

THE EDINBURGH TRAM INQUIRY
Witness Statement of Steven Bell.

Statement taken by Alistair Turnbull. Solicitor present.

Introduction

1. By way of introduction, it would be helpful if you could provide an overview of the following matters:
 - (1) What were your main qualifications and vocational experience prior to joining TIE?

My curriculum vitae (**CVS00000036**) has been submitted to the Inquiry. I graduated from Strathclyde University with a First Class Honours Degree in Civil Engineering in 1987. I am a Chartered Civil Engineer and a member of the Institution of Civil Engineers. I am a Fellow of the Institute of Directors, a Fellow of the Chartered Management Institute and a Fellow of the Permanent Way Institution.

My current occupation is Engineering Director North with Amey Rail Limited.

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

My experience has been as an infrastructure professional and I worked initially with British Rail. I then worked with First Engineering, which was bought by Babcock. I was technical director of First Engineering Ltd, Managing Director of the Track Group and associated activities within First Engineering (which is now known as Babcock Rail). I then joined TIE in September 2006. My experience relates mainly to heavy rail infrastructure works including maintenance, asset renewals, multidisciplinary projects, plant provision, consulting services and design.

The major infrastructure projects I worked on were delivered through works at First Engineering and Babcock on contracts and frameworks primarily for Railtrack and Network Rail between 1996 and 2006. I did not have a particular tram and light rail project focus.

- (3) What was your experience in utilities diversions, design and procurement matters?

I acted as a designer in the mid 1990s but more recently, as part of the First Engineering business between 2003 and 2006 I ran the consulting arm of the design business on several railway-related frameworks in the transportation field.

In procurement matters, it was clearly important to have a supply chain while I ran parts of First Engineering business. I had responsibility to review the governance arrangements for the business that I represented. This included contributing to and influencing the business' strategic approach to its procurement arrangements as both a supplier and client.

In relation to utilities provision, we interfaced specifically with the utility specialist providers and statutory utilities when we were operating. We therefore had a liaison and an understanding of the relationships. We would not normally undertake utility diversion works outwith the railway infrastructure but we did extensive work to railway utilities which included telecommunications, power supply, drainage and control systems. I tended to be focused on the rail envelope and those systems are common and have similar engineering principles outwith the rail sector. For example, the heavy and light rail control systems are very similar systems.

- (4) To what extent was your experience in heavy rail transferable to a light rail scheme, such as the Edinburgh Trams Project?

My experience was very much transferable. The role that I originally moved to TIE for was an engineering procurement leadership role and thereafter as Tram Project Director. I had been in leadership roles on multi-disciplinary projects which most rail project schemes are. They involve key integration of good value technical solutions and a key understanding of the stakeholder management requirements and of the asset owners and funding bodies, Transport Scotland being a common funding body for all major rail projects. One of the things you are looking for is an output for the asset owner - a transport solution or infrastructure, which is very similar whether it is a major railway scheme or a light rail project.

When I joined TIE there were three ongoing schemes: Stirling/Alloa/Kincardine (SAK) which was a heavy rail project, Edinburgh Airport Rail Link (EARL) which was a heavy rail interface scheme which also proposed significant civil engineering works, and the Tram Project which was a light rail scheme with a key city centre on-street highways section and ran parallel to heavy rail for much of its route, so there were big overlaps irrespective of the specific light rail elements.

I left First Engineering or Babcock, as they then were, in the summer of 2006. Later that summer, I was looking at a range of transportation opportunities and Susan Clark, who I had worked with at Railtrack, and was working on the Edinburgh Airport Rail Link at the time, suggested that TIE were seeking an Engineering and Procurement Director. After an interview with a number of senior TIE management, including Willie Gallagher, the TIE

Executive Chairman, I was offered, and accepted the role of Engineering and Procurement Director.

2. During your employment with TIE:

(1) What were your job titles (and between what dates) and what were your main duties and responsibilities in each role?

My initial job role with TIE, from September 2006 was Engineering and Procurement Director but from day one I also took on responsibility for Health and Safety Leadership. My key responsibilities were for TIE's engineering, technical standards, health and safety, risk and procurement and supporting all other key projects. That included Edinburgh Trams, SAK and EARL.

That remained my primary role until the end of 2007/start of 2008.

TIE were supporting the Forth Estuary Transport Authority (FETA) so I did some work with FETA. It was an East of Scotland transport interest and was a smaller element of my workload. That was 2006 and into the end of 2007, thereafter my role was as Tram Project Director to October 2011 when I left TIE.

I was not the first Project Director. My immediate predecessor was Matthew Crosse (who undertook the role from December 2006), his predecessor was Andie Harper, who was in post when I joined TIE in September 2006. There was a Project Director for the tram project before Andy as well (Ian Kendall).

From May 2007, when the SNP became the minority administration at the Scottish Parliament elections, transport priorities were changed. They chose to end support for EARL and that strand of the three projects was halted. Similarly, during 2007 TIE's involvement with SAK was concluded so the main focus was on the Edinburgh Trams. By the end of 2007 there were a number of handover activities and I also focused on the assurance and engineering issues in closing out TIE's input to those schemes effectively.

At the end of 2007 the Tram Project Director, Matthew Crosse, was working through the procurement phase and was expected to conclude that work in late 2007/early 2008 with commencement on site thereafter by the successful infrastructure contractor. I was then asked by Willie Gallagher to take up the role of Edinburgh Tram Project Director for the delivery phase.

(2) In each role, to whom did you report and who reported to you?

In my Engineering Procurement and Safety role between 2006 and the end of 2007, I reported to Willie Gallagher, the Executive Chairman. I reviewed some of the work on SAK but I did not have a large group of direct reports at that time. Looking forward to the

tram project, I continued to report to Willie Gallagher until his departure, after which I reported first to David Mackay who became Executive Chairman, and then to Richard Jeffrey following his appointment as TIE CEO in 2009. After Richard left in 2011, I then reported to Vic Emery until I left TIE in October 2011.

There were a number of people who reported to me as Tram Project Director. That included Susan Clark, initially as Programme Director, later as Deputy Project Director; Frank McFadden, Infracore Director for infrastructure contracts; Dennis Murray, Commercial Director for TIE; Graeme Barclay who looked after the MUDFA and utility works; and a Health and Safety Lead, Bob Cummins. As we developed the organisation we also recruited Bob Bell, the lead on rail systems-related works, he focused on third party works and some of the system preparation. Tram Project Board (TPB) papers that contain the organisational charts and governance structures are the accurate source of information for reporting lines at that time.

The EARL and SAK Projects

3. We understand that when you joined TIE you worked, initially, on the Edinburgh Airport Rail Link (EARL) and Stirling, Alloa, Kincardine (SAK) Railway projects.
 - (1) It would be helpful if, by way of overview, you could outline your main duties and responsibilities in relation to each project?

While working on EARL and SAK I had a general responsibility to look at the engineering and safety aspects of TIE's activities on both those projects, the engineering assurance arrangements and the approach that the TIE delivery teams were taking. I would also work with the Project Manager or Project Director for both schemes looking at specific technical problems and helping take forward solutions to those problems.

The EARL project was at quite an early stage in its development so we were looking at technical scenarios and options to solve some of the tunnelling options. The proposal was to create a train station underneath the runway at the Airport so there was complex civil engineering as well as railway engineering associated with that. We consulted industry contractors throughout the UK and Europe on best options and solutions. There were options for Transport Scotland and the other interested parties to consider. EARL was more of a connectivity project that had a complex piece of engineering within it rather than just building a railway station underneath a live airport runway, challenging as that is.

SAK was a much more specific piece of work where TIE had a role as the Project Manager advising Clackmannanshire Council. They had technical support from a company called Jacobs who were

undertaking a specific role in that contract and the contractors delivering that job was a Joint Venture featuring First Engineering (Babcock) and BAM Nuttall. Those arrangements pre-dated any involvement I had, but there was a significant issue surrounding ground conditions and we assisted with issues arising from extensive ground remediation works and repair that was required so there was a challenging problem on SAK.

- (2) For completeness, when and why did you stop working on the EARL and SAK projects and start working on the tram project?

The Government made a decision not to take the EARL scheme forward so there was a transition to close it down competently between the summer and autumn of 2007. With regard to SAK there was a complex arrangement that incorporated TIE giving advice and support to Clackmannan Council. I think the job was appointed back in 2005 and it was a multi-disciplinary piece of work. The funding came from Transport Scotland and in 2007 a decision was made to simplify the governance arrangements. There was no requirement for input from both TIE and Jacobs so it was simplified. TIE then concentrated solely on the tram project. That occurred during the summer of 2007.

4. A newspaper article on 12 July 2009 reported that concerns had been raised about TIE's management of the SAK project which was reported as costing more than double the original budget of £37m (and which opened in May 2008, apparently three years behind schedule) (CEC00784171). We also understand that the management of this project was transferred to Transport Scotland.

- (1) Do you have any comments on the concerns raised in that article?

That article was released in the middle of the Princes Street works. It was an interesting alignment of an old story (SAK) against a current theme regarding the delivery of the tram works through Princes Street, the trams being at the forefront of Edinburgh news at that time. In relation to TIE's involvement with SAK, on the overall performance, there were issues with risks that were retained by the client, in this case Clackmannan Council, and TIE helped by working with both Jacobs and the client to try and resolve those risks fairly, and at as low a cost as possible. TIE brought in an external claims consultant to look at some of the arguments that the contractor (BAM Nuttall) was making at that time and I believe TIE did the right thing and discharged their role properly. The quote from me in the article is a clear summary.

- (2) Why (and when) was management of the project transferred to Transport Scotland?

I do not recall the management of the SAK project actually being transferred. At the end of the day we concluded our role and I

would not normally have seen exactly what was subsumed within the responsibilities of Jacobs and/or Transport Scotland. TIE had set out their view on programme forecasts and the issues and items and it was all visible to both Clackmannan Council and Transport Scotland. I recall discussing those matters with Transport Scotland. The TIE Project Manager on that job was Richard Hudson. He had extensive heavy rail experience and was diligent in trying to resolve the challenges and issues in line with the responsibilities and risk allocation under the NEC contract. That was part of our obligation to try and close that off. I had no issue with Transport Scotland wanting to streamline the governance, but I do not know specifically what they took on themselves, if anything.

The Trams Project - General

5. By way of overview:
(1) When did you first have responsibilities in relation to the tram project? What were these responsibilities? Did your responsibilities in relation to the tram project change over time?

I had a general obligation to TIE between 2006 and 2007 around the overview on engineering assurance and safety. During 2007, Willie Gallagher asked me to give some support to Graeme Barclay, who was the Construction Director for the utilities work, to try and unblock some of the challenges Graeme and his team were facing. That related to the interface with statutory utilities such as Scottish Water, SGN, British Telecom, Virgin Media etc and some of it related to the works with the MUDFA contractor, Alfred McAlpine (AMIS) who were later bought by Carillion.

Therefore there was a practical interface that was required and they were some of the topic areas that we went on to tackle. It was Graeme Barclay's responsibility to take forward but support was required and that is why I got involved. That led to follow up with the SDS provider, which was Parsons Brinckerhoff (PB), where we were having challenges not only with utilities designs but also in producing their main design works and deliverables. That was from mid 2007 onwards, and I was involved in some of those specific areas, but that still sat formally under the accountability of Matthew Crosse, as Tram Project Director.

My responsibilities did change over time. I took over the role of Tram Project Director at the start of 2008, for the preparation of the delivery phase, albeit, Matthew Crosse and Geoff Gilbert still had responsibility for closing out the procurement phase. The Infracore contract was agreed and signed in May 2008 so there was a transition from the very end of 2007 through to about May 2008 when Matthew closed out the procurement-related themes formally. I was focusing on trying to resolve the utility diversions and design

themes at that time, then closing out the final issues on the contract agreement.

Later in the lifetime of the project there was a more active engagement from CEC and their advisors post Mar Hall (March 2011). So in the months leading up to me leaving the project in October 2011, I completed a transitional, professional close out stage with some of those areas, in preparation for handover.

CEC were clearly and consistently involved in all of the agreed governance arrangements and they were represented at the TPB and on TIE's Board through the project's life. There was transition from the spring of 2011 onwards where CEC brought in Sue Bruce's special advisor Colin Smith of HG Consulting in a formal certifying role. That was also the point that Turner and Townsend were brought in as project managers.

- (2) We understand that you attended meetings of the Design, Procurement and Delivery sub-committee from around January 2007 and the MUDFA sub-committee from around February 2007? What were your responsibilities in relation to each these matters (i.e. design, procurement, delivery and utilities)?

They were about engineering assurances and looking at what principles and what solutions we were trying to resolve. It was more about tram specific issues rather than the generic responsibilities that I had. Part of it was challenging some of the proposals the designer put forward, testing other solutions that might be available or trying to unblock some of the barriers within the respective organisations to get the project moving forward. In my view, there was an obligation on the TIE leadership team, including myself, to look ahead and see what potential problems or issues might be, how they could be dealt with and ensuring actions were in place or that we were challenging our supply chain, our stakeholders to make sure they had addressed actions as well as ourselves. TIE were challenging, supporting or escalating where appropriate and identifying where there were potentially issues to resolve.

- (3) We further note that you were on the Infraco Tender Evaluation Panel (see e.g. the slides on Infraco Tender Evaluation dated 11 May 2007, CEC01656654, page 16). Again, what was your role and involvement in that matter?

The slide on page 16 is helpful in providing the answer The panel was part of the overall approved approach by which TIE conducted the procurement process. They weighed up the different offers that bidders put forward for the Infraco contracts and sought to clearly demonstrate objective assessments. It weighed up the differences between technical proposals and the financial benefits or dis-

benefits of those proposals as transparently as possible. It also set out the methodology behind the decision making process.

My role, in particular, was as part of the Evaluation Panel, which is shown on the slide entitled Evaluation Team Structure Overview (page 13). It shows the role of the management team going through the procurement process. Then there were the individual specialists that contributed in terms of the evaluation and negotiations who presented their recommendations to the Evaluation Panel. I sat on the Evaluation Panel and we reviewed and tested what was put in front of us. We gave some guidance and once we were content with the team's report we made our recommendations to the TPB Procurement Sub-Committee. That was the formal governance arrangement at that time.

- (4) We understand that you attended meetings of the Tram Project Board from around August 2007 onwards and it would be helpful if you could explain, in general terms, how meetings of the TPB were conducted and your involvement?

In general terms they were conducted very professionally, they were diarised and there were key formal members of the TPB and other individuals in attendance including myself. The meetings were chaired by David Mackay and key members included Neil Renilson the Chief Executive of TEL and Lothian Buses, Bill Campbell who was the Operations Director for Lothian Buses and Willie Gallagher the Executive Chair of TIE. There was also key representation from CEC - I think it was Andrew Holmes (CEC Director of City Development) and Donald McGougan (CEC Finance Director).

TPB meetings were formal with a chair, papers and reports were circulated in advance and there was a clear agenda. There tended to be a PowerPoint led presentation by the Tram Project Director to fully brief and communicate key issues with the Board. Then we had a structured debate around any key decisions required and there was the opportunity for anybody in attendance to raise queries or questions. It was scheduled every month.

It continued throughout my time albeit some of the representatives changed. David Mackay chaired it from the first time I was there until he left then at the end of 2010 and Vic Emery chaired it from early 2011. There was also representation from elected Councillors so the Transport Convenor and two others were regular attendees. The SNP declined to appoint a representative on principle. It was always minuted, actions arose and we always addressed any previous actions arising out of previous Board meetings. The Board looked at the whole tram project requirements and obligations and dealt with matters such as design and utilities diversions and the Infraco and Tramco contracts. It looked ahead to operating the tram

and key choices and decisions around the operating arrangements, including working arrangements with Lothian Buses.

There was usually constructive debate and most meetings lasted about three hours. If any follow-up was required it would be identified in the minutes and actions, and then dealt with before the next TPB meeting. It was not intended to be a verbatim minute of the meeting, more a summary and then action points as necessary.

6. A number of documents noted difficulties and delay in carrying out the design for the tram project. By way of overview:
 - (1) What were the main difficulties encountered in carrying out the design work? What were the main reasons for these difficulties?

There were a number of difficulties that are relevant here. One would be that the designer was required to consult with a range of stakeholders, some of whom had statutory powers, such as CEC, or had a key third party agreement with CEC, like Forth Ports, who had a specific view on what they were looking for. The designer had a difficult task in assimilating what were, sometimes, conflicting views.

