure that the change did not arise from a breach of contract, an Infraco change or a change in law.

3.17.4 At paragraph 7.42 of his decision, the adjudicator quoted from the submissions made on behalf of Infraco in the adjudication and which seem to have influenced his decision. It is useful to quote those paragraphs:

"The Responding Party accepts that it has carried out a due diligence exercise on the design, it accepts that SDS was novated to it, it accepts that it was responsible for development of design and ultimately for delivering the Edinburgh Tram Network. There has been no omission by the Responding Party in not referring to these obligations in its analysis of pricing assumption 3.4.1. That is because Schedule Part 4 relates not to what the Responding Party is obliged to do under this contract but how it is to be paid for performing those obligations....the Responding Party fully accepts that the Employer's Requirements require anti pigeon measures. The Responding Party's obligation to provide anti pigeon measures is entirely distinct from how it is to be paid for carrying out this work. The same could be said about all of the change identified, the Responding Party accepts that it has an obligation to complete the design in all respects and to construct in accordance therewith, but this is a separate matter to how it is to be recompensed for doing so."

3.17.5 The adjudicator went on to firmly agree with this analysis and stated that "*I am sufficiently persuaded by the Responding Party's argument on this point to concur with them that there is a distinction between their obligation to design the works and the price that they are to be paid and I reach this conclusion as it is clear from clause 4.3 of the Infraco Contract that "nothing in this agreement shall prejudice the Infraco's right to claim additional relief or payment pursuant to Schedule Part 4 pricing.*""

3.18 In applying these tests to the changes from BDDI to IFC at both Carrick Knowe and Gogarburn, the adjudicator found substantially in Infraco's favour, albeit that in respect of Carrick Knowe, he held that three of the many changes were design development, and not a Notified Departure and so he awared his costs on a 75/25% basis with tie picking up the 75%.

3.19 On Carrick Knowe, the adjudicator did not deal with the issue of what constituted a relevant and acceptable Estimate for the purpose of establishing the value to be placed on a Notified Departure as he had not been asked to do so. However, on Gogarburn he had been asked by tie to decide that Infraco had no entitlement to additional loss and expense/ time as a consequence of or connected with the date of issue by Infraco of the INTC and or the date of delivery to tie of the Estimate. The adjudicator determined that these were matters associated with the administration of the change mechanism and he held that *'timeous administration of the change mechanism is not a condition precedent to establishing whether or not a Notified Departure has occurred and I therefore need say nothing further in relation to the submissions of the Referring Party on that point'*.

3.20 Although the main issue here was what constituted a Notified Departure, this finding was also very important to us due to the many and ongoing debates we were having with tie about late submission of Estimates etc. Mr Hunter's decision was effectively saying that the issue of whether something was or was not a Notified Departure, was separate from the issue of how it was administered. tie were found wholly liable for the Adjudicator's fees in the Gogarburn adjudication.

3.21 We were clearly very pleased with the results of these two adjudications which we considered established important points of principle which we could use in future discussions with tie in establishing what was and was not a Notified Departure where there had been a change in design between BDDI and IFC. Unfortunately and as I explain in the main body of my Witness Statement, tie didn't see it like this and we had further adjudications on very similar points where tie reverted to their original arguments (see below on Russell Road Retaining Wall and Section 7A Track Drainage).

4. RUSSELL ROAD RETAINING WALL TWO: DECISION OF ALAN E WILSON DATED 4 JANUARY 2010

4.1 This was another adjudication issued not long after Carrick Knowe and Gogarburn, which dealt with changes between BDDI and IFC in relation to a structure known as the Russell Road Retaining Wall Two.

4.2 Here, Infraco had identified that the four sections of the retaining wall had changed between BDDI and IFC. Two sections which had previously shown an L shaped gravity structure for the foundation, had changed to a cantilevered wall on piles. In addition, the two sections which had originally shown cantilevered wall on piles, now showed that the piles were of increased number, length and diameter than those shown on the BDDI drawings. Infraco had raised an INTC (no. 146) in respect of these changes.

4.3 In the period running up to the adjudication, tie had indicated that it accepted that a Notified Departure had occurred but wanted further details on who had instigated the design change. In the meantime however, tie issued a tie Change Order with reference to INTC 146 on the basis that the tie Change was urgent and therefore it instructed Infraco to proceed with the Works before the Estimate was agreed. tie was entitled to do this with reference to Clause 80.15 of the Infraco Contract.

4.4 By the time the issue got to adjudication, tie took the view that there was no Notified Departure and nothing was due to Infraco. The issues referred were:

4.4.1 Whether the change from the L shaped gravity structure to a cantilever wall on piles (the Foundations claim) amounted to a Notified Departure under clause 3.4.1.1 of Schedule Part 4;

4.4.2 whether the changes to the Foundations and to the number, size and length of the piles, being changes to the Piling, constitute Notified Departures and hence deemed Mandatory tie Changes

4.4.3 the value of each Change.