The designer ran a series of engagement workshops and sessions to try and get a consensus on the emerging design but did not always get 100% consensus. There was a challenge in some of the design choices and that probably took longer than most people expected it to. I think the SDS contract was awarded in 2005, so it had been running for about 18 months when I joined TIE.

There were some practical and technical challenges in some of these issues. An example would be Picardy Place where there was a difficult traffic management arrangement that needed to be solved. A complex track had to be laid and there were lots of engineering or technical choices that had to be weighed up. There was a difficult technical range of solutions that were not necessarily what people wanted. There was always a challenge of wanting the best in class but at an economic price. Some people wanted the best of the best in certain circumstances and that included parts of the Council, which is understandable, but there was a budget that we had to work within.

I think the SDS provider had some challenges around putting the right consistent design teams on the job and the right resources. Some of their submissions were not as good as they should have been and were rejected by the Council's approvals team. Sometimes that was justified, sometimes not, it depended on circumstances. There is no doubt the Council sometimes had legitimate reasons not to accept a design because it was not good enough, so there were quality issues to resolve as well.

There were also change issues that arose where legitimate choices or changes were made, sometimes led by the Council, that changed the original design which has a knock-on effect on the deliverables and when they would be produced, causing a delay and usually a bit of frustration all round.

There were also some aesthetic challenges. There was a Tram Design Manual which laid out the principles of what the project and the City were trying to achieve and it was clearly intended to make an effective product, but not at any price. So there was always a bit of a constructive tension between going for the absolute best and making it affordable. Then there was some iteration with key architects and key officers, wanting it to look a certain way, that could sometimes be a very expensive solution.

The SDS provider was also doing utilities designs so they had to agree an envelope for the tram system and what utilities that would then need to be moved out the way. That was a big challenge because not all of the information was available from the statutory users or providers and what was provided was sometimes not in the correct place. We also had an issue with the process by which we agreed a design solution for a diversion, in that the design needed to go back and forwards between all the utilities for consolidation, so that took some time.

All these difficulties had the potential for delay, particularly if they were on the critical path for what was agreed as the programme.

There were a number of live issues to be resolved and that is why Willie Gallagher first asked me to get involved in 2007. He told me there were a lot of things building up that had not been resolved in the timeframes TIE wanted and he wanted them resolved. He wanted a fresh pair of eyes and an additional skillset looking at these issues to see if we could help unlock them.

- (2) What steps were taken to address these difficulties?

I think these are covered when we get into some of the detailed questions later.

- (3) Were these steps successful (and, if not, why not)?

Some of them were and some of them were not successful. We will come on to that as well when we look in more detail.

7. A number of documents noted difficulties in relation to the utilities diversion works. By way of overview:
- (1) Prior to the utilities works being undertaken, what investigations took place (including by whom and when) to identify the utilities that would require to be diverted and replaced? What investigations, for example, were made with the statutory utilities companies (SUCs) and with CEC? Were any difficulties encountered in carrying out these investigations?

Some of this took place prior to me joining TIE. There was a work stream that identified the expected scope of the utilities diversion contract. That included asking all the statutory utilities, including the Council, to provide details of the whereabouts of all their assets or equipment. There were also some targeted trial holes and excavations where they tested certain locations. That was pretty much a sample, it was not extensive.

There was an expectation of unknowns and people not having the right location of such unknowns on their drawings. However there was also an element of provisional sum or allowance which is part of managing the risk or contingency associated with utilities diversions. That is my understanding of what the framing of it was before I became involved.

Around the first week in October 2006 the MUDFA contract was signed (a week or two after I joined TIE). There was an outline stage of planning that was intended to be undertaken by the MUDFA contractor (Pre Construction Agreement) that assimilated some or all of the final solutions for each of those elements. There was a reliance on information from SUCs and CEC and the quality of information coming from them was mixed. I do not believe they did not share information deliberately, however some of it was very patchy, inconsistent or just plain wrong. The statutory utilities and CEC understood they were required to provide the information but it was not necessarily the most important thing on their radar. Those were some of the areas that we sought to improve during the 2007/08/09 engagement with the statutory utilities but it certainly was an area that would have been more effective if there had been more active engagement at the very start of the project.

The SUCs and CEC were all asked for details of all of their assets across the route (as they are obliged to provide). They were also asked to highlight their rules or constraints around what could be designed or used in common trenching or options for technical solutions that might have been available to SDS to consolidate. TIE clarified from them which things they were going to undertake themselves. BT, for example, would not let a multi-utilities contractor undertake their cabling and jointing of their fibre optic cables. They asked for new chambers and new ducts to put cables in to their specification, then came and installed the cables themselves. They were paid to do by the Project undertaking the

actual cabling and ducting and the design associated with that and fed it into SDS for consolidation. One of things that was clarified at this point was which elements of design were being undertaken by SDS and which were being undertaken by the SUC and then provided to SDS for consolidation.

The difficulties we encountered are as we have already covered; availability and information. The records were mixed, at best, some were very poor and some were slow in being delivered. It would be fair to say the project team did some research with previous tram schemes and they all highlighted the need for trying to get the utilities diversions done in advance and the challenges with statutory utility companies around provision of information. Therefore it was no surprise that these were difficult things but that does not make them any easier. There were many very valid difficulties which were enhanced given that Edinburgh is a very old city and some of the infrastructure dates back to the mid-19th century. Some of the gas and water pipes that were changed were from around 1870.

The information they hold may not be correct. It is the best information anybody has available but it may have been really old and the records have been lost.

- (2) Which organisation was primarily responsible for ensuring that accurate and sufficient utilities investigations were carried out?

TIE, as the client, sought this information from all of the utility providers. We also asked the SDS design provider to look at where they thought they might need additional information and they were working as a designer for us at that time. Sometimes, we sought further amplification on specific issues, for example BT, and what combinations or solutions of information they might have on say, manholes or ducting arrangements that would be required.

We did also ask the utilities of the level of confidence they had in their own information but they did not provide a blanket assurance either positive or negative and said they had given all they had without providing any comment on how good, bad or indifferent it was. For me, that was weak in terms of their obligations. I can understand why they might not have some of the information but it is not the fault of the Tram Project if a statutory utility provider does not have knowledge of their own assets.

In France for example the legal arrangement is different. If you were building a tram scheme you would tell the utility provider you would be doing it in 3 years and where it would be. Their SUCs are then obliged to move their equipment in advance, not the scheme itself, so that is quite a different structure to what we have in the UK.

As a client we are undertaking this scheme so we need to provide to the MUDFA contractor all the information we could get but there is also a clear responsibility of the utility to provide it to us.

Similarly, if we identified gaps, my view is that we have got the responsibility over what we can do about closing those gaps. So, we got the SDS provider and others to go and do specific surveys. Later on in the process we also ended up getting Carillion to do survey work. An example would be Scottish Water where they were very slow in providing detailed manhole information so we agreed to pay Carillion to go and find out the detail because it was going to cause additional delay to MUDFA and potentially Infracore if we did not have that. Had we not done that we might still be sitting here waiting for it. The responsibility sat with Scottish Water, but they did not have it or did not have easy access to it so we agreed how we were going to overcome a problem that was not ours.

- (3) What agreements were entered into with the SUCs to facilitate obtaining their agreement to the utilities works?

There was a standard approach with agreements and most of them pre-date when I joined TIE because it was part of the precursor to the MUDFA contract. Agreements were being made between CEC and the relevant utilities around the approach that was going to be taken for the individual works. We had the powers, or whoever was going to do the work, had the powers to actually go in and undertake that work.

From an authority point of view, we needed the Tram Acts in place to allow CEC to have the powers to do work within the corridor for the tram works and they devolved that authority to TIE and our contractor, in this case Alfred McAlpine/Carillion, otherwise we would not have had a proper legal basis to do it and everything would have gone through a statutory utility provider contractor.

Not all of the agreements were fully complete and executed and I think, from memory, Scotia Gas Networks was one that took extra time to resolve because I remember having their argument around betterment rates and the rules by which we got credited back.

There is a clear set of processes that deal with asking for estimates, agreeing to pay estimates and calculating what it actually costs. In some cases the statutory utility providers were paid an amount because they did some of the work themselves. Sometimes, if we operated one of their assets that were very old, there was a betterment calculation undertaken and they credited us back because we had upgraded their asset. The upgrade then goes on to their regulated asset base which is the way in which they can charge customers. It is a complex calculation which

should have a structured approach but betterment charges was an area we had some robust debate on.

In my experience on previous projects you tend to deal with only one or two utilities and you 'piggy back' on their arrangements to do diversions. They do it on your behalf and you pay them. However, on this project, where so many things were going right through the centre of Edinburgh for on-street works, one of the big challenges was that we could not ask businesses and residents to continually put up with the road being dug outside their premises or homes. It was not acceptable and would be very time-consuming because you would gridlock the city. That is one of the reasons for the multi-approach where we would incorporate utility diversion works into the main Infraco contract. However, given the challenges we had in getting the information, it was very difficult for the Infraco contractor to price to deal with the risk of delay. That is why the aim was to have utilities completed in advance to then allow the Infraco a free run in building the tram.

You are not normally dealing with so many multi-utilities together in such a prominent and traffic sensitive area. Traffic congestion was one of the reasons for doing the scheme, since moving people about is difficult in Edinburgh. So there is a vicious circle; you have to disrupt what is there now in order to improve it, which makes things worse for a while.

- (4) What were the main difficulties encountered in carrying out the utilities works? What were the main reasons for these difficulties?

We have covered many of these but just to summarise:

- Lack of accurate information from the utility owners.
- Congested sites, which meant we knew what was there and had a plan to move it, but when we dug it up it would not fit because there was not enough space or there were unknown obstructions.
- Additional services that may need to be incorporated.
- Extensive traffic management and diversion work required to enable access to undertake the utilities diversions.

We did try and use some non-destructive testing to find some of that but it was not 100% guaranteed as successful.

The big challenge was working out what access to take to allow the work to be completed and still keep the city moving. We had to do extensive traffic modelling, diversions and temporary traffic constructions. It was much much more extensive than anything I have ever seen in Edinburgh or, probably, any other city. It was an area where we had a very high bar to clear and it was costly and time-consuming. I think it mitigated the delay as best could be done but it was not easy. There were areas of the city with limited access, so if you missed the window, for whatever reason, there

could be a significant delay. There were also embargoes for certain areas of the city. At Forth Ports they have an embargo from October to January to avoid the pre-Christmas season. Princes Street and the West End had to be avoided during the Festival in August and in December in the run up to Christmas so there were constraints and programming on all that.

These matters are very extensive and there is a lot of planning. You also have to consider other pieces of emergency work that may take place which are nothing to do with the tram project. That causes further congestion or constraint so that integration was very challenging.

Then there were issues with certain times of the year, besides the embargoes, when utilities work cannot be done. Gas demand in the winter is high so there were certain things we could not do to the gas network between November and March.

There were also certain key critical locations that would have been financially debilitating if we had a problem during any utility works. For instance, there were lots of fibre optic cables running into RBS at Gogarburn and St Andrew Square so they were, rightly, hypersensitive about any interventions and outages to transfer assets across to other fibre optic cables.

- (5) What steps were taken to address these difficulties?
- (6) Were these steps successful (and if not, why not)?

I think (5) and (6) are probably best dealt with in the detail of later questions.

Events in 2007

- 8. Notes of meetings on 4 and 6 June 2007 between you, Geoff Gilbert, Jim McEwan and Stewart McGarrity (**CEC01629344**) noted slippage in the procurement programme.

In respect of 1. Procurement Programme, it was noted (page 1) that "*the plan as it stands shows that the due diligence process will kick in on receipt of the complete plan. The rationale of de-risking the procurement through ensuring that the design is completed upfront is laudable however the sequential nature of the process carried a cost, and the procurement team were asked to consider a different approach viz:- Take 2 months out of the programme through starting due diligence of the critical design items earlier, accepting that in doing this the design process will continue and specifications will therefore be subject to change*".

In respect of 2. Value Engineering (VE), it was noted (pages 2-3) that there were VE opportunities of £72m (categorised into easy, medium or difficult) and that the target for VE was £14m.

In respect of 4. Risks, it was noted (page 5), that the Risk Management process and associated plan had formerly been managed by SDS but that

“the execution by SDS had been unsatisfactory and there was concern on the poacher/gamekeeper status of that arrangement, it had been decided therefore to bring the process under the control of the Tram project team”. The meeting went through a “pareto” version of the risk register, which resulted in an adjustment of the risk sum to circa £69 million (from £72 million) versus a Draft FBC position of £60 million. It was noted that “The process, risk plan and toolset are felt to be sound, it was noted that adherence was in a patchy state with roughly 50% of project and functional managers complying”. One of the agreed actions was “5. Target moving the aggregate risk position back to the DFBC number”.

- (1) What were your views on these matters?

The original timetable for moving to a preferred bidder for the Infraco and Tramco contracts was targeted at May 2007 and this document highlights the fact that it was likely instead to be October 2007. The primary reason identified for this related to completion of the design from SDS and the associated due diligence that the bidders, or preferred bidder, would need to undertake, to both understand what was proposed and stand by their price. We had expected the bidders to have a sufficiently complete design.

It was about getting greater confidence and certainty in the price, as well as making sure the technical competence, capability and integration were not impeded. I think the final batch of information that was due to go to the Infraco bidders was around August 2007.

- (2) In relation to the procurement programme, did it cause you any concerns that due diligence would be carried out on the critical design items rather than complete designs? What was your understanding of what were the “critical designs”?

In any circumstances if the design is complete there is no latitude for anybody to say they were not sure what was intended, so we had to be very clear on that. However, that is rare on major infrastructure projects, particularly those with significant approval requirements. You can wait to have design 100% complete but it delays your overall programme of works and that may or may not be acceptable. It was clear that the Council and the other supporting funders such as Transport Scotland and the Scottish Ministers were seeking commencement at the end of 2007 or start of 2008, and completion by 2011. If there were further delays waiting for the design to be 100% complete then those timescales definitely would not have been met.

In relation to my understanding of the critical designs, there are areas where there might have been a significant additional cost if certain specification had been different. An example would be things called ‘Public Realm Works’ which tested the likes of landscaping and paving. At Forth Ports, the Council were not solely in control of what that specification was. Forth Ports also had the

right to agree what it looked like, albeit they may also have had to contribute. So, the contractor could price on a basic solution, and then the final specification could be much more expensive. The contractor might then feel a little put out that he has priced for £1 per slab and it actually costs him £5 per slab because of a higher quality finish. It was that type of specification issue that would be a potential critical issue. The Infraco perspective was that they could not give you certainty on a price if you had not confirmed the specification.

There were numerous choices to be made around the design solution. Would a difference make it much cheaper or more cost-effective to build, or much faster to build hence cheaper, or was it a case that some things were potentially 'gold plated'.

You might be presented with an equally functional and reasonable looking answer which may only cost 60% of the alternative - an example of value engineering. Do we really need a particular pumping arrangement? Do we need that specification of road make-up just to insert the tramway? Are we trying to get a whole new road on the back of something that is just a tie-in to other areas? These are examples of that type of element. I would say it was pretty clear where the designer was going on the civil engineering structures but that is where you might also have applied some specific value engineering or different construction techniques.

- (3) In relation to Value Engineering, why did you understand there to be a need to find £14m of VE savings?

First of all it is unusual that any designer's first proposition, in conjunction with an approval authority, is going to be the most cost-effective solution. Compromises will be made as part of the options that are there and as you bring in a contractor contribution. There are build opportunities and contractors say they can build it easier if they do it a certain way which will make it cheaper all round.

We would clearly expect to look for value engineering savings and there was a broad register that had been created both by TIE and the Infraco bidders. Both bidders suggested opportunities from the designs that could be different or cheaper in a different way. It is part of the industry trying to be a bit more cost-effective as well.

There are lots of different aspects and it is a complex mixture of items which need to be systematically looked through. When you get to the final contract you will see a series of schedules that identify elements that were firm and clear and other elements that were a target that both TIE and the Infraco thought we should be able to save, for example £0.5m in our management processes by working better together. Therefore, there were some things that

were targets that were just about process improvements and other things that were about specific end products that we were trying to build.

There is a consequence to this because if you choose to change the design you have got to re-design certain bits which might have an impact in time, so you have got to weigh that up. You might look to save £5m but it might delay the project by a couple of weeks, so there is that trade off to consider.

A re-design might also impact on price. If you need to ask them to redo something and they have already done it properly the first time then you are going to have to pay to have it done again.