4.5 It was Infraco who referred this dispute to adjudication (and who were therefore the Referring Party).

4.6 Many of the same arguments as had been relied upon by tie in the Carrick Knowe and Gogarburn adjudications, were also relied upon by them in this adjudication (despite the fact that they appeared to have accepted that a Notified Departure may have occurred). tie therefore argued that Infraco was to deliver the whole of the works specified in the Employer's Requirements and the Infraco Proposals for a lump sum, fixed and firm price. tie also argued that he provisions for the possibility of change are

not intended to place the risk or consequences of any and all changes on tie. In particular, this applied to the normal development and completion of the design. tie again took the view that Infraco had to prove that the changes in dispute were not normal development and completion of design and also to show that different facts and circumstances apply to those changes, than existed prior to the date of the Contract. tie stated that the Price was not just for what was shown on the BDDI but also for the Employer's Requirements subject to Specified Exclusions and Pricing Assumptions. tie also maintained that the mere occurrence of the change did not result in an entitlement for Infraco as it must comply with the requirements of Clause 80. tie maintained that Infraco had not complied with Clause 80 and therefore that it had no entitlement on this basis either.

4.7 In contrast and as set out at paragraph 46 of the adjudicator's decision, Infraco's position was again to accept that it was responsible for delivering the Infraco Works in accordance with the Employer's Requirements and Infraco Proposals but as in the previous adjudications, that had to be distinguished from how much it was to be paid and any consequential time effects. This was not a normal design and construct contract where the contractor accepted all of the risk. The Pricing Assumptions were not unilateral statements in the nature of tender qualifications but were agreed terms of the Contract to provide a mechanism whereby Infraco was paid for matters that were uncertain – the alternative would have been a much higher Contract Price. In response to the tie argument about compliance with Clause 80, our position was that that clause concerned valuation, not whether or not a Notified Departure had occurred.

4.8 Another issue which arose here were arguments concerning Ground Investigation reports which although dated after BDDI, were available before the Infraco Contract was signed in May 2008. tie argued that this was knowledge which was within Infraco's possession and insofar as ground condition issues lead to the changes in the design of the foundations and piling, then it was something which was only the normal evolution of the design and should therefore have been included within the Contract Price. tie also referred to a due diligence report which reviewed the design at February 2008 and which was included with Infraco's Proposals (Schedule Part 30 of the contract). tie's argument here was that in considering what was normal development and completion of design, this information also had to be taken into account when considering whether a design change was a deviation from Pricing Assumption 3.4.1.

4.9 In deciding how to interpret these issues, the adjudicator reviewed various clauses of the Infraco Contract.

4.10 He noted that a Notified Departure was *'where now or at any time the facts and circumstances differ in any way from the Base Case Assumptions save to the extent caused by a breach of contract by the Infraco, an Infraco Change or a Change in law'.*

4.11 He also recited Clause 3.5 which I have referred to above, noting that what was important in terms of whether a Mandatory tie Change had occurred, was whether or not *'now or at any time the facts or circumstances differ in any way from the Base Case Assumptions (or any party of them) such Notified Departure will be deemed to be a Mandatory tie Change...'*

4.12 Base Case Assumption is defined as meaning the *'Base Date Design Information, the Base Tram Information, the Pricing Assumptions and the Specified Exclusions'*. As mentioned elsewhere, BDDI was the design information and drawings issued to Infraco up to 25 November 2007. Pricing Assumptions are as set out in clause 3.4 of Schedule Part 4. The Specified Exclusions are 'the items for which Infraco has made no allowance within the Construction Works Price as noted in section 3.3 below..'. The relevant part of the Specified Exclusions was 3.3 (c) which provided:

"*Ground conditions that require works that could not be reasonably foreseen by an experienced civil engineering contractor based on the ground conditions reports*

provided to BBS on 20 and 27 of November and 6 December 2007. Additionally the Contruction Works Price does not include for dealing with replacement of any materials below the earthworks outline or below ground obstructions/voids, soft material or any contaminated materials."

4.13 This latter Specified Exclusion became relevant in the adjudication because both in the due diligence report, and the GI reports themselves, there was information which showed risk in relation to ground conditions at Russell Road which tie maintained resulted in knowledge on the part of Infraco which had to be taken into account in considering the meaning of normal development and evolution of the design. In other words, even if there was a design change in design principle, shape, form and/or specification, that design change had to be viewed in light of the facts and circumstances known to Infraco which had to be taken into account when deciding whether a Notified Departure had occurred (because of the definition of Notified Departure).

4.14 Ultimately the adjudicator agreed with Infraco that the state of knowledge of Infraco was not relevant because the Infraco Contract made express provision for the information and knowledge upon which the Price and other obligations are based[1]. Clause 3.3(c) was not to be taken to have qualified Clause 3.4.1.1.