You tend to look at it from a net answer. It might cost you £1m to implement a value engineering proposal that saves you £5m so you get a net £4m benefit.

I think there was a clear listing that provided the choices and conditions that might have applied to some of the VE and I believe there was a reasonable expectation that we could achieve the £14m saving. I personally thought there was opportunity for a little bit more, back in 2007, especially if early decisions had been made and some key Council officers had bought in sooner on some of the approvals or consents. They were the key people that needed to be content with what was proposed.

VE is an area of contract management and reporting that you expect to manage delivery against. Sometimes it changes and what you think is going to be a £1m saving does not arise or is not going to be as much of a saving as was first identified. That could be for a number of reasons. It is impossible for me to say that my view changed on any given day. It was an ongoing review about how VE was being delivered and it was an active part of management. When the contract was finally formed it had a very clear schedule on value engineering and it had a set of assumptions that required certain decisions.

- (4) In relation to Risk, are you aware why the Risk Management process and associated plan had formerly been managed by SDS rather than by TIE? Did you have any concerns around that time in relation to the risk management process?

I do not know the background of the Risk Management process that preceded my involvement with TIE. I cannot therefore comment on it or on whether or not I had any concerns in relation to the risk management process from that time. I anticipate SDS would have offered to provide that service and TIE agreed but I do not know.

The question on why there was a target of moving the aggregate risk position back to the Draft Final Business Case (DFBC) number is slightly different. It is not so much about the risk process; I think that it is more around trying to be consistent, where appropriate. If we say X in the Draft Final Business Case, do we think that is still valid? If the answer is yes, then we are able to emphasise that degree of consistency. It might have been that at some time we identified an increased VE opportunity and something else that had become worse or become more expensive, therefore we had a different risk item.

9. The minutes of the meeting of the Design, Procurement and Delivery (DPD) sub-committee on 5 July 2007 (**PBH00027525**) noted (page 7, para 4.5) that you expressed concerns about the achievability of the design programme and that you and David Crawley were to discuss details “off-line”.
- (1) What were your concerns?

This is one area where my memory from ten years ago is a bit challenged. The minute says, “*SB expressed concerns about the achievability of the design programme. SB/DCR to discuss details of line.*” I do not recall it specifically so if there are any other associated papers it would be helpful to look at those.

However, generally I suspect it would be in relation to lack of previous consistent performance, in achieving agreed design commitments. We had a number of months where there had been failure to achieve what was promised by the SDS provider and I think David Crawley had unlocked a number of critical issues around about May/June time. This was about the first month where things that the SDS provider had said to us were critical had been cleared up. I anticipate that it would have required everything to go pretty seamlessly.

I am sure I would have discussed these matters with David because I would speak to him two or three times a week on all such issues. Most of it would have been ‘off-line’ because that was a Design, Procurement and Delivery Sub-Committee meeting so it would not be appropriate to discuss anything that was going to be detailed in technical complexity or likely to be extensive in terms of time.

There were members of the TPB present, plus Matthew Crosse and myself and a rep from a couple of the other external design providers, in addition to advisors and probably another half a dozen people, including Transport Scotland’s rep. If it was going to take me an hour to go through significant detail with David I am not going to hold up the meeting and do it there and then.

It is a bit difficult to say whether or not my concerns were addressed to my satisfaction. I suspect we identified areas where progress could be made but given that we never fully got at, or ahead, of the programme on design. I doubt I was fully satisfied.

10. The following documents in June/July 2007 showed problems with the MUDFA works, namely:
- (1) The Construction Director's Report for the meeting on 6 June (CEC01664524) noted (page 8, Executive Summary) "*Release of ... IFC ... still a major concern and impacting significantly on programme. Ratification of full impact being assessed*"; as a result, the MUDFA programme was under further review and the next MUDFA programme "*should take into full consideration any interdependencies with INFRACO to mitigate any cost implications to tie*" (para 2.2.2) (the minutes of the meeting are CEC01640813).
 - (2) An email dated 20 June 2007 from Stewart McGarrity (CEC01650422) noted, in the final para, that "*We've managed programme slippage by keeping them busy elsewhere (digging a hole at Gogar) but we're now running out of such ideas*".
 - (3) An email dated 26 June 2007 from John McAloon, Technical Support Services (CEC01640669) attached a MUDFA design tracker (CEC01640670) which appeared to show that MUDFA design was behind programme.
 - (4) The Construction Director's Report for the meeting of the Utilities sub-committee on 4 July 2007 (CEC01640813) noted (Executive Summary) "**Note of Concern** – *release of design IFC drawings a major concern in maintaining continuity of work and impacting significantly on the programme dates*" (original emphasis); "*shortfalls of response information and/or acceptance from the SUCs now threaten the IFC Deliverables programme*" (para 3.2) (the minutes of the meeting are CEC01642221).
- (1) What were your views on the matters noted above?

If I am quoted in any of these notes that was my view at the time and it will be a fair reflection of what was covered because we did review the minutes.

In overview I would say there was a clear indication of a bottleneck in design delivery which was addressed by sorting out standard design details and deliveries and by managing SDS in a very close way around the individual packages of work. An example being to look at the prioritisation of those individual packages and ensuring what they were working on was the next most important from a critical path point of view.

TIE also had close conversations with Carillion, as the delivery provider, asking them how they could mitigate some of the impacts. One of the things we got them to do was some preparatory work at Gogar Depot as part of mitigating the cost of resources. They were not able to deliver all of the work packages available because not all of the designs were ready so we got them to do some work at Gogar.

We also had a look ahead, as suggested by the point that is covered in the question that said “*should take full consideration of any interdependencies with Infraco to mitigate any cost implications to TIE*”. We would consider the first places Infraco wanted to go and start work, and make sure those areas were clear of utilities diversions, to minimise the risk of Infraco saying they were being delayed and the whole Infraco “factory” had turned up. That would result in a much more expensive delay.

We still had problems with the consolidation of the IFC drawings. Sometimes it is the SDS provider, sometimes it is the SUCs but the bottom line is you cannot get the contractor started until the design is crystalised. What we were doing with the prioritisation was mitigating the effect of that under-performance. Solving the underperformance was about trying to agree standardised details and speed up that integration process as well as holding SDS to account and making sure they were deploying their resources as effectively as possible.

(2) What steps were taken to address these matters?

I think I have just answered that. That was the idea of the reprioritisations and standard design details; they were looking at what we could mitigate with the MUDFA contractor and focusing on what the Infraco contractor was likely to need first, based on their draft programme.

11. The minutes of the meeting of the Tram Project Board on 5 September 2007 (CEC01357124) noted: “*AH (Andrew Holmes) questioned when the more difficult sections for utility diversions would be tackled – SB confirmed that initial work would commence in October 07 with physical works starting in April 08*” (para 3.18).

5 September
2007 should be
26 September
2007

(1) In which sections had utility works already taken place at that time? What were the more difficult sections (and why were they more difficult)? What was meant by “initial work” work and “physical works”?

I think off-street sections had utility works taking place at that time. The sections from Haymarket through to Edinburgh Airport were the areas that were able to be tackled, where it did not require significant road closures or diversionary work. That would be from section 2a through to section 7. The relevant sections are 2a, 5a, 5b, 5c, 6 and 7.

I think what Andrew Holmes meant by ‘more difficult’ was primarily the major on-street sections. So sections 1a, 1b, 1c and 1d, which took you from Ocean Terminal in Leith to Constitution Street, then to Leith Walk, York Place, St. Andrew Square, along Princes Street into Shandwick Place and on to Haymarket. That route takes you through the heart of historic Edinburgh or is in a very heavily used

historical environment, such as Leith Walk. You also have a tremendous congestion of services including shops and tenements so there was a lot to be done in those areas. Then we found some interesting archaeological remains and a leper colony, none of which were on any drawings.

In relation to what is meant by 'initial works' that would include trial holes to prove locations of some of the services, and enabling works to the street furniture, like temporary traffic light ducting, removal of some kerbs, diversions etc.

In relation to what is meant by 'physical works' that was the necessary excavation and multi-utility diversion work: the actual digging of trenches, installing manholes, new pipes, transferring connections and installing of improved new pipes or cables.

- (2) Did the fact that the "physical works" in the more difficult sections were not due to commence until April 2008 cause you any concerns?

It goes back to the mitigation point. Clearly we were not achieving the original programme so we were looking at prioritised pieces of work. It was always going to be a concern because we had to re-sequence the work and it adds risk that there might be a delay to other parties, primarily Infracore in this circumstance. The reason we were re-sequencing was to make sure it mitigated the impact, so we were still trying to reduce or eliminate any effect.

12. An email chain in late September 2007 between Steve Reynolds, Willie Gallagher and yourself discussed the question of delays in the MUDFA IFC design and problems with the statutory utility companies (SUCs) (CEC01714281). The Construction Director's Report for the meeting of the Utilities sub-committee on 26 September 2007 (CEC01620243) noted among the Key Issues/Blockers (page 7, para 6.0) "*SDS programme for IFC drawing issue – significant risk to maintaining continuity of work for MUDFA team*", "*Section 1A redesign – bottom Constitution Street and Ocean Terminal to Newhaven*", and "*BT Openreach programme works to deliver to suit TIE needs, specific issue with cabling programme*" (the minutes of the meeting are CEC01496981).

- (1) What were your views on these matters?

The general point that was being made was trying to get sufficient outputs from SDS to package it up sensibly for MUDFA so they had work that was connected and did not have to wait for gaps in the middle of what they were doing. That was an action for Steve Reynolds as the Director of SDS, to provide us sufficient bundles in time for the programme. His argument was that some of the problems were related to other things so Willie Gallagher and I were trying to make sure we removed blockers so we could efficiently deploy our MUDFA contractor.

I would say there were two or three areas where we did have a degree of sympathy. Openreach and Scottish Water had a poor speed of response and engagement was not so good compared to some of the other statutory utilities. It was something we were trying to work on, to get them to up their performances. So SDS did have a point around them being slower than they needed to be. That said, SDS were somewhat dysfunctional in what they were putting together and Steve was defending his organisation's position on that. He stated he thought SDS's underperformance was all sorted at that point in time but that was not proven over the coming months.

At the bottom of Constitution Street there was something that required a design change. I cannot recall exactly but I think SDS design did not quite work there so they had to amend it. It meant that, as this was the main tram route, they could not release utilities diversions that they had already prepared. Constitution Street was a very narrow street to operate in, and there was no room to divert traffic to the side so there needed to be a plan to divert down adjacent streets and then back which was something that was not originally contemplated. So that took a bit of extra re-work.

13. In response to an email dated 25 October 2007 by Jim McEwen circulating a proposed presentation to the Tram Project Board on Value Engineering, Willie Gallagher sent an email the same day stating "*Let no one be (in) any doubt, we will be going back with a number of £498m for Phase 1(a). Get cracking on whatever needs to be done*" (CEC01453723).
- (1) What was your understanding of what Mr Gallagher meant by that?

Willie was looking for consistency. There were a number of variables that were highlighted: core Infraco price, risk allowance, the utilities-related works. Some of these matters had reduced in cost, or expected costs, some of them had gone up and, therefore, we expected to be able to be consistent with what had been said beforehand. My understanding of his intention was that we expected to be able to objectively demonstrate that £498m was an appropriate expected outturn for phase 1(a) of the project given all that we knew at that time.

- (2) To what extent, if at all, did that statement influence or reflect the approach taken by TIE to the negotiation, agreement and/or reporting of the Infraco price?

It was earlier that month, October 2007, that Infraco proposed their best and final offer, as had the other consortium. There was a recommendation paper drafted that, based on the balance of the most economic, attractive offer with the best technical solutions, was expected to recommend Bilfinger Berger and Siemens.

There were a number of caveats that had to be clarified or confirmed as part of that preferred bidder negotiation to final contract. We expected to close those matters down and then weigh up value engineering opportunities, risk, items that the Infraco had said they had excluded from their offer, or otherwise, in order to crystallise a firm basis of the contract price, together with any conditions that would legitimately allow the Infraco to identify elements of change going forward or elements that TIE had to provide risk for.

One of the key assumptions, for example, was Infraco assuming that utilities diversions were going to be undertaken in advance of when they got to each particular area. This was a reasonable assumption. Equally, there was an example where in some places it was appropriate to have the Infraco undertake the diversions because, for example, we had to build a retaining wall in the middle of that location or they had a very complex set of road diversions to do. In Picardy Place there was a provisional sum allowance that allowed for the uncertainty over design and for some significant utility diversions that were always expected to be undertaken by the Infraco. The Infraco understood that and were clear on that.

14. By email dated 30 October 2007 (**CEC01498550**) you sent Steve Hudson, AMIS, a summary of TIE's proposed settlement of AMIS issues raised up to the end of September 2007 (**CEC01498076**). A subsequent letter dated 9 April 2008 from Graeme Barclay (**CEC00217639**) noted that certain issues outwith the control of AMIS had resulted in a contractual entitlement to a settlement sum of £991,142 in relation to programme and cost up to 30 September 2007. The issues concerned: interpretation issue related to the application of Pre Construction Services (PCS) and progressing to Construction Services; political delay to the commencement of the works; and delay in IFC designs from TIE/SDS Provider.

- (1) What did each of these issues relate to?

This was to deal with legitimate contractual points AMIS [Carillion] had at that point – late provision of design and so on. We were responding to Steve Hudson's proposals; we wanted a revised framing given what we knew and what we had to do. There were generally some incentive proposals to deal with multi utility diversions and common trenching. There was an assessment of change control, delayed start and pre-construction services. Their bill seemed to be inflated or double counted by £800-£900K. That is why there was a two stage process of pre-construction services and construction-services. We were trying to sort out and clear the pre-construction services so that it was correct. It was just part of normal contract management we would expect. I would expect AMIS to put forward a proposal as positively as they could make it. We would then assess their entitlement.

The interpretation issue was what was due to fall under construction services and pre-construction scope of works. From memory I think it was around the boundary of traffic management obligations and planning – if they were core PCS or extras.

(2) To what extent, if at all, did these issues delay the commencement or completion of the MUDFA works?

I don't recall AMIS saying that they were not going to start until we got agreement on pre-construction, and I don't recall them withholding resources from the job as a result of not having settled this difference. We had made some interim assessments and valued changes as we went along. Some assessments were "on account". I don't think as a core issue this had any material impact on the remainder. There were other practical issues – they didn't have right team, no IFC designs, some congestion, SUCs weren't happy with AMIS or wanted something different but we accepted that was a change.

15. The minutes of the meeting of the Tram Project Board on 31 October 2007 (CEC01387400) noted: "*SB reported that there were areas of minor slippage in SDS deliverables and that the focus is now on the Approvals and Technical Approvals programme which will be a timing and resource challenge*" (para 4.14); "*AH (Andrew Holmes) reiterated previous statements that the programme (and costs) are dependent on SDS getting it right first time*" (para 4.15).

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

I think both comments and items were relevant. This is about the main design project that required certain prior approvals and technical approvals from the Council. There is no doubt there was a delay in some of the SDS design deliverables although some of those were related to getting the approval from the Council. Andrew's comment is relevant; some of those submissions were of poor quality or incomplete, however, it would be fair to say at the start of this process, some of the Council officers who were reviewing them were very particular. They were entitled to be like that but it was not the most constructive way of moving things forward.

It would also be fair to say that in late 2007, there was a better engagement with some of the key Council officers in relation to technical and prior approvals and planning consents. We encouraged some of the technical officers from the Council to either spend more time down in the project offices at CityPoint or we did more liaisons in their offices, to improve the communication flow and create a better understanding of where we were trying to get to.

At the start it did feel a bit like people were throwing bricks back across the garden wall as opposed to actually dealing with the core issue. I think from pre summer 2007 there was a perception of 'gold plating' from the Council. After the summer that changed because Mr Swinney's settlement deal was a capped £500m contribution from the Scottish Government and any cost overrun was the liability of the Council. I think that started to feed through and that helped adjust that engagement level thereafter.

- (2) Did it cause you any concerns that the programme was dependent on SDS getting it right first time? Did you consider it likely that SDS would get it right first time?

I think I have answered that. SDS were inconsistent; some of their submissions were spot on and some of them were not satisfactory and needed to be done twice or even three times.

16. The minutes of the meeting of the Tram Project Board on 7 December 2007 (CEC01526422) noted:

- Design Programme and Bidder due diligence, “SB gave an update on the progress of these matters, highlighting the following aspects: (i) Slow design delivery requires prioritisation within key streams to help BBS programme, (ii) Price certainty is increasing but slow and some areas of provisional pricing may remain at end – December 07, and (iii) Feedback from initial information on technical approvals is encouraging” (para 3.2);
- “AH queried the impact of the late design delivery, particularly its knock-on effects on the MUDFA programme, any change in risk profile accepted by the Infraco and the price impact ... SB explained that although the programme was tight, the current MUDFA Rev.06 programme accommodated the design delivery programme without price impact at the moment” (paras 3.3 and 3.4).
- You also explained that the areas of provisional pricing were roads, tram stops and certain structures. Out of these, the roads pricing were the most uncertain as others had been widely explored. The technical reviews so far showed little likelihood of major networks with significant price impacts being required (para 3.5).
- “WG advised that from BBS’s perspective the price critical areas were Picardy Place and the Forth Ports area plus potential implications arising from the obligations to obtain consents and complying with 3rd Party Agreements. He expected that greater certainty around these matters would be available following the latest return of price information from BBS, expected early w/c 17th Dec” (para 3.6).

The progress report presented to the meeting of the Tram Project Board on 7 December 2007 (CEC01387400) noted: “To 23rd November, of the 344 design deliverables, 236 have been delivered, representing 63% of the tram system design. 66% of Phase 1A detailed design is now complete and it is expected that about 75% will be complete by the date of placement of the construction contract in Jan 2008 ... SDS design process will be discussed with Tom O’Neill, the PB President, on the 5th December” (para 1.2.3).

- (1) What was your understanding of, and views on, these matters?

I think I was quoted in some of those minutes so my view at that time was as I stated. At that time in December 2007 we were hoping for a formal close on the Infraco contract in January 2008. There were still a number of elements of third party agreements that the Council needed to conclude, for example Forth Ports, in order for TIE to incorporate everything into the contract requirements. There was always a residual risk of a potential change. We could have dealt with what we believed it to be but you

would need to then allow a risk of adjusting that up or down accordingly. There was also Picardy Place; that was an area where it was really difficult for the concept design to actually work from a traffic management point of view. There had been two or three technical iterations around what could work, was it to be gyratory, a T-junction, or perhaps something else. There were a number of areas to tackle and they were all likely to have significant price impacts. However, we ended up with a pretty significant provisional sum and I think we incorporated into that about £3m in the price because we did not have the finalised detailed solution at that particular point in time.

- (2) Did there come a time when the MUDFA programme was no longer able to accommodate the late design delivery (and, if so, when, and what was done to address that)?

I will try and answer it at that window in time in December 2007. Factually, at some point in the future, there did come a time when the MUDFA programme was not able to accommodate the late design delivery but not at that time. We had to target certain approvals, we were escalating matters with SDS around resolving their issues and with the issue of CEC. The SDS performance was a cause for concern and Willie Gallagher made arrangements to see PB's Vice President, Tom O'Neill, in the US. At a tactical, or regular level, there was a weekly set of reviews on the projects outstanding issues and David Crawley, the key engineering lead from TIE and Jason Chandler from PB were meeting formally each week to go through what was still to be resolved. Equally, we bring in, where appropriate, the relevant Council officers if it was an issue associated with a technical approval or otherwise. This was just good standard project management, accountability and escalation of key issues. I would say that at that point in time we did not have a great deal of slack or float in the programme but it was still able to be achieved.

- (3) Did there come a time when the MUDFA programme impacted upon the Infraco programme (and, if so, when, and what was done to address that)?

There are two parts to that. In the first quarter of 2008 we were finalising the Infraco contract. There were two mechanisms that were provided to give Infraco protection against late running MUDFA works. One was a generic point and had always been in the Infraco contract. It was called a Compensation Event Mechanism (Clause 65), and meant that if something that was caused by utility diversions impacted on Infraco's programme then if they notified that properly and provided evidence and substantiation we would assess what time and/or money might have been due to them as a consequence. It was a generic protection for them.

In addition, there was a Schedule Part 4 that we come on to later, which had a specific term called a 'Notified Departure'. There was a fact statement that set out that the MUDFA works would be completed as per their programme, ie it would not impact on the Infraco. If that did not hold to be true then they were entitled to activate the TIE change mechanism and, again, they might be due time, or they might be due money but they might be due neither. I would say from the first quarter of 2008 that it was clear there were mechanisms in place to allow Infraco to be protected at that time, so it was not their risk if MUDFA ran late. At that time we still expected the MUDFA works to be completed in line with that current programme, albeit we were paying for accelerative measures and working very hard to ensure that issues were dealt with. We expected the Infraco to be able to undertake their work in the order they said that they were going to.

17. The minutes of the meeting of the Tram Project Board on 19 December 2007 (CEC01363703) noted:
- Infraco Price Update, "*The Board noted the confidence by the project team in the Infraco price based on the stated conditions. The Board also accepted that, to protect the Infraco costs, it is essential to avoid client side design and/or programme changes and to ensure final design approvals are not delayed*" (p.6).
 - Project Cost Estimate update, "*AH questioned how the risk of programme delays, specifically due to design delays, had been allowed for in the cost estimate. WG explained that a number of factors provided comfort in this matter: Normal design risk is passed to BBS through the SDS novation; Sensitivity testing had been undertaken for a 6-month programme delay which is covered by risk allowances; and the risk of potential programme delays due to systems integration was passed to BBS through the Tramco novation. AH requested further details on the design risk being passed to BBS – SB to provide*" (p.6).
 - Programme, "*AH expressed his concern about potential programme impacts arising from design delays. SB to provide greater detail on how the risk is passed to BBS*" (p.7).
- (1) What was your understanding of, and views on, these matters?

The first comment around "confidence by the project team" is an emphasis or a marker to the Council. There was a price but you had to read it in conjunction with the conditions.

The second item relates to Andrew Holmes questioning risk of programme delays but that had been allowed for and Willie Gallagher commented around what sensitivity testing had been done. I cannot specifically recall sitting down face to face with Andrew Holmes on this but I would be surprised if I had not done so. Normally when there was an action arising out of the TPB minutes I would sit down with Andrew, Andy Conway from the roads team or Bob McCafferty. We would clarify it was part of the risk allowance we had incorporated within the submission overall. We

had modelled a six month programme delay for the Infraco as a whole and that was covered by the risk allowances as Willie Gallagher is quoted as saying there. There were elements that this delay was caused by the Infraco's proposals about what systems it wanted to put in, as opposed to the SDS original design, or integrating with Tramco, so that was an Infraco risk not the Council's. In relation to the issue about the design risk the point was that by novating the design contract, TIE ceased to be the client of SDS. As soon as the Infraco contract was signed, Infraco became the client for the SDS design and it was for them to complete everything that was outstanding.

I recall a detailed discussion with the CEC solicitor Gill Lindsay, near to Final Contract Close, that went through the risk transfer proposals. DLA were TIE's lawyers who also had a duty to CEC and they provided a risk transfer report to CEC and TIE. DLA provided a clear schedule that showed what is transferred to the Infraco, what is retained by the public sector and what risk is deemed shared.

- (2) Given the delays that had been experienced with design, approvals and consents, what were your views on the prospects of avoiding "client side design and/or programme changes" and of ensuring that final design approvals were not delayed?

At this particular meeting, two of the TPB members were Andrew Holmes and Donald McGougan, they were two of the senior CEC officers. Andrew had responsibility for the departments that would do both technical and planning approvals and Donald was the Finance Director for CEC, so he understood the cost consequences of those particular delays.

I think they knew it would be deeply unhelpful to have unnecessary or preferential engineering programme changes and I believe that was the message they would have given to their teams. The expectation was that they would not seek to be too pernickety about minor details however; the designer also has an obligation to make sure he puts forward a competent proposal and not something that is deficient. I think CEC understood that it was really important and could cost the city money if we did not get it right.

The clear expectation at that time was, therefore, that they would be focused on not changing things that they did not need to and that those final approvals would be met in line with the programme. I think the only area where they would not have been in control was where they had to make a third party agreement, for example, with Forth Ports or the SRU. I am clear that the Council understood how important it was not to do it, they were not in total control of that but they understood very clearly at that point in time.

- (3) Did you provide greater detail to Mr Holmes in respect of the design and programme risks being passed to BSC (and, if so, when and how)?

I think I have just covered that but yes we probably did to some of his team and to Gill Lindsay. I think Andrew Holmes retired just before the contract was signed. Then Dave Anderson came in as the Director of City Development.

18. We understand that in the middle of December 2007 discussions took place at Wiesbaden, Germany, between representatives of BBS and TIE in relation to the pricing provisions of the Infraco contract and that, on 20 December 2007, an agreement, or Heads of Terms, were reached (the Wiesbaden Agreement) (**CEC02085660**).

- (1) What was your understanding of the purpose and outcome of that meeting?

The purpose of the meeting was to reach an agreement and the outcome was that they did, because there is a document that has been signed by both parties. The reason behind trying to reach that agreement was to stop the opportunity for the other side to keep moving the price. I think Matthew Crosse and Willie Gallagher went to Wiesbaden to go through that with BBS. Geoff Gilbert, as the senior commercial guy, stayed in Edinburgh communicating with them on fine-tuning some of the items and the aim was to get things locked down with a clear set of obligations for all parties.

Infraco would then go and deliver the infrastructure works against the sets of terms and conditions that were agreed. It was to try and ensure that Willie was then able to take forward to the full Council confirmation that things were locked down with the preferred bidder because at this point the Infraco was still a preferred bidder.

- (2) By whom were you advised of these matters?

I believe there is an email trail, probably from Geoff Gilbert because Geoff was documenting the arrangements. Then once Matthew and Willie came back from Germany I met with them. The outcome of their meeting was to get the Heads of Terms which is what that document is (**CEC02085660**). That then allowed us to take it forward. It was one part of the Final Business Case and the various governance and recommendation papers that needed to go forward to the TPB then, eventually, to the City of Edinburgh Council. It was to allow proper governance and delegated authority based on the Business Case.

19. On 20 December 2007 the Council were asked to agree the Final Business Case for the tram project (the report to Council is **CEC02083448** and the FBC is **CEC01395434**).

- (1) What was your understanding at that stage of the extent to which the price for the Infraco price was a fixed price (and the extent to which it might be subject to change)?

The Final Business Case is a 200 plus page document and I think it sets out quite clearly the terms of what is the core infrastructure works price. It lays out specific additions to that, a schedule tabulating that and also where there are elements of risk allowance or what is dealt with as other project costs.

At that point in time, it was clear that certain things were firm and agreed in price and there were certain things that were based on a Pricing Assumption that had been confirmed between the two parties. Therefore, it was clear between us what was firm and what was a provisional sum, Picardy Place was the example I used earlier. The purpose of that documentation was to seek from the Council delegated authority to Tom Aitchison (the Chief Executive) to allow him, when appropriate, to instruct TIE to contract on the basis as set out in the papers.

- (2) What was your understanding of which party bore the risks arising from incomplete design and design development?

Design development was the responsibility of the contractor in the construction contract and you would expect that to be the fine tuning of practical solutions and buildability changes. This was a contentious area on this project but it was clear at this point in time that the design development TIE expected the contractor to complete would not attract any additional cost or time. Infraco made proposals as to what systems they would use, like the track or overhead line system. Those were deemed Infraco proposals and any impact of incorporating those into the final solution was clearly the Infraco's responsibility and liability. There was a dispute that emerged over time after the contract was signed in relation to this issue of what is design development and who falls liable for that and we touch on that later in greater detail.

If there was a fundamental piece of design that was not complete - Picardy Place, again, I would pick on because it required a major input from the Council and a change that was driven by a third party - that was clearly the client's responsibility and not the responsibility of Infraco. We would discuss with them what the effects would be and there would be an appropriate price adjustment whether up or down depending on whether there was a deduction or addition in scope.

Events in 2008 (January to May)

20. The Tram Project Board met on 9 January 2008 (CEC01015023 at page 5). The minutes noted (page 5, para 1.5), "*SDS design and risk transfer – SB stated that further details had been provided to AH regarding his queries. The discussion on risk transfer was continuing with BBS and progress updates would be presented to the TPB*".

- (1) What is your recollection of these matters?

I do not physically recall sitting down with Andrew Holmes but I may have discussed matters either in correspondence or with one of his officers, perhaps Bob McCafferty or Andy Conway. I expect that it was around discussion when risk transfer was continuing with BBS and progress updates would be presented to the TPB. That was primarily around closing out the Heads of Terms that were discussed at Wiesbaden and transferring those. That was led by Geoff Gilbert and Matthew Crosse because it was part of their completion of the procurement part of the process. In January that was not something I was specifically involved or engaged in.

- (2) The minutes note (page 6, para 2.1) that you were to take on full responsibilities as Project Director as of 14 January. It would be helpful if you could explain the circumstances surrounding your appointment as Project Director (eg were you approached to do the job, was there an open competition etc)? Did you become Tram Project Director in January 2008 (and, if not why not)?

In terms of the approach, Willie asked me to do that work in the December with the purpose of having a transition and also that the focus was looking ahead to building the tram infrastructure and preparing the city for that work. It also permitted me to get myself fully up to speed with where Matthew Crosse and Geoff Gilbert had been working on procurement negotiations.

Between January and May 2008 which individual or individuals in TIE were responsible for negotiating the price of the Infraco contract?

At that time Willie Gallagher, as Executive Chairman, had ultimate responsibility on behalf of TIE. Matthew Crosse and Geoff Gilbert had responsibility with regards to the procurement elements. Dennis Murray, who was Commercial Director, and myself were both assisting where relevant in terms of any close out of any of the final items. The two other individuals who would have had an insight into pricing would have been Alistair Richards, who was the principal TIE representative for the Tramco contract works and Susan Clark who was looking at matters from a programme and day-to-day point of view. She oversaw the risk management activities and provided some input into the scheduling and risk. Stewart McGarrity consolidated the outputs of those decisions and negotiations into supporting the Business Case reconciliation items,

and Jim McEwan was involved in looking at the value engineering issues and assisting in the final negotiations.

- (3) The minutes noted (page 6, para 5.1) that you requested approval from the TPB for the formal publication of contract award on or after 18 January. Were you of the view that risk and price had been sufficiently agreed at that stage to allow for contract award? What pressures, if any, were there to proceed to contract award?

Formal publication of contract award kicked in a ten day standstill period which gave notification to the successful bidder and any unsuccessful bidders, and allowed for any legal challenge. We wanted to get that process started so that it cleared any risk of objections from unsuccessful bidders or anybody else.

Before you could award that contract you have to work your way through that, the intention being to be ready to start the contract at the start of February. We wished to conclude the procurement process because it was costing money to everybody involved in the process, including Infracore, TIE and CEC. There would be pressure against the Infracore price if the process was extended significantly because they had an extended supply chain and had agreed prices up to a particular point. They were holding those prices and were guaranteeing their prices through to the end of 2011 so they had to factor in inflationary costs and that was all predicated on an award at the start of 2008.

It was done on the basis that we believed that we had a set of terms and conditions and an offer that was appropriate against the requirements that we needed. We had gone through the relevant elements of due diligence and considered that we were in the final elements of concluding the detailed terms and conditions on the contract.

Matthew Crosse was actively engaged in this at the start of 2008. I think Matthew left about April or May. I took it forward from that particular point and had responsibility for the role.

21. By letter dated 9 January 2008 (CEC01530140), Andrew Malkin, AMIS, wrote to Graeme Barclay, TIE, in relation to Programme Rev 6 and listed a number of issues at pp 2-3.
- (1) What were your views on the issues listed by Mr Malkin?

I thought there were some valid points that needed to be properly assessed. I would say it was an overview position; he was emphasising issues he believed were the responsibility of TIE. I think there were some legitimate points; however, it made no acknowledgement of AMIS's under-performance.

We eventually got some better people in AMIS but that took some time and there were some self-inflicted wounds from them in that they did not help themselves in the mobilisation phase. It is fair to say that design was a challenge, so AMIS had a point there. I think we clearly evaluated and assessed where there were issues of change, as we were obliged to do. AMIS tried to overplay it in my view but that is not unusual through a contractor's eyes. We did not agree on a couple of areas of specific pricing, sometimes there was no entitlement but sometimes they were over-optimistic in what they sought to recover.

One area they did have a point was with some of the contract administration and the way the instruction was set out and written. It was not fully in compliance with what was expected from TIE at that point. That was something that Graeme Barclay and his team had to take forward to improve.