4.15 On the meaning of clause 3.4.1.1 the adjudicator sought to re-write this to include definitions of design principle, shape, form and outline specification. He also sought to rewrite the body of the clause which he claimed included a tautology.

4.16 Overall, applying his definition of how clause 3.4.1.1 was to be interpreted and applied to the changes at Russell Road Retaining Wall Two, the adjudicator determined that both the changes to the Foundations and the changes to the Piles were Notified Departures and that as such, they were Mandatory tie Changes. He carried out an extensive exercise to value these changes. He awarded Infraco a total of £1,461,857.21 out of the total being sought by Infraco of £1,840,407.73. tie's previous 'commercial proposal' had been only an offer to pay £292,237.22 (albeit this offer had been withdrawn by the time of adjudication) which shows that we were justified in taking this matter to adjudication. This was the adjudication where tie tried to misinform the media as to the true outcome of this adjudication. I have dealt with this in the main body of my Witness Statement.

4.17 Whilst this adjudication confirmed the principle of our entitlement to treat changes between BDDI and IFC as Notified Departures, it was also very important in terms of tie's arguments surrounding the inadequacy of our Estimates and our alleged failure to comply with Clause 80 of the Infraco Contract. We had submitted 'part Estimates' which dealt with the cost elements but not time. tie had previously accepted this but now argued that the onus was on Infraco to comply entirely with Clause 80, and that having failed to issue a competent Estimate, there could be no valid assessment of the 'alleged Notified Departure'. tie argued that to be a valid Estimate, we would have had to include for matters such as providing reasons for the design changes, showing compliance with design submission requirements, providing details of the factual and technical grounds for Change, showing that we had complied with the duty to mitigate, and also confirming that there was no Infraco Breach, Infraco Change or Change in Law.

4.18 In response to this, the adjudicator held that the Contract does not provide a quality standard for Estimates[2]. The only consequence of an Estimate falling below what was contractually or reasonably required would be that the other party can raise in defence the absence of information and that the entitlement could be reduced due to lack of evidence. A party could not reject an Estimate simply because it said it was badly executed. He pointed out that Clause 80.10 of the Infraco Contract provides that if parties cannot agree 'on the contents of the Estimate' it may be referred to the Dispute

[1] para 58 of the Russell Road decision
[2] para 118 of the Russell Road decision

Resolution Procedure. He also agreed that on the evidence, tie had agreed in any case to the submission of a *'part Estimate'*. He further concluded that there was no express condition precedent to an Estimate being valued.

5. TOWER PLACE BRIDGE: DECISION OF JOHN HUNTER DATED 18 MAY 2010

5.1 This was another adjudication which concerned changes between BDDI and IFC, this time at a structure known as Tower Place Bridge. Both Infraco and tie accepted that a Notified Departure occurred. There was a dispute about the value of this Mandatory tie Change, which actually related to the change in scope between the IFC drawings, and the BDDI drawings. What this dispute actually related to, was whether or not certain drawings were included in the BDDI definition, or not. tie claimed that they were not, and we claimed that they were.

5.2 The definition of BDDI in the Infraco Contract was not particularly helpful here. Clause 2.3 of Schedule Part 4 (Pricing) defines the BDDI as "the design information drawings issued to Infraco up to and including 25th November 2007 listed in Appendix H to this Schedule Part 4." However, Appendix H was simply a one page definition with one line on it which stated 'All of the Drawings available to Infraco up to and including 25th November 2007'. This was a circular definition which didn't help to determine whether the relevant drawings were or were not included.

5.3 tie claimed that lots of design information was made available to Infraco up to and including 27 November 2007 and that it was necessary to look at the whole 'factual matrix' to determine what was/ was not included in the BDDI. Information was uploaded to an electronic data room, and the information was also provided on compact disc. tie maintained that the drawings they wanted to rely on were included in the BDDI because they had been uploaded to the electronic data room.

5.4 In response, our position was that the data room was not accepted as being the primary means by which the parties had agreed that design information would be made available – it did not reflect what we understood to be the BDDI. We maintained that the share point (data room) system at the time of BDDI (27 November 2007) was very unreliable and hence, drawings had to be issued on CD and lists of documents prepared. The drawings that tie wanted to say were part of the BDDI, were not on any of our lists or CDs of available BDDI drawings.

5.5 On the facts and circumstances before him, the adjudicator could not find that the drawings which tie were relying on, constituted the BDDI. He agreed that the data room seemed to have had operational issues and multiple functions. There was no evidence of the drawings actually being included in the BDDI. The drawings which tie wanted to rely on could not be shown to be the correct base line from which to review the design change as required by clause 3.4.1.1 of Schedule Part 4.