- (2) To what extent, if at all, did these issues delay the commencement or completion of the MUDFA works?

I think it is highly likely that some of these issues delayed the completion of MUDFA works. They may not all have had a critical path delay but some of them are likely to have contributed to critical path delay. Some areas were expected to be re-scheduled, or were re-scheduled, successfully, others are likely to have had an overall impact. A detailed programme analysis is required to be able to say exactly which items might have had that outcome.

My overview, from an AMIS point of view, was they were generally a diligent utilities contractor and they had a mix of some very capable people and some people that were not as strong. We needed to have some changes throughout the duration of the MUDFA contract as a result. Graeme Barclay's background was in utilities so we had people within TIE that understood the issues very well from both sides of the table.

22. There was a joint meeting of the Tram Project Board/TIE Board/TEL Board on 23 January 2008 (CEC01246826 at page 5). The minutes noted (page 5, para 3.1) that Willie Gallagher provided an overview of the progress towards Financial Close, *"In summary, the Boards were assured that there were no indications of material price, scope or programme changes at this time"*. You provided an outline of the progress on the Infracore suite of documents (page 6), including, *"SDS novation: significant progress had been made. However, a number of concerns remained outstanding in relation to the Prior and Technical design Approvals. SB explained that establishing a baseline and programme for Prior and Technical Approvals, which has buy-in from SDS, BBS, TIE and CEC, was essential"* (para 5.4). You gave an update on the current status of the MUDFA works which were noted to be "on programme and budget" (page 5, para 4.1).

It was noted (page 7, para 5.16) that the Boards expressed their satisfaction that the proposed programme to Financial Close allowed for a final review of the whole document suite and the resolution of outstanding issues, "*which is likely to result in a better risk profile*".

- (1) What was your understanding of, and views on, these matters?

Three weeks before this we were hoping to close the contract suite and make the agreements by the end of January. At this meeting we were saying a realistic close was mid to late February so we had moved by a month in a two to three week timescale and that is not where you want to be in that part of the process.

At that point there were some particular problematic things, for example, SDS started to get very nervous around the novation process and proposals. None of that was a surprise to them because ever since they had been contracted there was the intent to novate on to the successful Infraco. TIE was very clear they wanted the novation process to progress as planned. I do not know why SDS did not want to be novated to the Infraco; Steve Reynolds would need to answer that.

- (2) Did there come a time prior to Financial Close when there were indications of material price, scope or programme changes (and, if so, when)?

Between January and May 2008 there were at least two occasions when matters were taken forward from the Heads of Terms or principles that were agreed at Wiesbaden. The Rutland Square Agreement was the first and then there was another one called The Kingdom Agreement. TIE was saying they did not want to go into contract on the back of certain sets of assumptions, as they were open-ended. For example, TIE could not get certainty over what types of OLE/lighting poles were to be used in Princes Street and we did not want anyone coming back, to have us pay for any change. Infraco were saying that they wanted to make adjustments in exchange for clearing these assumptions, and they also claimed they were facing pressure from their supply chain meaning that they were seeking additional costs.

- (3) Did there come a time prior to Financial Close when the MUDFA works were no longer "on programme and budget"?

At that time the MUDFA contractor was working on, I think, Revision 6 of their programme. That Revision 6 supported the Infraco programme of works. If that was delivered on time then there would be no impact on the Infraco. There were obligations for SDS and TIE, and for the SUCs and AMIS to deliver, for that to successfully happen. I think it was clear that the MUDFA works could be concluded without material adverse impact on the Infraco but it was becoming more likely that they might have some impact, which would have required either the Infraco or MUDFA to take

some further actions to avoid a clash. There were allowances in both the MUDFA contract and the Infracore work contract to deal with the rest of the programme as part of that.

- (4) How did you envisage at that time that a better risk profile would be achieved?

Some of that relates back to part 2 of the question. When you are getting certainty on some assumptions or qualifications, you might pay an extra £4m to take out some assumptions or pricing qualifications so there is no option for the contractor to come back and argue for any extras.

We also anticipated at that time that the contractor would be very clear on their obligations to mitigate any impact of the delays and would actively demonstrate that they were mitigating these things.

The contractors' behaviour did not support that supposition and they did not demonstrate to us much engagement in trying to mitigate anything if they felt it was something they could clearly identify as not being their liability. They did not show much energy or effort to mitigate irrespective of whose responsibility it was.

23. The Construction Director's Report for the meeting of the Utilities sub-committee on 13 February 2008 (**CEC01398499**) noted (page 10) under Action Plan, "*Review of output performance within the current 'live' sections over the prevailing periods has noted a reduction in target achievement. This is reflective of the congestion of services being uncovered within Leith Walk and latterly the city centre and the increasing output requirement to meet programme targets*". The Key Issues/Blockers (page 15, para 4.0) included "*Design delays in issuance of IFC drawings. Trend beginning to show again*" (the minutes of the meeting are **CEC01453676**).

- (1) What were your views on these matters?

That last comment around "*Trend beginning to show again*" relates to their having been an improvement in SDS and the SUCs' combined performance in getting the IFC drawing process closed out and issued. Graeme Barclay is saying however at this point TIE was starting to see some delays in some of these IFC drawings again.

The congestion of services was certainly causing a difficulty in allowing planned diversions to be executed and we were thinking about what the best way was to solve some of those areas, given that SDS clearly had an obligation on the core Infracore design to keep getting it closed out.

Edinburgh Airport had their own approval processes that needed to be addressed as part of their safety requirements and, to be fair to AMIS, they suggested working with the Airport's normal utilities designer (Grontmij) to come up with diversions. They came up with

proposals which could then be transferred from SDS. TIE did pay for it because it was our responsibility to provide that design, but it helped take some of those actions forward and is an example of the project team and AMIS coming up with a solution.

At that particular location most of those assets were Edinburgh Airport's assets. We did have similar propositions elsewhere. For example, SGN always did conversions of pressure of medium or high pressure gas mains because they were higher risk and they use their own specialist contractor. They did that and we paid them. Sometimes that was a solution because of the risk profile, sometimes it was a case of special assets and sometimes we were just trying to address the volume BT or Scottish Water were trying to complete.

24. A joint meeting of the Tram Project Board and the TEL Board took place on 13 February 2008 (CEC01246825).

The minutes noted that you gave an update on SDS (page 5), it being noted (para 4.3), "*SB confirmed that the timetable for delivery will be part of the contract and that the final design packages are now expected in late 2008 and that the critical designs will be identified and dealt with in the programme*".

It was noted, under Price, Budget and Risk, "*SMcG (Stewart McGarrity) ... explained that the to-go costs in the budget represented the full programme and scope of works, with a risk allowance of approx £30m relating to £90m of non-firm future costs. However, the budget does not contain allowances for stakeholder changes to programme or scope*" (para 6.1)" and "*the Infracore price was a negotiated number, which included a premium for achieving price certainty on previously provisional items, as well as some contingency for design issues*" (para 6.2).

You were noted to be "*content with the current level of (risk) allowances and would not recommend further adjustments*" (para 6.4).

- (1) What was your understanding of, and views on, these matters?

I am quoted in the minutes and my view is as I stated. Stewart McGarrity's comments are clear in relation to costs in the budget, risk allowances and what the price certainty is. At some point we did pay an addition to what was the previously tendered price in order to close out an assumption or achieve price certainty. We did allow certain contingency items and we also made it very clear that if a stakeholder, third party or CEC changed something, that was not allowed for in the price. Therefore, anybody generating that change would be expected to bring the relevant funding.

- (2) Did you have any concerns arising from the fact that the final design packages were now expected in late 2008?

It was a further extension of the original proposed settlement. There would have been reasons for each of these and they would have a mixed range of responsibility. It would obviously have been

better if that was not the case and the practical concern was that it had the potential to be misaligned with the Infraco programme, which might cause a knock-on of either additional risk impact or potential delay. Those would be the types of concerns that were in the forefront of my mind.

- (3) What was your understanding of how (and by whom) the risk allowance had been compiled and quantified and the main risks it covered?

There was, I understand, a specific risk manager role within TIE from the start. That covered all projects, not just the tram. A risk management system, Active Risk Manager (ARM) was available for use by the project team. It was a tool that allowed items to be identified and ranked, for any mitigation plans and a post-mitigation assessment of what that the risk ranking would be. It tended to be measured in terms of time and money, as shown in some of the TPB reports. If you saw a column called 'black flag' then that was a showstopper for the project if that particular risk materialised. If it could not be dealt with then it had the potential to be fatal to the success of the project. For example, if CEC could not come up with their funding for their £45m share of the £545m, that would be fatal to the project because we could not go ahead with only the Transport Scotland funding.

That was the system approach that was consistently looked at and built up the elements of risk allowance whether it was for utilities work, the main Infraco works, elements of design or project management costs. Those were reviewed every month with the relevant teams and updated. As the project moved forward some of that emphasis changed, so in 2006/07 a lot of it was about approvals, project management costs and preparing for MUDFA and the issues around those risks whereas from 2008 onwards, they moved more into Infraco-related risks and started to look ahead to operational risks for the tram going live.

25. On 18 February 2008 BBS produced a Design Due Diligence Summary Report, based on design information received by BBS by 14 December 2007 (CEC01449100). That document raised various concerns about design, including that *"more than 40% of the detailed design information"* had not been issued to BBS.

- (1) Were you aware of that report at the time?

I recall being presented with that report around 2010 as part of the disputes we had but I do not recall seeing it at the time.

- (2) What were your views on the matters in the Executive Summary of the report? Did it cause you any concerns?

The second paragraphs says, *"Contrary to the TIE's original intention for this project stage, the design is incomplete and will*

require significant further development. Several sections are currently under re-design and the final concepts for these are unknown to us. According to the SDS document tracker more than 40% of the detailed design information has not been issued to BBS at all by the above-mentioned cut-off date. I agree TIE's original intention back in 2006/07 was to have a completed design but it had been clear since the summer of 2007 that the Infracore was not going to have the full completed design so there is some selective editing there.

In addition, circa 60% was considered as complete design and that included what SDS and TIE considered was the majority of the significant or critical design elements. That was clearly set out and covered accordingly. The idea that "the final concepts for these are unknown to us" might be their statement from December 2007 but it does not gel with me because most of those critical issues were discussed and shared. I would be surprised if there were critical locations that were not in that category.

What they do say in their third paragraph is, "*Where detailed design is available, it is mostly of an acceptable standard*". I think my view would be that they had most, if not all, of the critical elements and, therefore, they understood the direction of travel and the material issues.

I do not recall seeing that contemporaneously in February 2008 although some of those topics were discussed. It was my clear understanding that Infracore had accepted an element of design development and that that was their issue to resolve and that they accepted any things arising from their own systems proposals as being their responsibility as well.

- (3) What discussion was there with within TIE, and with BSC, of how incomplete design would be dealt with in the Infracore price?

That goes back to the Wiesbaden agreement. The principle was set out there and I would expect normal design development to continue from that point and to be part of the original price that was included. If there is a significant change in principle or if a third party requires a change then that is not the Infracore's responsibility. That is a TIE responsibility under the contract. My expectation was that part of the work that Geoff Gilbert and the guys were doing in closing the final contract was to translate those Wiesbaden principles into what was agreed so that the detailed legal drafting echoed that principle or those sets of principles.

26. An email dated 19 February 2008 from Andrew Malkin, AMIS (CEC01457599) raised concerns in relation to the management of multiple interfaces and stakeholders. Mr Malkin stated, *"the real question for senior management is who is responsible for the planning and coordination of the precursor activities to support the MUDFA works on Revision 06. AMIS MUDFA has no control, authority or jurisdiction over SDS provider, CEC, Faber Maunsell, Lothian Buses, SUC's, Network Rail and other parties, and resolution on this particular and key issue would significantly help Carillion Utility Services focus on the utility specific diversion works and greatly improve our production outputs"*.

(1) What were your views on this matter ie which organisation did you consider was responsible for the planning and coordination of the precursor activities to support the MUDFA works?

Where it was outwith the scope of the MUDFA contract or anything we agreed for AMIS to undertake as the MUDFA provider, it was generally the responsibility of TIE to coordinate or arrange coordination. I know that Graeme Barclay, on behalf of TIE, working with Andy Malkin and his team held a lot of coordination and integration sessions at the MUDFA offices in Leith. This was to try and improve the flows of communication and I accept that many of these things were either elements where TIE had a separate contract with the SDS provider or a separate agreement with the SUCs.

That was an area where Steve Hudson from Carillion and I worked hard to try and deal with solving the problems rather than doing it only in the way that either AMIS or TIE's local team particularly wanted.

(2) Were there difficulties in relation to managing multiple interfaces and stakeholders? Did any such difficulties lead to delay in commencing or completing the MUDFA works?

Yes, there were difficulties in managing those multiple interfaces and stakeholders. Sometimes it was due to the third party stakeholder who had a right to demand or object. Or it was about agreeing appropriate access with the Council or the roads teams because of traffic management implications and being asked to demonstrate by modelling that it would be acceptable whatever diversion they were proposing. That was quite a high bar and I accept this was a landmark project that the Council were an integral part of, so I understand why they asked for that bar to be achieved, but it is not without consequence.

As a result of these matters we had some things not occurring as originally scheduled that did delay MUDFA works. Where we could, we also sought to manage the impact on our stakeholders, such as local businesses.

I think we were quite novel in the tram scheme in dealing with rates relief options, trying to engage in that and it probably still felt very difficult if you were the local business with everything going on around you but there was a significant effort to try and improve things.

27. By email dated 25 February 2008 (CEC01449710) Andrew Fitchie forwarded you an early draft of Schedule 4 (Pricing Schedule) of the Infraco contract (CEC01449711).

(1) When did you first become aware of Schedule 4?

I suspect it was probably around mid to late February. Geoff Gilbert was leading the Infraco contract drafting. The contract was not in its final form until May, albeit much of it had not changed but this Schedule Part 4 was something that was adjusted over that period of time. I think this was the first time I saw that working draft.

(2) What was your understanding of the intended purpose and effect of the Schedule including, in particular, the Pricing Assumptions?

The purpose of the schedule was to present the agreed assumptions that Infraco used to base their construction works price in order to deliver their obligations under the contract. If any of those assumptions did not hold true, for whatever reason, they would then be looked at to establish if they were factually different. If they were different, it would then depend on what effect that had on either time or money to the Infraco.

It might have been a deduction or an addition but you would then use the change mechanism in the contract to either deduct money or pay them extra.

Were you aware of any Pricing Assumptions that were expected to become Notified Departures? and if so, how many?

There were, for example, two sets of protection given to the Infraco against utilities. One is the compensation mechanism which is Clause 65; the other is an assumption about MUDFA delivering to the Revision 6 programme.

However, we knew that would not always hold as factually true because, for instance, we have already re-ordered something, for a good reason, in order to try and protect Infraco's programme in the first place.

We did not go through the Notified Departure mechanism and predict there would be X number or Y number or Z number of each one. What we did do when we looked at the risk register was see if we had an appropriate allowance for the impact of these topic areas, and to check if these Notified Departures were likely to

cause delay beyond the six months allowance we have in the risk register. The conclusion at that time was that we did not think it should because it would not all be consecutive, some of them would run concurrently and, therefore, we had made an appropriate allowance for them.

There would be allowance for changes coming from third parties like Forth Ports, Network Rail or from CEC themselves. It would either come with funding or it would be part of an allowance that was put in the risk register for Network Rail immunisation or similar topics.

We would have set that off against significant items but we did not go through an exercise that predicted hundreds of Notified Departures. We looked at likely areas where we expected things to be different and what the assessment would be in terms of that. We spoke to the designers, we spoke to TSS who were providing technical expertise and support and we assessed it based on the discussions we already had with the Infraco and what they could or could not do to mitigate it.

28. By letter dated 3 March 2008 (**CEC01521318**) Mr Malkin, AMIS, expressed a number of concerns in relation to the MUDFA works and Revision 06 of the MUDFA Programme.

Graeme Barclay, TIE, replied by letter dated 5 March 2008 (**CEC01530317**).

Mr Malkin replied by letter dated 6 March 2008 (**CEC01532028**).

See also, Mr Malkin's letter dated 7 April 2008 (**CEC01528518**).

- (1) What were your views on the main points in Mr Malkin's letters?

Graeme was saying TIE did not agree with what was said; but if AMIS were not prepared to progress on the original basis we would find an alternative route. Graeme was saying looking backward AMIS would have to substantiate what they had done and we would evaluate it. Andrew Malkin was putting down a marker.