5.6 Thereafter the remainder of the dispute concerned valuation of the changes from BDDI to IFC. There was mixed success for both parties on the valuation principles as a result of which the Adjudicator found parties liable to pay his fees on a 50/50 basis.

6. SECTION 7 A TRACK DRAINAGE: DECISION OF GORDON COUTTS QC DATED 24 MAY 2010

6.1 This is another adjudication which dealt with changes between BDDI and IFC and again concerned clause 3.4.1.1 of Schedule Part 4. The issue here was with the standard of drawings available for us to price at BDDI stage. There was only one outline drawing for the whole of the drainage in this section, which seemed to differ from an earlier preceding but more detailed drawing for part of the section.

6.2 The issues before the adjudicator were really twofold:

6.2.1 what was the correct BDDI drawing (and hence the base line) from which to review the changes between BDDI and IFC status; and

6.2.2 what did the word 'amend' mean where it appeared in clause 3.4.1.1 of Schedule Part 4. tie ran the argument (which they had also run in Russell Road Retaining Wall Two) that for there to be an amendment, there needed to be a design there in the first place. If there was no design at all for part of the drainage in this section, then it could not be said that there had been an 'amendment' to the design by the time that it appeared for the first time in the IFC drawings. In this latter situation, tie maintained that it was simply evolution and development of the design and was within the Construction Works Price in the Contract.

6.3 tie brought this adjudication but lost on both points of principle, with some issues of valuation remaining in which there was a measure of mixed success. Although it is not worth going into the details, on the first question, the adjudicator held that Infraco was right to rely on the later of the two available BDDI drawings, and where there was no detail for a particular section shown, was correct to extrapolate the information that it did have and to assume that the design of the drainage would be substantially the same along the whole length of the section, and to price on this basis.

6.4 In relation to the second argument, the pricing assumption assumes that the Design "*in terms of design principle, shape, form and/or specification (shall not be)* ***amended*** *form the drawings forming the Base Date Design Information...*" . The issue was whether an amendment could be something which was never there in the first place By reference to the Oxford English Dictionary, the adjudicator held determined that the word 'amend' is defined as *'a change or addition to a document'*. He also made reference to the Fifth Amendment to the Constitution of the United States, and noted that it could not be said that this was not an addition providing something which was not previously showing. On this basis, he preferred Infraco's interpretation that the change as shown on the updated IFC Section 7A drainage drawing, did fall to be assessed as an amendment with reference to this pricing Assumption.

6.5 The adjudicator awarded his fees 80/20 with tie picking up the larger element given Infraco's substantial success in the adjudication.

7. DELAYS RESULTING FROM INCOMPLETE MUDFA WORKS: DECISION OF ROBERT HOWIE QC DATED 26 JULY 2010

7.1 This was again, a very important adjudication decision for us. It dealt with the operation of the access and time provisions in the Contract and was an application, to a certain point in time, for an extension of time for the delays caused by the MUDFA Works. I have referred to this in summary in the main body of my Witness Statement.

7.2 There was a preliminary issue in this adjudication which the adjudicator had to deal with first of all. This was to do with whether the Estimate which we had submitted for this Notified Departure, was adequate or not. As I've explained in my Witness Statement, all Notified Departures were to be dealt with in accordance with Clause 80. tie kept arguing that our Estimates were not 'competent' because they didn't include information on mitigation (or what we would call, acceleration) measures which they believed were required. They had many other complaints about the format and content of the Estimate for this particular Notified Departure. I had to give evidence before Mr Howie at the hearing which took place on this Preliminary Issue, as did Steven Bell and Susan Clark of tie.

7.3 tie also argued that it would have been open to Infraco to pursue its entitlement to an extension of time in respect of the MUDFA delays as a Compensation Event under Clause 65.

7.4 On this preliminary point, the adjudicator held in our favour. He stated that where a Notified Departure had occurred, it could **only** be pursued under Clause 80. This was a very important principle for us to win on because it meant that, if Clause 80 applied, we believed we were not permitted to proceed with work which was the subject of a Notified Departure, where a tie Change Order had not been issued (or the matter had been referred to the dispute resolution procedure with reference to Clause 80.15). This was subsequently confirmed in the Murrayfield Underpass adjudication which I discuss below.

7.5 The adjudicator also held that failure to produce a fully detailed Estimate, did not bar our entitlement to seek an extension of time here. Again, this was a very important decision given the many debates we had had to this point in time with tie, about whether our Estimates were 'adequate'.

7.6 Following the determination of this preliminary issue, the Adjudicator had to go on to consider our overall entitlement to an extension of time. This was based on our Estimate of 6 August 2009, which showed the impact of the MUDFA Programme received in April 2009 (MUDFA Revision 8). Pricing Assumption 24 in Schedule Part 4 assumed that the MUDFA Works would be completed in accordance with the requirements of our Programme (that is, they would have been completed in advance of our works). To the extent that this was not the case (i.e. the MUDFA Works were still ongoing), then this was a Notified Departure and a Mandatory tie Change which had to be dealt with via Clause 80 of the Infraco Contract.

7.7 At this point in time, we were looking only for a decision on the amount of delay caused by the continued MUDFA Works up to March 2009. We knew that there were further MUDFA delays beyond this, and other delays caused by design changes (BDDI to IFC) but we were looking for a starting point, given that beyond the original extension of time (which was to do with the slippage in the SDS Design Programme at contract award), tie had refused to agree any updated Programme.

7.8 The extension of time we were looking for was as follows:

(a) Planned Sectional Completion Date for Section A: 187 Calendar Days (to 13 December 2010)

(b) Planned Sectional Completion Date for Section B: 185 Calendar Days (to 10 January 2010)

(c) Planned Sectional Completion Date for Section C: 251 Calendar Days (to 22 November 2011)

(d) Planned Sectional Completion Date for Section D: 257 Calendar Days (to 20 May 2012)

7.9 To put this into some context, by March 2009, we knew that the MUDFA delays to that point had caused a delay to completion of over 9 months, and this was only for part of the delay that we knew about.

7.10 Lots of issues came up in this adjudication over the course of a three day hearing before the adjudicator. Those issues concerned things such as, whether we were obliged to accelerate the works by adding additional resources where a delay had occurred (as tie maintained), or whether, in mitigating, we were entitled to stick with the resources which we had planned to use (that is, not bring in additional resources at our own cost in order to reduce overall delay). The adjudicator found in our favour on this point.

7.11 In addition, there are lots of ways of proving delay. We had chosen a prospective, and in some ways, theoretical approach to showing delay by impacting the Programme with the MUDFA Programme. In contrast, tie maintained that we should have carried

out a retrospective analysis, by looking at the actual delay caused by the MUDFA Works being delayed. The adjudicator found in our favour on this, based on a proper reading of clause 80 i.e. the Estimate required that we give our reasonable opinion about the impact on the Programme at the time the Notified Departure occurred (the Estimate to be issued within 18 days of the event arising, it could only be prospective).

7.12 When the adjudicator issued his decision, we were successful in obtaining an extension of time in respect of Section A, the depot and first tram delivered to site, of 154 days, which was the majority of what we were seeking. He did not give us an extension of time for the remaining sections because of the way in which the extension of time claim had been prepared: we had based this on 'Designated Working Areas' (with reference to clause 18.1.2 of the Contract) being the same thing as the intermediate sections in our Programme. The adjudicator unfortunately decided that this was not correct. We were entitled under Clause 18.1.2 to an exclusive licence to occupy the Designated Working Areas required to carry out our works but the adjudicator decided that this was not the same thing as the intermediate sections (which were too long) and that Designated Working Area should be interpreted as only *'denoting so much of the land, worksite or public road as the JV requires to occupy at a given moment in order to carry out that part of the Infraco Works which, according to the Programme, it ought then to be executing there.'*

7.13 In spite of not getting a full extension of time, we had won some important points of principle in this adjudication, not least:

7.13.1 that Notified Departures had to be dealt with via Clause 80, not Clause 65;

7.13.2 that mitigating delay did not require Infraco to spend its own money by increasing resources beyond those provided for;

7.13.3 that tie still had to deal with our applications for payment/ time even if it believed the Estimate was not as complete or full as it should have been; and

7.13.4 that it was correct that extensions of time be assessed on a prospective and not a retrospective basis.

7.14 As there was mixed success for both parties, the adjudicator ordered that his fees be paid on a 50/50 basis between us and tie.

8. MURRAYFIELD UNDERPASS (CLAUSE 80.13): DECISION OF LORD DERVAIRD DATED 7 AUGUST 2010

8.1 I have mentioned this adjudication decision at various points in my main Witness Statement. It was the most important to Infraco from the point of view that it dealt with one of the major points of contention between tie and Infraco: whether we were entitled to stop work when the value of a Notified Departure had not been agreed and tie had not issued a tie Change Order.

8.2 We maintained throughout that the Infraco Contract did **not permit** us to proceed with Work which was the subject matter of a Notified Departure until we had a tie Change Order. tie maintained that this made no 'commercial sense' and with reference to various parts of the Infraco Contract, including Clause 34.1, tie argued that we were obliged to comply with any instruction issue by tie or tie's Representative, and that, by refusing to comply with their instructions, we were a 'delinquent contractor'.