Andrew Malkin was representing AMIS' commercial position. Graeme was saying that we did not agree with the principle but that we were happy to pay on a substantiated cost basis for what had been done and that we would find a route forward.

I had regular high level contact with Steve Hudson from AMIS without cutting across Graeme and Andy Malkin's responsibilities. We eventually concluded a mediated agreement on the whole account with AMIS in late 2010.

- (2) What were your views around that time of the prospect of the MUDFA works being completed by the end of 2008?

If this included transferring things we anticipated putting into Infraco's scope of works, like Picardy Place, so that MUDFA were dealing with a reduced amount, then in February that was still

possible. Provided we had undertaken the activities AMIS was reluctant to undertake, that increased our likelihood of getting it done.

29. By email dated 10 March 2008 you noted that an agreement had been reached on 7 March (between Richard Walker, Michael Flynn, you and Jim McEwan) that the contract price would be increased by £8.6m to cover certain matters (CEC01463888).

- (1) Why had a price increase been sought?

This is the Rutland Square Agreement. From a TIE perspective, Jim McEwan and I were concerned that there were a couple of assumptions or pricing variables that did not give TIE the certainty that we had expected. Some of these flowed over from the Wiesbaden Agreement that Willie Gallagher and Richard Walker had agreed back in December. We sought to take away the option for Infraco to argue for more money later on and before we went to a final agreed price with the Council.

There were five specific points, as referred to in that email. Jim McEwan and I agreed with Walker and Flynn that it was a good answer for both parties to take those uncertainties away and Infraco got the certainty of an additional £8m worth of value and price of the job and it took away these issues and excuses.

30. By email dated 11 March 2007 (CEC01544518) Duncan Fraser, CEC, advised TIE that CEC required a statement confirming the elements of the SDS designs that are being re-designed by BBS, if any, the working assumption to date having been that all of the SDS designs were to be adopted by BBS.

In a reply, Graeme Bissett stated "*the information you want is embedded in the Infraco proposal ... As I think we discussed today, the liability would sit with BBS/SDS in relation to any redesign*".

- (1) What were your views on these matters?

I recollect sitting down with Duncan Fraser from CEC and discussing Infraco proposals. Part of the tender was that Infraco proposed system solutions like the type of track form or the type of overhead line equipment that was going to be used by the tram including controls and passenger information systems. Much of this was intended to be "off the shelf" type solutions from Siemens or key suppliers, which is what we went through and debated.

The thrust of Duncan's question was around SDS proposals being changed on the back of some of the major Infraco drivers and whose liability would it have been. Principally it was that of the Infraco. I do think there was an element of Duncan putting on record that he had asked that question and he is perfectly entitled to do that. I had no problem in taking him through that.

31. By letter dated 11 March 2008 (CAR00003591) AMIS set out certain concerns in relation to the suitability and integrity of the MUDFA Schedule 4 Rates and Prices on the basis that ten items listed in the letter had not been administered, managed and/or completed in accordance with the MUDFA contract terms and conditions. It was further noted that these items *“will, if not comprehensively and proactively managed by TIE Limited, result in Revision 06 of the Programme being compromised, rendering it unsustainable in the immediate future”*.
- (1) What was your understanding of the purpose of that letter? What were your views on the matters in that letter?

My interpretation was that he was setting out grounds to support any future claim he might make for an amendment to raise the prices and for any change items that he saw as being legitimate from an AMIS perspective.

I think in terms of the matters in that letter some of the points were not justified and others might have a legitimate argument to develop and make his case for.

We did agree, as part of the contract management of the AMIS account, a number of change control items for things that were not originally in contemplation. For example, there was extra traffic modelling to do beyond what could reasonably have been expected. That was because the Council were asking us for a high level of modelling to prove certain diversions worked without creating unacceptable delays. This was not AMIS' problem.

There were some areas where we had a fundamental disagreement. For instance, AMIS wanted to amend the rate for common trenching and we said the whole point in doing a multi-utilities diversion was to put more than one service in the trench at the one time. We did not take that lightly, it was not in the spirit of what we agreed.

It is also fair to say that AMIS were behind on the programme because they did not mobilise particularly well and were a bit slow in some of those areas or they could not carry out certain duties that they were obliged to.

Where there are genuine additional items then they should be fairly compensated and we went through that pretty systematically. There was a fairly robust engagement between Andy Malkin and Graeme Barclay and their respective commercial leads.

- (2) What were your views at that stage in relation to whether Revision 06 of the MUDFA Programme would require to be revised?

This was March/April 2008 and my view was it was possible to be completed with both AMIS and TIE and any respective other parties

had to make sure they dealt with the issues in front of them. Therefore, if TIE had an issue to resolve with a third party we were not getting that sorted and if AMIS had resource or supervision type issues then that was something they needed to get sorted out. If neither of us resolved our areas of responsibility then it was going to be less likely that we were going to successfully deliver Revision 06.

32. The Construction Director's Report for the meeting of the Utilities sub-committee on 12 March 2008 (CEC01453676) noted, under Overall Performance to Date, that a total of 7805 metres (against a planned 9754 metres had been undertaken), including 44 chambers (out of 79 planned chambers).

In relation to Section 1B, progress in the period was less than anticipated.

The Action Plan noted that *"Overall progress in period had identified a reduction in outputs, due to increasing workload and number of live sections"* and that *"Key areas to be targeted are North end of Leith Walk (output 33%) and the Mound/St Andrew Square (output 58%) which are substantially lower than the section overall average output of 80%"*.

Under Programme (para 2.2) it was noted *"Latest production figures indicate outputs have dropped significantly (approx. 50% output planned achieved), especially in the last period. Indications are we are 3-4 weeks behind programme"*. Similar Key Issues/Blockers as before were noted (with the addition of a 1500 mm sewer under the proposed A8 underpass) (the minutes are CEC01456730).

- (1) What were your views on these matters?

The report provided transparency and highlighted what the Project intended to do but was not achieving. There were a number of factors associated with that. One was section 1b at Leith where there was very significant congestion and additional redesign and diversions. We had issues with certain chambers that were constructed unsatisfactorily by AMIS. There was a lot of work that we were investigating at the Mound and in St Andrew Square, where things were very congested and difficult to build.

It was achievable but there were a lot of unknowns that we had to investigate. In addition, there were some significant enabling works that needed to be undertaken for diversionary works and that cost us a little bit of extra time. If things had gone well I would have expected us to be at or near the planned output because it was a reasonable plan. However, because things had to be done sequentially, it meant it was very difficult to just jump to a different location and if you were held up whilst you were trying to solve a problem, you could not automatically open up another work front.

We had assessed at that time there was circa three weeks' worth of delay that we saw against the potential MUDFA 06 programme. There were some opportunities there for the contractor to recover and it was their responsibility to do so, similarly there were some

elements which were the client's responsibility and we were looking at options to try and accelerate works.

33. A progress report for a proposed meeting of the Tram Project Board on 12 March 2008 (CEC01246825) noted: "SDS submissions to CEC for their approvals are now timed such that, in some cases, construction is programmed to commence before approval has been completed" (p12) and "Design. The delivery of design to meet the construction schedules for various structures is causing concern and detailed reviews and discussions are underway with SDS, CEC and BBS to provide solutions" (p19).

- (1) What were your views on these matters? Did they cause you any concerns? How were any such concerns addressed?

In that particular area there was a review of the design timing and we were fast tracking certain issues into approvals to try and make sure they were agreed in principle. Needless to say they required some subsidiary approval and, assuming that the Infraco contract was going to be awarded, it was clear there were going to be elements of the design that would be required from the Infraco that had to be incorporated in order to finalise SDS designs.

We were undertaking daily reviews on approvals to make sure we understood what problems we had and that none were either CEC or TIE's responsibility to resolve. We wanted to make sure that the submission we were taking to the Council was a robust one and there was no reason to unnecessarily reject the design or the proposal.

There were specific design issues that may have had an impact on the programme, some variations around what was going to be accepted like Haymarket viaduct, for example, it was going to have a timing impact when compared to the Infraco programme.

What we wanted to do was make sure we were dealing with what was going to be practically applied, with no unnecessary recycling back to approval. Until you get the final 'issued for construction' (IFC) drawing you are always going to have a risk element. The reason for the final version going through a fast track with the Council was to make sure they did not spend a lot of time getting something concluded and then have to revisit it later in the process.

34. A joint meeting of the Tram Project Board and TIE Board took place on 13 March 2008 (CEC00114831). The minutes noted (page 5, para 3.2) Willie Gallagher as having explained that "the position with BBS was settled in terms of price, programme and scope for Employer's Requirements, however two key items were awaiting resolution: a) Network Rail issue on the cap on economic losses; and b) SDS novation".

In relation to SDS Novation (page 6, para 6.3), you explained that SDS would receive *"10% of the milestone retention payments on delivery to programme as an incentive to perform"*.

In relation to Price, Budget and Risk Position (page 6, para 10), it was noted that there was an increase of Infraco price of approximately £10m, from £498m to £508m.

Willie Gallagher explained that the buy-out of the risk of SDS non-performance was considered good value for money.

Mr McGarrity summarised the key items in the specified risk allowance going forward, which included *"significant sums for programme delays, unforeseen delivery issues and consent issues and MUDFA related issues"* (para 10.5).

It was noted that *"95% of the combined Infraco/Tramco price is firm and the remainder had been reviewed by both TIE and BBS for adequacy"* (para 10.6).

The Boards expressed the desire to stress the achievements of the proposed deal in all communications, including the fact of fixed pricing.

The Boards approved the notification of contract award and to move to Financial Close around 24 March, subject to resolution of the SDS Novation Agreement and Network Rail Asset Protection Agreement (APA).

In relation to MUDFA it was noted, *"the period experienced a slippage in programme due to AMIS' difficulties to ensure appropriate supervisor mobilisation. WG confirmed that tie had taken steps to work with AMIS to address this issue"* (para 15.2).

- (1) What was your understanding of these matters, including the extent to which agreement had been reached on price, programme and scope? What matters were still subject to negotiation?

Stewart McGarrity's comment is clear on this where he identifies the key items in the specified risk allowance going forward. The combined Infraco and Tram price is firm and was reviewed by TIE and BBS. As we touched on in question 29, the increase in the Infraco price was £8.6m for the Rutland Square adjustment which was specifically focused on Willie Gallagher's point around buy-out of risk, timely provision of the design and the quality of the design.

The Network Rail APA (Asset Protection Agreement) is one of the documents that needed to be signed off in order to do work alongside the railway corridor on this particular project and that was something we needed to agree with Network Rail. It would be standard for Network Rail to insist on a developer accepting an uncapped limit on economic loss.

It was really about whether tram works disrupted the main link railway per se. That was an exercise here, to resolve the difference between CEC and Network Rail because they were the two key players. I do not have a copy of that final version of the Asset Protection Agreement so I cannot remember how that was finally resolved.

I remember sitting down with Ron MacAulay, the Director of Network Rail Scotland at the time, to try and work through to a conclusion. My instinct is that we got a satisfactory conclusion that it was not an uncapped liability because that was not really fair or acceptable to the Council and we got a sensible compromise from Network Rail. However, I would need to see the final document to confirm it.

In relation to the SDS Novation and the point about 10% of the milestone retention payments, it was to try and give an incentive for timely delivery as well as having a downside with the existing provision for liquidated damages.

We certainly did not consider, at that stage, that the Infraco would apply their subsequent approach to Schedule Part 4 and arguing that any minor change entitled them to additional time and costs. I think that approach ultimately drove tens of millions of pounds with direct cost change and tens of millions of pounds of delay-related change. Under our interpretation there would have been some direct cost change because there certainly were some amendments but nothing of the order of magnitude that the Infraco argued for from late 2008.

The issue surrounding what is a fixed price: this was a contract that had a construction works price which was a lump sum for delivering works but also had a series of mechanisms by which that could change with the provisional sums, through a Change Order or through the Notified Departure mechanism. I think there were probably some areas where people were reading into the words what they wanted to read into them, "Does that mean it is fixed then? Is that capped at a guaranteed maximum price?" I think that was an area where communications were not as good as they could have been or that the correction of interpretation was not as good as it should have been.

For me there was a clear statement from Stewart McGarrity which set out what was intended.

35. By letter dated 19 March 2008 (CEC01526804) TIE sought to instruct certain MUDFA works. In his reply dated 28 March 2008 (CEC01533381), Mr Malkin noted that the purported instruction did not comply with the requirements of the contract and stated that "*This level of ambiguity, confusion and consistent change frustrates the ability of AMIS MUDFA to manage and discharge their obligations under the MUDFA terms and conditions, in accordance with the set provisions*".

- (1) What were your views on these matters?

I think Andrew Malkin is correct in that the MUDFA contract set out some requirements that TIE were not fully completing at that time, for example, TIE acknowledging a verbal instruction that the contractor had given where they should also have added some supporting documentation. Andrew Malkin's point was that the contract administration was not complete but I do think it is a minor issue, albeit it does not take away from the fact there is a need for a bit of tidying up of the contract that we were obliged to do.

36. By email dated 19 March 2008 (**CEC01464731**) Willie Gallagher advised that TIE had issued a notice the previous day advising that BSC had been selected to build the Edinburgh Tram System and that a contract required to be concluded by 28 March to facilitate the drawdown of funding from Transport Scotland before 31 March.
- (1) Can you explain the process whereby funding was drawn down from Transport Scotland? Did the need to drawdown funding by a certain date put any pressure on TIE to conclude the Infraco contract?

This is probably a better question to ask Stewart McGarrity or Donald McGougan as the respective Finance Directors of TIE and CEC, but I can explain the process in principle.

TIE would supply a forecast of anticipated expenditure to CEC and CEC would then discuss that, usually with TIE and Transport Scotland in attendance. CEC would then confirm what was expected in terms of the flow of cash available, which, on this project, would mean that if £10m was due to be drawn down in a month, the share was 91% funded by the Scottish Government and 9% funded by CEC.

It is a finance management process based on agreed forecasts and related to what budgets were agreed with CEC and TS on an annual basis, subject to regular forecasts or updates if there was a change. For example, in earlier years there were a number of forecasts that if the Infraco contract had been awarded on its original timings our demand for cash would have been an earlier drawdown that was then deferred and delayed by the fact that the contract was not signed.

As Project Director and with the elements I was involved in, it did not put any extra pressure on me. This needed to be the right contract and a fair deal. Clearly it is politically challenging if you have to go back to Transport Scotland and others when actually the deal is not going to crystallise on the original anticipated date. However it is not unusual for a Government authority to look at what is expected to be expended by the end of the budget year and whether there is likely to be any increase or any deferment of that.

- (2) In the event, why was the contract not concluded by 28 March and why was it not concluded until 14/15 May 2008?

Firstly, Infraco came back in April stating they required a further price increase if they were to agree a contract, and that were also some significant items of final drafting to be agreed by Bilfinger, Siemens, CAF, TIE and CEC in relation to governance arrangements in each of those organisations. They all needed to be able to say they accepted the final version. Unfortunately these matters nearly always take longer than you anticipate and that is not a comment specific to the tram project, that is a general comment irrespective of the contract involved.

37. By email dated 21 March 2008 (**CEC01491920**) Willie Gallagher advised, *"Last night, we successfully concluded agreements on the price schedule and the Infraco detailed contract. There is no change to the overall price, scope and Programme reported to the Board"*.

- (1) What was your understanding at that stage on the extent to which agreement had been reached on the price?

I would need to see more of the surrounding correspondence and paperwork, but I think we had closed out a number of things such as the SDS novation. There might have been some final schedules to refine or arguments over final bits of drafting. It is difficult for me to answer without being able to look at all of the documentation.

38. An internal TIE email dated 26 March 2008 from Stewart McGarrity (**CEC01422917**) attached tables giving a breakdown of the Infraco contract price (**CEC01422918** and **CEC01422919**).

- (1) Do you have any views on the analysis of the contract price as shown in these tables (including, in particular, the extent to which, if at all, allowance had been made for the risk of changes post-Financial Close as a result of Notified Departures)?

I think the tables themselves are about the Infraco contract price which then, in effect, is the price for doing the works against the assumptions or Notified Departures that are formally proposed to be agreed with the contract. If there are allowances made for risk of changes post-Financial Close as a result of the Notified Departures then that is not contained in the Infraco price but rather in the risk allowance.

From memory, I think the risk allowance was about £30m. That might be required for things like MUDFA or for elements of delay and/or elements of design change that are within the project scope.