8.3 This adjudication related to a structure known as the Murrayfield Underpass, a new structure adjacent to the railway line at Murrayfield. Again this was a BDDI to IFC change. We intimated that this was a change by INTC in September 2008. Our Estimate was submitted in September 2009 and sought a total of £134,396.71. tie accepted that this was a Notified Departure and had accepted the value of a small

portion of the Estimate (the security gates). The dispute did not concern the remaining valuation of the change, but concerned a letter which we received from tie on 19 March 2010, which stated:

"*You are instructed to commence, carry out and complete the following works with due expedition. In the event that any item of the said works is, becomes or is alleged to be the subject of a tie Notice of Change, and Infraco Notice of tie Change, a tie Change Order or a Mandatory tie Change Order, at any time, this instruction shall be deemed to have been given and shall operate for such works pursuant to Clause 80.13.*

We remind you that pursuant to Clause 108, this Agreement constitutes an entire Agreement and in particular refer you to the terms of Clause 34.1 regarding your compliance with instructions from tie's Representative."

8.4 The issue was whether we were obliged to comply with tie's instruction as contained in this letter.

8.5 In terms of Clause 34.1, we were obliged to comply with any instruction from tie or tie's Representative 'provided that such instructions are given in accordance with the terms of this Agreement and will not cause Infraco to be in breach of this Agreement..."

8.6 Having received this instruction from tie, our position was to rely upon Clause 80.13 which states the following:

"*Subject to Clause 80.15, as soon as reasonably practicable after the contents of an Estimate have been agreed tie may:*

80.13.1 issue a tie Change Order to Infraco, or

80.13.2 except where the Estimate relates to a Mandatory tie Change, withdraw the tie Notice of Change, in which case Infraco shall be entitled to claim the reasonable additional costs incurred by the Infraco in complying with this Clause 80 in relation to that tie Notice of Change including the cost of any abortive works where tie has instructed Infraco to commence works prior to the agreement of the Estimate.

Subject to Clause 80.15 for the avoidance of doubt the ***Infraco shall not commence work in respect of a tie Change Order until instructed through receipt of a tie Change Order*** *unless otherwise directed by tie*".

8.7 We considered that the important words were the ones in bold above. We could not commence the work which was the subject of a Notified Departure, and hence subject to the Clause 80 tie Change regime, until we had agreement on the relevant Estimate by the issue of a tie Change Order.

8.8 If it didn't agree with the value we had placed on the tie Change Order there was an answer for tie - it could refer the matter to the dispute resolution procedure and instruct us to proceed meantime under Clause 80.15. If we proceeded under clause 80.15, we were entitled to recover our demonstrable costs under Clause 80.16. We didn't think that Clause 34.1 operated as tie intended - they could only instruct us to do something which was in accordance with the Agreement and which wouldn't cause us to be in breach of the Agreement. If we proceeded with the Work before we had a tie Change Order, we would be in breach of Clause 80.13.

8.9 tie's position was that they had the power to instruct under Clause 34.1 and that the last few words of Clause 80.13 made it clear that tie could either issue a tie Change Order, or it could 'otherwise direct' Infraco to proceed. tie claimed that by its letter of 19 March 2010, it was 'otherwise direct(ing)'.

8.10 Lord Dervaird found in favour of Infraco, his reasons being set out at paragraph 21 of his Decision and beyond. He did not agree that the words 'unless otherwise directed'

meant that tie could bypass the first part of Clause 80.13. tie's only alternative to get Infraco to carry out the work was Clause 80.15, that is, refer the disputed Estimate to the DRP provisions and then issue an instruction pursuant to that Clause.

8.11 He also held that Clause 80.13 and the Clause 80.15/80.16 regime, were there to protect the interests of both Parties. Infraco did not have to proceed where there was no agreement as to cost – it only had to do so if the Estimate was agreed, or if it had the protection of Clauses 80.15/16 in that its demonstrable costs would be recoverable. Likewise tie get the protection of Infraco not proceeding with work and claiming in respect of that work, where the value of the change (Notified Departure) has not been agreed. However, if the matter is urgent, tie can utilise Clause 80.15 and 80.16 at which point it becomes liable for Infraco's demonstrable costs. Clause 34.1 and 34.3 did not offer a relief for tie here either – the valuation of tie Changes has to be dealt with in accordance with Clause 80, including Clause 80.13.

8.12 We were therefore entirely successful in this Adjudication and tie had to pick up all of the adjudicator's fees. Even despite this, and as I explain in my witness statement, tie refused to accept this decision and looked for further ways to get round this issue. This was disappointing. If tie had accepted what this, and all the other adjudication decisions determined, we could potentially have found solutions much earlier than we did.

9. DEPOT ACCESS BRIDGE: DECISION OF BRYAN PORTER DATED 22 SEPTEMBER 2010

9.1 This was a dispute which we referred to adjudication. It was about the valuation of a Notified Departure at one of the trams structures - the depot access bridge (S32). It concerned changes between BDDI and IFC and was accepted by tie as a Notified Departure. We believed that we were entitled to an additional £1.2 million for the change, and an additional £550,000 in respect of the cost of the temporary works associated with the Change. In contrast, tie valued the Notified Departure at minus £4.8 million and minus £12,000 in respect of the temporary works. This meant that there was a difference between us of slightly over £6m in respect of the valuation of this change.