The risk allowance does not appear in either of those spreadsheets.

39. On 26 March 2008, Ian Laing, Pinsent Masons (solicitors for BSC) sent an email to you and Jim McEwan (copied to others) (CEC01465908) in which he stated:

"As we discussed earlier today, the Design Delivery Programme that will be v28. The Pricing Assumption in Schedule 4 of the Infraco Contract assumes that the Design Delivery Programme will not change from v26. It follows that there is the possibility that there will be an immediate Notified Departure on contract execution. Given the unusual position that we are in, please can you confirm that this is understood and agreed by tie".

In an email dated 31 March 2008 in the same chain, Andrew Fitchie stated that the only approach open to TIE was *"to capture as many identified key changes that tie knows will be required and to attempt to fix them and agree their likely programme and/or cost impact with BBS prior to contract award, or at least identify the reasonable range of programme and cost impacts".*

In a response to you, in the same chain, Mr McEwan stated, *"My view is that if we pursue Andrew's steer on this we will open up the whole can of worms on the Infraco contract cost overall, and that we have to take on the chin that the programme version is not consistent, get the deal signed and then fight the Notified Departure tooth and nail. I understand Andrew's point but if we are at all hopeful of getting this done by the 15th April (this year) we cannot take his suggested approach".*

- (1) What was your involvement in the discussions and negotiations in relation to Schedule 4 (both before and after Mr Laing's email)?

This relates back to question 27. I could not find any response from me in the correspondence that was provided to me by the Inquiry. I would have thought, given that Ian Laing, Andrew Fitchie and Jim McEwan commented on this, that I would also have responded, unless we agreed that Andrew would do it on my behalf.

During March there were a number of meetings that I attended, that Dennis Murray (my Commercial Director) and Jim McEwan also attended, sometimes with Geoff Gilbert or Bob Dawson who led the TIE procurement team. They were working with Matthew Crosse to finalise these matters. There would probably have been a couple of sessions per week, maybe more depending on what topics were being dealt with and that was, generally, working in a round-table type forum. There would be ourselves, DLA (usually Andrew Fitchie), Pinsent Masons representing Bilfinger (Ian Laing), Susan Clark and also Scott McFadzen who was the BBS Project Director at that time.

We talked through some of the points that were not yet agreed or finalised as we went through the schedules and that would be led by Geoff or Bob. I did that a couple of times a week throughout March, because this was one of the last sticking points in getting the contract to an agreed form.

It was not until early May that we got agreement. That said, I cannot remember exactly when the drafting stopped but I think it was probably finished about mid-April 2008.

- (2) What is your understanding as to why Mr Laing sent the email directly to you and to Mr McEwan rather than to TIE's solicitors, DLA?

I believe that the email was sent to all parties at the meeting so I think it was copied to Andrew Fitchie as well. I think the original version actually came from DLA.

- (3) What were your views on the matters noted above?

Regarding the point "Is there going to be an immediate Notified Departure based on the SDS design programme?" we knew and expected that to become a Notified Departure, which I had no issue with. We then go on to assess the claim, based on information provided by the Infraco. The question is whether it actually has any financial or time impact.

- (4) What did you understand Mr McEwan to mean by his reference to "*the whole can of worms on the Infraco contract cost overall*"?

Jim sometimes uses flowery language. My interpretation of what he had written in that email was that we had a number of pushes from the Infraco to try and inflate or increase the price from the Wiesbaden Agreement. I interpreted Jim's language as concern over another push by the Infraco to try and further increase the price.

- (5) To what extent, if at all, were CEC advised of the risk/likelihood of Notified Departures under Schedule 4, including the potential number and cost of Notified Departures?

Right from the very start, when Schedule 4 was proposed as a mechanic within the contract, CEC, through the TPB and also CEC Legal directly, were appraised of that. I am sure that was gone through in great detail with Gill Lindsay, CEC's Head of Legal. DLA also provided specific advice to the Council on the contract in addition to the advice they provided to TIE.

I also think that it was clear from the very start that the Notified Departure mechanism existed to allow us to have a contract price on the basis of agreed assumptions. Any risks of increase or decrease from those particular points of assumptions could be dealt with using the Notified Departure mechanism.

The TPB were clear on that and had been briefed on that from at least the Wiesbaden Agreement onwards, albeit Schedule 4, as it was defined, did not really crystallise until February 2008.

Those Notified Departures related to the things that were covered in the risk register or the provisional sums or matters that would be considered as change external to the project. Therefore, it would either be covered by the allowance that was in risk or it would be covered by the allowance that was in the provisional sum or it would be something that we would expect somebody from outside the project that had demanded the change to bring funding to.

How were the number of Notified Departures and the costs recorded?

When there was work the Infraco believed was a Notified Departure, then Infraco would send TIE a letter with an INTC (Infraco Notice of TIE Change). That was them giving notice that they believe they are entitled to additional time or additional money or both. They were obliged to provide an estimate as well as particulars of how it came about. That had to be provided within 28 or 30 days.

What actually happened was that they had a standard proforma response that automatically asked for an extension to the time available for this estimate as they were almost never in practice provided within the prescribed time. Once their estimates were eventually received, they were invariably inflated. Overall we averaged settlement at 52% of their original estimates.

Infraco systematically started from a place that was over-charging us for a change. This was clearly not good behaviour and took a lot of work to get to an agreed point. If they had actually applied for 52% in the first place it could probably have been done in a fraction of the time.

This was a significant frustration because they were distracting from it being a point of principle. Even if TIE accepted a change, the Infraco were wasting everybody's time by asking for an inflated sum of money.

(6) How was the risk of Notified Departures reflected in the risk allowance?

In order to answer this question it would be better to look at the Schedule that broke down the risk allowance by topic area or headings. There was an element for delay, an element for approvals risk, an element for changes in the technical design parameters and certain elements of interface with Network Rail and immunisation.

That is all contained in about three or four different schedules of documents which I could not find in any of the material provided to me by the Inquiry.

40. By email dated 31 March 2008 (CEC01493317), David Leslie, Development Management Manager, Planning, CEC, sent a letter to Willie Gallagher (CEC01493318) expressing certain concerns in relation to prior approvals. On 3 April 2008 Duncan Fraser sent a letter to Willie Gallagher setting out similar concerns by CEC's Transport Department relating to Technical Approvals and Quality Control Issues (CEC01493639).
- (1) Were you aware of these letters and/or the concerns expressed in these letters?

Yes, I think Willie Gallagher forwarded these letters to me. They raised two key issues. One was that the planner considered the SDS submissions to be of poor quality, or inconsistent quality, and felt, in their view, that we should have been quality checking those matters before it came to them. We did samples through our TSS support but we were not there to be quality checking. SDS had set out a quality assurance process under their contract and they were making sure things were fit for acceptance by CEC Planning Department.

There was quite a lot of informal consultation between the planning authority and the SDS designer in the run up to the formal submission. Sometimes that ended up with the designer having to choose between conflicting stakeholders who had contributed. Sometimes SDS could have been better in setting out the rationale around why we settled and what they settled on, but it was always going to be difficult trying to get a consensus out of this process.

The second point I took from those notes was the suggestion that if the designers come up with an answer that is not exactly what the planning officer would have preferred then TIE is at fault, which I did not think we were.

The people involved in prior approvals agreed with us that we would fund some extra posts for them so they paid a lot of attention to what came through the door. So having allocated people to it, they got disappointed when they saw inconsistencies in the quality of submissions.

- (2) What, if anything, was done in response to these concerns?

It was a priority for both sides to reach a conclusion on these issues. We had daily and weekly summaries of many outstanding items and issues. We got a number of the key Council reviewers down to the TIE offices and based them with the SDS provider at various times to try and fast track a resolution. They could then give guidance as to what was more likely to be acceptable but they could not tell SDS what the answer was.

People like Duncan Fraser, from a technical point of view, also started to spend more time in the project offices rather than up at the Council offices so we had a significant amount of working time during the week and, I think, ended up funding most of those individuals as part of expediting the project.

41. An email dated 1 April 2008 from Graeme Barclay noted slippage in the MUDFA Rev 06 Programme (**CEC01456006**).

The Construction Director's Report for the meeting of the Utilities sub-committee on 9 April 2008 (**CEC01456414**) noted, under Overall Performance to Date, that a total of 10081 metres (against a planned 12,112 metres had been undertaken), including 54 chambers (out of 104 planned chambers).

It was noted (page 2) that "*there has been no recovery of the previously reported slippage*".

Cumulatively, the existing effect was a delay of circa 6 weeks on the affected sections. The root causes were in four main categories: greater congestion of existing utilities than anticipated (principally affecting Scottish Water diversions); increased temporary diversion provision; slower than estimated chamber construction for BT chambers; and incomplete supply of supervisory and operative resource to meet the full demands of the Revision 06 programme and the enabling works (AMIS addressing). "*The summary impact on the REV 06 Programme critical path suggests that two weeks delay is likely allowing for realistic implementation of the recovery plans to the MUDFA programme*".

The Key Issues/Blockers were set out in para 7.0 (pp12-13) (the minutes of the meeting are **CEC01301007**).

- (1) What were your views on these matters?

The previous month discussed a three week slippage against Rev 06 programme and, at that time, we had asked AMIS to look at recovery actions that they and/or TIE might need to try and take to get back on schedule. It did not improve and whilst there were some other delays that might not have been on critical path, it was crystallised as potentially a two week delay impact on the critical path of that programme.

The reasons were the same reasons that we had been dealing with for a number of months; congested services, AMIS supervision and quality of operatives, slower progress than expected and this example which was focusing on the BT chamber that might be related to the supervisory and operative resource.

- (2) What are your views around that time of the prospect of the MUDFA works being completed by the end of 2008?"

My view at that time, from that report, was that there was an increased risk of an element of delay, in this case, up to two weeks. My overview at that time would still have been that we could recover that if we continued to apply additional resources in conjunction with AMIS. We would also need to look at re-

sequencing or reviewing elements of the programme to allow us to integrate that effectively with the Infraco programme and minimise any impact on the Infraco works.

42. A Joint Meeting of the TPB and TEL Board took place on 9 April 2008 (CEC00079902). The minutes noted (page 5, para 3.1) that you presented the agreed plan and phasing for the next stages of the MUDFA works and that you confirmed that *“despite an anticipated slippage of approximately five weeks, the alignment with the Infraco programme was maintained”*. Reasons for the delays in certain areas were: greater congested services than anticipated, SUC’s issue of locating own assets; and AMIS resource level below the Rev 06 programme (para 3.2). Currently 30% of expected works were completed.

The Boards received updates on the progress in relation to the Infraco and Tramco negotiations on pricing, programme, scope and risk profile etc.

Under SDS Novation, it was noted (page 6, para 4.7), that *“some details were outstanding and were being negotiated robustly”*.

In relation to Design Management after Close (page 7, para 10.2) it was noted that *“from novation onwards, the contractual relationship with SDS moves to BBS. However, tie and CEC would continue to support and manage BBS in this regard”*.

- (1) What was your understanding of, and views on, these matters?

Most of this is a quote from what I said. It represents my view at the time.

We started to see some evidence of AMIS addressing some of their resource deficiencies, although they had not caught up at that particular point. There was a focus on sequencing the programme and understanding how it fitted with the relevant embargos across the city. It was very close to the Infraco milestones and deadlines, so it could still be achieved, however anything falling significantly behind its intended programme was likely to have the potential to cause a delay unless the Infraco could consider re-sequencing works.

I went on to mention the Infraco/Tramco negotiations and SDS novation and said *“that some details were outstanding that were being negotiated robustly”*. We touched on that earlier around the liquidated damages arrangements and potential incentivisation; we still required novation to be completed although SDS were looking for reasons not to do that.

I note I said *“from novation onwards to a contractual relationship with SDS moves to BBS, however, TIE and CEC continues to support and manage BBS in this regard”*. We would still want to see visibility of how BBS were managing SDS in order to ensure matters were being completed and to be aware if SDS were suggesting, for example, that the reason for any failure to achieve a milestone was because of a CEC failure. We would want to know

about that straight away so we could get that resolved with CEC and CEC were absolutely aligned with that.

43. In an internal Weekly Report dated 18 April 2008 (PBH00018333 at para 1.3), Steve Reynolds, Parsons Brinckerhoff, noted:

“Richard Walker indicated to me on Friday that he has concerns over the presentation of the Infraco Contract deal to Council. Some weeks ago I had expressed my concerns that the price on the table from BSC did not align with the programme contained in the offer. For example, the price assumes that value engineering savings will be made whereas the programme has no allowance for the design and approvals time which would be required. I had suggested that tie would have to be careful in the form of presentation so as not to mislead CEC. Richard is now expressing (to me) similar concerns and has suggested that he will take this up with tie separately. To a large extent the current position is one of BSC’s making where the offer is dependent upon a set of Pricing Assumptions which can be interpreted by the informed reader as a basis for price increase and programme prolongation. It may be that Richard is belatedly expressing worries which have more to do with his concern over working with tie as a client or may even be due to friction between Bilfinger Berger and Siemens. Whatever the reason I detect an air of uncertainty and last minute concern over whether BSC should be taking the job”.

- (1) What were your views on these matters?

I have now read the note, as the Inquiry provided, but I have never seen it before. It is an internal note between Parsons Brinckerhoff and Bilfinger Berger’s representative, Richard Walker. That is not something that would go through any channels with TIE.

I do take issue with the content of it. I would have expected Steve Reynolds to have raised these issues with Willie Gallagher or myself or others in TIE.

I cannot recall Steve Reynolds raising any such issues.

- (2) Did anyone from BSC raise with you (or anyone else at TIE) any concerns in relation to TIE’s reporting of the Infraco contract or price to CEC?

I do not recall any such conversation from Steve Reynolds, Richard Walker or Michael Flynn, the senior Siemens representative, nor indeed anyone else in the consortium.

- (3) Did you, at any time, have any concerns in relation to TIE’s reporting of the Infraco contract and price to CEC?

No. We were able to answer questions on an ad hoc basis at formal meetings and there were a number of specific forums or sub-committees set up where we addressed those points. I do not recall any extended request to explain anything further or to go over anything above what we had already done.

44. By email dated 28 April 2008 (**CEC01312358**) Graeme Bissett circulated an updated draft of the Close Report (**CEC01312359**) and other documents. The updated draft Close Report noted that there had been an increase in the base cost of Infraco of £17.8m compared to the Final Business Case, which increase was as a result of *“substantially achieving the level of risk transfer to the private sector anticipated by the procurement strategy”* and that the increase of £17.8m approximated closely to *“the allowance which was made in the FBC for procurement stage risks ie the increase in Base Costs which might have been expected to achieve the level of price certainty and risk transfer which has been achieved”* (p4).

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

Graeme Bissett is stating that there was an original procurement strategy and intent that was generally achieved, including the risk transfer allocation. However, it was at a price, and that price increased the base cost expected from the Infraco-related works by £17.8m.

45. Mr Bissett’s email of 28 April 2008 also attached a letter dated 28 April 2008 from DLA to CEC and TIE (**CEC01312368**), a DLA/TIE Risk Matrix as at 22 April 2008 (**CEC01312367**) and a Report on Infraco Contract Suite (**CEC01312363**).

The Report on Infraco Contract Suite noted, in relation to Price, that *“A number of core pricing and programming assumptions have been agreed as the basis for the Contract Price. If these do not hold, Infraco is entitled to a price and programme variation known as “Notified Departure”* (p4) and, in relation to Programme, that *“Following contract signature, it is expected that BBS will seek a Notified Departure on Programme due to SDS delay in design production”* (p4).

- (1) What was your understanding of, and views on, these matters?

I think that answers some of the questions we looked at earlier. There was a very clear matrix that DLA had prepared and provided in a report to both CEC and TIE that identified public sector retained risk. It identified Infraco or private sector risks that were being transferred to the Infraco and elements that would be shared. I do not know how that risk register or matrix was ever used outwith the community that generated it so do not know whether it was ever conveyed to the wider public. However, I would have expected CEC, Transport Scotland and Scottish Ministers to have been briefed on it.

The contract was focused and remained very similar to the previous version that had been drafted six weeks beforehand. It incorporated the updated versions of the Employer’s Requirements that were needed and confirmed what SDS and the Infraco obligations were in terms of meeting those Employer’s Requirements.