9.2 Part of the reason for the huge difference between us and tie was to do with the fact that tie said that the valuation of a change to an adjacent structure - the A8 retaining wall – also had to be taken into account when valuing the depot access bridge. We raised a jurisdictional argument that it was not possible for the Adjudicator to consider the Retaining Wall argument as it was not part of the dispute referred to him. Following a legal argument on what the adjudicator had to consider, tie were found to be correct on this point.

9.3 However, when he went on to consider the valuation of the Notified Departure, the adjudicator (Bryan Porter) found that he did not agree with tie's argument that the Retaining Wall could not be separated from the Depot access bridge as they were one continuous feature. He found that they could be separated and that all he was being asked to do was determine the value of the portion which related to the access bridge.

9.4 There were a number of other measurement/ valuation disputes between us and tie on various aspects of the change. On all of these, we were largely successful, the adjudicator determining that the value of Notified Departure was approximately £800,000 and the value of the temporary works was £433,000. As a result, we were found liable for the fees in connection with the jurisdictional challenge which I refer to above (which were minimal) and tie were found liable for all of his fees on the main body of this dispute.

9.5 This was another example of us having to take something to adjudication which, had tie been behaving sensibly, should have been capable of being resolved by our respective quantity surveyors.

10. LANDFILL TAX: DECISION OF LORD DERVAIRD DATED 28 NOVEMBER 2010

10.1 This adjudication was concerned with payment by the Infraco of Landfill Tax for the disposal to landfill of contaminated material removed from the Infraco Works.

10.2 The Infraco required to deal with contaminated material in the course of the Infraco Works. That involved disposal of contaminated material to landfill, at which point the Infraco required to pay the landfill site operator Landfill Tax corresponding to the quantity of contaminated material disposed of.

10.3 The disposal to landfill of the contaminated material represented a Notified Departure under the Infraco Contract as Specified Exclusion 3.3c (set out earlier in my statement) provided that the Construction Works Price did not include for dealing with replacement of any materials below the earthworks outline or below ground obstructions/voids, soft material or any contaminated materials. The Base Case Assumptions also included Pricing Assumption 3.4.11 which included that *"The Infraco shall not encounter any below ground obstructions or voids, soft material or any contamination..."* As such, the Infraco was entitled to recover from tie the payments made in respect of Landfill Tax.

10.4 Change Estimates for INTC's 506 and 551 which related to the disposal of contaminated excavation arisings at Russell Road Retaining Wall 4 were the first INTC's to be submitted which included costs for the payment of Landfill Tax. tie responded to these INTC's denying liability for payment of Landfill Tax associated with the disposal of the arisings.

10.5 Subsequent INTC's were issued by the Infraco which included Estimates for repayment of Landfill Tax for contaminated material. tie refused to agree the Estimates or pay any monies in relation to Landfill Tax.

10.6 tie's position was that the Infraco was not entitled to be reimbursed for the Landfill Tax paid on the disposal of contaminated materials because the Infraco failed to apply for an exemption to payment of Landfill Tax.

10.7 The Infraco disagreed with tie's position. The Infraco was not obliged to apply for an exemption, and even if it had, it would not have received one given that the contaminated materials disposed of were not eligible for an exemption - exemptions to payment of Landfill Tax were limited to waste resulting from reclamation of contaminated land falling within certain categories. Waste arising from construction activities did not qualify, and so the Infraco Works would not have qualified.

10.8 Following tie's refusal to agree Estimates or make any payments in respect of Landfill Tax, the Infraco raised adjudication proceedings asking for certain declarators in relation to its entitlement to payment for Landfill Tax, the main ones being that (i) it had not been established that the Infraco Works would have qualified for an exemption to payment of Landfill Tax; (ii) the Infraco was not obliged to apply for an exemption; and (iii) the Infraco was entitled to be reimbursed for Landfill Tax paid on the disposal of contaminated materials.

10.9 The Adjudicator, Lord Dervaird, found wholly in favour of the Infraco confirming that the Infraco Works would not have qualified for an exemption to payment of Landfill Tax, but even if it had, the Infraco was not obliged to apply for such an exemption, and that the Infraco was entitled to be reimbursed for Landfill Tax paid on the disposal of contaminated materials.

10.10 The Adjudicator found tie wholly liable for payment of his fees and expenses.

11. **APPROVAL OF SUB-CONTRACT TERMS: DECISION OF ROBERT HOWIE DATED 13 DECEMBER 2010**

11.1 This was an adjudication which was concerned with the subcontracts which Infraco was to enter into. As will be clear, each of the three parties to the Infraco had very different skill sets and would be carrying out different elements of the work required to complete the Project.

11.2 As BCUK, we had prepared a number of subcontracts with subcontractors who we wanted to appoint for various different parts of the works. In accordance with Clause 28 of the Infraco Contract, we required to get tie's approval to enter into subcontracts and then also to get their approval to the form of subcontract.

11.3 Paragraph 28.4 provided as follows:

*"The Infraco shall obtain **tie's** approval to the form of sub-contract for any work which is to be sub-contracted to each Key Sub-Contractor in advance of such sub-contract's execution. **tie** shall notify the Infraco of its approval within 10 Business Days of a request for such approval by the Infraco which approval may only be withheld by **tie** acting reasonably if:*

*28.4.1 the sub-contract does **not in substance reflect the Infraco and the relevant Key Sub-Contractor as parties to such sub-contract**, the provisions listed in Schedule Part 38 (Approved Suppliers and Sub-Contractors and Trades) Part II in so far as they relate to the work that is to be sub-contracted; or*

28.4.2 the terms of the sub-contract will result in Infraco being unable to perform its obligations under this Agreement."

11.4 The dispute which we eventually referred to adjudication was whether tie was correct to hold that all three members of the Infraco (BCUK, Siemens and CAF) required to be parties to each and every subcontract that any one contractor entered into. We believed it would cause an undue administrative burden if this were to happen: it would take a long time for each of the other parties to agree the terms of one of the subcontracts that BCUK for example were intending to enter into. We considered tie's position to be unreasonable.

11.5 Ultimately, this was just another example of tie being unreasonable but it was beginning to impact upon our ability to enter into subcontracts and was therefore holding up issues. We referred the matter to adjudication and Robert Howie as adjudicator, issued his decision on 15 December 2010. He found against Infraco holding that the correct interpretation of clause 28.4.1 (and in particular the words highlighted in bold above), was that all three parties had to enter into each and every subcontract.

11.6 Ultimately when we reached agreement at mediation in March 2011, and as reflected in the terms of MoV 4 which was negotiated thereafter, it was acknowledged that this provision was actually unworkable. By clause [15.1] of MoV 4 it was acknowledged that there was no requirement for each Infraco Member to be a party to any sub-contract with any Key Sub-Contractor.

12. **PAYMENT OF PRELIMINARIES**

12.1 In around March 2010, tie started to deduct sums of money from our interim payment applications which we believed were due in respect of our Preliminaries costs. Preliminaries are sums included in the Construction Works Price in respect of costs which we incurred due to the passage of time. So for example, this would include the cost of maintaining the site offices at Edinburgh Park, and other consumables such as telephones, site vehicles etc. The Interim Certificates affected by tie's deductions were numbers 29, 30, 31, 32 and 33 from March to July 2010.

12.2 This was at around the same time as tie were trying to make our lives difficult on so many fronts : they were serving Remediable Termination Notices, many tens of letters per week (if not into the hundreds), performing audits, denying us permits to work and was at the same time as many adjudications were under way. It seemed part of the campaign to make life as difficult as possible.

12.3 tie's argument was entirely spurious. Schedule Part 5 of the Infraco Contract set out the sums of money we were to be paid on a monthly basis. There were sums due in respect of Preliminaries which were set out in the Milestone Payment Schedule. These were sums of money spread over the 42 month period of the Project. We believed that these sums became payable on a monthly basis, simply due to the passage of time.

12.4 Having paid these sums monthly until February 2010, tie then decided that the Preliminaries were Construction Milestones or Critical Milestones which required the issue of the appropriate Certificate, before the sum became due for payment. We disagreed fundamentally with this, and believed that in accordance with the relevant clauses of the Infraco Contract (Clauses 66 and 67), Preliminaries were due for payment on a monthly basis being "other costs or expenses which have been expressly approved by tie and/or to which the Infraco is entitled in accordance with this Agreement...." (Clause 66.5).

12.5 We referred this issue to adjudication in November 2010. Lord Dervaird found in Infraco's favour on this point, determining at paragraph 16 of his Decision that:

"In these circumstances it appears clear that Preliminaries, not being identified other than by reference to the passage of time, are simply a time based cost. Schedule Part 5 refers to them solely in respect of the passage of each of the months specified. It follows that the Preliminaries fall due for Payment under Clause 66 and 67 of the Infraco Contract as other costs or expenses to which the Infraco is entitled in accordance with this Agreement".

12.6 Again, we had won on a point of principle and a point of contractual interpretation. The adjudicator however held that we had not submitted enough supporting information on the valuation of the preliminaries in each of the affected months and so we were liable for 25% of his fees with tie liable for the remaining 75%.

12.7 This decision was actually issued during the mediation process with tie from 8 to 11 March 2011.