In addition, there was a Package of Bonds and guarantees where the Infraco was obliged to secure bonds for certain values of tens of millions of pounds, which were available on demand. If the Infraco breached its obligations then TIE, as the client, had the opportunity to go to call upon the bond. That was a pretty robust set up.

Everybody explicitly understood the idea of a Notified Departure, before Contract Close. It was clear to everybody who needed to understand from a CEC point of view, and a TIE point of view for that matter, that it was expected that there would be an immediate Notified Departure based on the design deliverables.

- (2) What was your understanding around that time of the likely number and value of Notified Departures?

While I was still involved in the project we got to 800 plus INTCs. I would have expected dozens but not hundreds and hundreds. Infraco were consistently including excessive valuations with the estimates that they submitted and it took a long time to get them agreed at a sensible, fair value.

The 52% that I have spoken of previously was based on an analysis of 200 or 300 items that were agreed. For example, I recall Edinburgh Park Viaduct starting off with a BSC estimate of £400k plus and eventually being agreed at £50k.

Our view was that Infraco should have been progressing with the works while we continued to seek agreement of the estimates. If, for whatever reason, we could not resolve that there was an opportunity to escalate it to the Chief Executive of TIE and the Infraco representative, which was Richard Walker. If that failed to resolve matters, the Dispute Resolution Process could be utilised which results in either mediation or adjudication.

- (3) To what extent were these matters discussed with CEC?

As has already been said, there was a DLA letter to CEC and, specifically, to their Head of Legal. I also recall a conference call with Gill Lindsay and Andrew Fitchie going through these matters in late April/early May. The DLA risk allocation matrix referred to in the question was a deliverable which DLA were obliged to provide to CEC and did so.

46. By email dated 30 April 2008 (**CEC01274958**) Willie Gallagher noted that Richard Walker had advised that Bilfinger required an additional £12m to conclude the deal, despite a deal having been negotiated and agreed by all parties on 14 April.
The meeting of Council on 1 May 2008 was provided with a report dated 23 April 2008 by CEC's Chief Executive (**CEC00906940**) which noted that: the

cost of the project was now £508m (comprising a base cost of £476m and a revised QRA of £32m), which increase was largely due to the firming up of provisional prices to fixed sums, currency fluctuations and the crystallisation of the risk transfer to the private sector as described in the Final Business Case; 95% of the combined Tramco and Infraco costs were fixed with the remainder being provisional sums which TIE had confirmed as adequate; and that "As a result of the overlapping period of design and construction a new risk area has emerged which has been the subject of extensive and difficult negotiation. TIE Ltd advise that the outcome is the best deal that is currently available to themselves and the Council. Both TIE Ltd and the Council have worked and will continue to work diligently to examine and reduce this risk in practical terms" (para 3.10).

In his internal PB Weekly Report dated 2 May 2008 (PBH00018873) Steve Reynolds noted:

"Two observations are that:-

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

Other than the fact that I had not seen the PB report before it was provided by the Inquiry my view was that it was a negotiation position statement to maximise their revenue at the time of closing. They were seeking to maximise their revenue at a point when they knew that TIE and the Council were keen to conclude this matter.

- (2) What was your understanding of why BSC sought a further £12m to conclude the deal?
- (3) What problems did that cause?

It brought into sharp focus what appeared to be a lack of good faith with the negotiating principles by people like Michael Flynn from Siemens and, particularly, Richard Walker. Most of this problem appeared to be related to Bilfinger Berger, although not exclusively. It is unlikely that the £12m problem suddenly cropped up on 13 April. There was a meeting in mid-April that confirmed everything was in good shape and there was no flag from BSC at that point. It would be disappointing if all of a sudden they had found the need for an extra £12m in that following two weeks so it does not seem particularly credible to me.

- (4) What was your involvement in resolving that matter? Did TIE agree to pay the further sum sought and, if so, why?

I looked at the rationale around the individual items and points that were raised. I think there was an email at this point, we cover this in the next question, so it is probably better to deal with those points

there. It would be fair to say though that I looked at and commented on the arguments made by Richard Walker and Herr Enenkel.

- (5) What are your comments on the passages in Mr Reynolds' Weekly Report noted above?

As previously stated this is the first time I have seen it. There was an expectation of a formal report going forward to Council the next day. The planned submission of that report to CEC means that some of the papers are commercially sensitive but there was certainly going to be a sharing of much of the report on the website. I absolutely disagree with Steve Reynolds' observation around the paper when it was presented to the CEC. We had set out all of the reasons about how we got to those totals and numbers for risk allowances.

I am also sure that Willie Gallagher would have discussed the next steps that he needed to take with the Council and how we would try and move matters forward. I would have expected him to speak to the CEC officers, particularly Dave Anderson and Donald McGougan. If their view was that there were still some issues that should not have been published at that point in time or that there was a concern over it, I am sure Willie would have taken full consideration of that.

47. We understand that Mr Gallagher met with Mr Enenkel, BSC, on 5 May 2008. By email dated 5 May 2008 Mr Enenkel proposed that in the event that phase 1b did not proceed TIE would pay BSC £3.3m under the contract for phase 1a (CEC01337607) (Mr Enenkel sent a clarification email on 6 May 2008, CEC01274976).

Mr Gallagher wrote to Mr Enenkel on 6 May, listing a number of conditions on which BSC would retain its position as preferred bidder (CEC01284033).

- (1) What was your involvement in, and views on, these discussions?

My view at that time was the 1b allocation of cost was a pricing position BSC took to reinforce their chances of being appointed preferred bidder. Moving a phase 1a cost into their phase 1b price was the commercial choice they made; we did not require them to do that and it made their 1a price more attractive so they had an advantage during the tender process.

It was fundamentally their risk and they were pushing the envelope by suggesting it was something the client should pick up.

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

The bonus would not be paid until successful timeous completion of works. It was agreed as part of the negotiations around their

demand for an additional £12m, which became the Kingdom Agreement as discussed in Question 50 below. I cannot recall exactly how it was quantified.

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

There was an expectation that BSC would mobilise quickly and undertake the early deliverables that we expected from them. It did not require us to have a final design for certain pieces that might have still been going through the design process. What Willie Gallagher was doing was reminding BSC that they had an obligation to a construction programme that they had signed up to.

The last thing that the whole programme would need would be an awful lot of effort to get the contract signed and then the perception of nobody doing any physical work on the job. Willie wanted to clearly demonstrate, in the summer of 2008, that visible progress had commenced on the project, even if it was only demolitions and ground preparation.

- (4) What agreement was eventually reached in respect of the price increase?

I think that is covered in question 50.

48. The Construction Director’s Report for the meeting of the Utilities sub-committee on 7 May 2008 (**CEC01300994**) noted, under Overall Performance to Date, that a total of 12,421 metres (against a planned 16,051 metres had been undertaken), including 65 chambers (out of 120 planned chambers). Under Period Progress it was noted (page 2) that there was a downturn in output from the previous period ie 70% achieved in this period and 77% achieved in total to date. The cumulative effect on the sections was approximately 7 weeks. The overall effect on the critical path remained at two weeks, “*but implementation of revised recovery programme actions required urgently*”. The key areas of delay were as before and additional demands/constraints imposed by Traffic Management. It was noted (page 3) that elements of the city centre works (the Mound area) would extend into the first quarter of 2009 (the minutes of the meeting are **CEC01302139**).

- (1) What were your views on these matters?

We had by this time got up to seven sites opened up simultaneously so multiple work fronts were underway. That was part of the mitigations and actions that both TIE and AMIS were expecting to undertake in order to deal with some of the historical delays, so we were working on more areas than originally planned.

There was an improvement in performance in some areas but we still had not recovered the two week critical path delay, and there were up to seven weeks worth of delays in total, as opposed to the six weeks that were talked about at the last period.

There were some recovery programme actions that were underway but they had to be implemented fully. I think there was one piece of work associated with the Mound where Scotia Gas Network would not allow us to do a diversion during the winter on a very old piece of infrastructure works and we just had to wait. If it could not be done before autumn 2008, as was originally pencilled in, then it had to be done after spring 2009.

The MUDFA contractor completed these diversions at the Mound during the same closure of Princes Street in 2009 and then later in that closure gave that site over to the Infracore to build the tramway above the diverted gas main and that is how we eventually resolved it. I think that work was finally undertaken round about the June of 2009 by SGN.

Can you explain the chambers, ducts and metres completed that are spoken about?

Part of our work was building chambers that somebody could go into and access ducts that ran between individual chambers. The manholes carry the fibre optic cables from BT and Virgin. That would then be completed with that ducting so you would get credit for the metreage of ducting you put in plus the number of individual chambers. BT would then install the fibre optic cable into the duct once it had been handed over to them and they would join it to the existing network and commission it. They would then transfer the circuits across from wherever they were and we could dig up the old circuit at any point at our convenience because it was abandoned. In addition there would be metres of water pipe or gas pipe or power cable that was also measured in metres. Some of the individual reports refer to Scottish Power, SGN, BT assets and there will be a linear metreage, either metres of cables or pipe and, where relevant, the number of chambers. It is mainly on telecoms.

49. On 12 May 2008 (at 18.49 hours) Graeme Bissett circulated an email (**CEC01338846**) attaching a final set of TIE's internal approval documents. The Financial Close Process and Record of Recent Events dated 12 May 2008 (clean copy, **CEC01338847**; tracked changes, **CEC01338848**) noted that a response was received from BBS on 7 May 2008 which proposed a payment of £9m to BBS and "*Further examination of the contract terms surrounding the design management process, which although unclear pointed to an extended design and consent programme with potentially material adverse consequences for the construction programme*" (p4).

- (1) What was your understanding of that matter?

I think those internal documents answer questions 46 and 47 so should be read in conjunction with that. The design management process is made more complicated and less effective because of that requirement to get approvals but it talks about a potential adverse consequence as opposed to actual. We have always had a risk around some of those approvals and it is reaffirming a continued risk going forward. I am not sure it tells us anything new over and above the answers we are coming on to about the Kingdom agreement.

50. On 13 May 2008 parties signed the Kingdom agreement (**WED0000023**).
(1) It would be helpful if you could explain your understanding of the need for, purpose and effect of that agreement?

In simple terms what we are trying to get to is if an increase in cost is agreed what does the client get for it? Condition 1 was about framing issues from an incentivisation perspective and there were four stages of that. The sectional completion was for different parts of the job. Section A was the depot, section B was off track elements, section C was the whole route ready for final testing and section D was about once that had been satisfied as approvals and was ready to be handed over for operational service.

Condition 1 laid out some incentives that we believed would allow the Infraco to get a benefit financially if it achieved or beat the dates and it had a specific incentivisation bonus accordingly. It is not something that was covered in the previous proposals because what is in the proposals are solely penalties in the form of liquidated damages for failing to achieve these dates.

I interpret this as it is part of the gap closing around our starting point of zero additional pounds versus Infraco's demand for an additional £12m. We get Infraco interested in achieving these dates because they get a bonus. If they do not achieve the dates, they do not get a bonus.

Condition 2 was around the phase 1b costs. There was an obligation on BBS to produce an estimate for completing phase 1b and if they did that and we choose not to proceed then they get compensated for the work that they had previously done on this. We valued this at £3.2m.

Condition 3 was around closing out the issues around the SDS novation argument that had been raised at the end of April 2008. The reason was so that BBS would not argue over the novation. It was also trying to improve the proposals on design review and design management which they were continuing to argue about whether they would accept those or not.

Condition 4 was about CAF joining the consortium. There is an indemnity provided and there are bonds provided by the sureties and amendments to the Siemens and Bilfinger parent company guarantees.

Conditions 5 and 6 were certain elements of work that were intended to be done as advanced work and mobilisation that the Infracore were going to argue for compensation events or changes.

Condition 7 was road reconstruction, we had an item in the risk allowance around one of the Pricing Assumptions about what the make-up and issues of roads construction were. We capped that liability in the number we had in our risk allowance so that it could not get any worse than the amount there and that supports the risk provision.

Condition 8 was if there was change arising from early release of IFC (Issued for Construction) documents and design information, the BBS consortium accepts those subject to a cap of £1.5m.

Finally, Condition 9 is an issue around an uninsured third party economic and consequential loss. There was an arrangement to put that into an account where it sat and it was intended to be shared three ways if there was anything left in it at the end.

Those were the main points that were intended to be concluded. I think the only other point to make is that agreement got us to a point where it was still possible for a contract with the Infracore, whereas on the 30 April they had said that unless they got £12m they could not sign a deal.

51. On 13 May 2008 the Council's Policy and Strategy Committee considered a report by the Council's Chief Executive (**CEC01246115**).

The report advised that the estimated capital cost for phase 1a was now £512.2m. The report stated that "*Offsetting the increase in cost is a range of negotiated improvements in favour of TIE and the Council in order to reduce the risk of programme delays and minimise exposure to additional cost pressures, as well as better contractual positions*".

- (1) What are your views on the statement noted above?

The point we were making was that the estimated capital cost for phase 1a now stood at £512m and there was a further contingency payment of £3.2m if line 1b did not proceed. The report is clear, if we do not proceed with 1b (and there is no automatic presumption that we would), there is an additional liability of £3.2m that has been agreed since it is part of the process.

It did reduce risk and provided certain caps and limits of liability as we have just discussed in Question 50 so it certainly improved the

position from a liability and a risk point of view. It clearly stated that alternatives were considered including extending the time period for Financial Close.

- (2) Do you agree with it? If so, what do you consider were the “improvements” and “better contractual positions” that reduced the risk of programme delays and minimised exposure to additional costs?

In relation to what are the “improvements” and “better contractual positions” I think that is the securities and risk profile issues which are specifically conditions 5, 6, 7 and 8 of the Kingdom Agreement. Those are the areas where there is a benefit in risk profile as conditions 1, 2 and 9 are more beneficial potentially to the Infraco. Conditions 3, 4, 5, 6, 7 and 8 would assist TIE.

52. A meeting of the Tram Project Board took place on 13 May 2008 (CEC00080738 at page 9). During the meeting, news was received that approval had been given by CEC’s Policy and Strategy Committee for CEC’s Chief Executive to authorise TIE to sign the contracts.

The Approvals Committee (comprising Mr Gallagher, Mr Mackay and Mr Renilson) approved signature of the Infraco contract (as recorded in a separate minute, CEC00079774, at page 3).

It was noted (page 9, para 4.3) that *“Following a discussion on the consequences on price and programme of delaying a decision, the TPB approved the completion of the SDS novation”*.

- (1) What was the purpose of that meeting, what was discussed and what was the outcome? Were you at that meeting?

As the minutes record, I was present for only part of the TPB meeting. The purpose of the meeting as it says at item 1.1 was to update members. What was discussed is in the minutes as far as I can recall. The outcome is in the question: *“the TPB approved the completion of the SDS novation.”*

What it says is there was no consequential impact on price and programme. I think this was around particular terms that were included or the potential liabilities for SDS. I am confident that we assessed the impact on price and programme at that stage. I do remember falling out with SDS around about that time, telling them they were not going to get any extension of the time on their programme or we would cancel the whole thing.

The points that were discussed at the time are within the document I introduced, page 2 of CEC00079774, the Finalisation of SDS Novation Draft report. It is the document referred to in CEC00080738 at paragraph 4.2. It was about historical change issues and that was dealt with in some of the risk items and was definitely utilised £1m of risk contingency identified as part of the negotiation to conclude the Infraco contract. It aligned with the Employer’s Requirements in SDS design. It cut out further price

escalation from CAF or Siemens surrounding their equipment that was on order.

- (2) What were the consequences on price and programme of delaying a decision?

The price would increase if we delayed and the programme would extend.

53. Infraco Contract Close took place on 14 and 15 May 2008, as part of which a number of contracts were signed, including the Infraco contract (CEC00036952) and novation of the SDS contract to BSC. By way of overview, what was your understanding of the following matters at Contract Close:

- (1) The extent to which detailed design was complete (and all necessary statutory approvals and consents had been obtained), the extent to which these matters were outstanding and when the detailed design was likely to be completed (and all approvals and consents obtained)?

The most accurate way to determine that would have been to check the latest version of the SDS progress and programme which would have probably been V28 or V29 at that time. That would have dealt with percentage complete and the final completion date.

None of those documents were provided to me by the Inquiry. If I had a copy of the V28 and V29 programmes then that would allow me to confirm what we knew at that time and what we would have been clear and visible to the Infraco, TIE and CEC in May 2008.

- (2) The extent to which utilities diversions were complete, the extent to which these works were outstanding and when these works were likely to be completed?

The MUDFA contractor produced progress reports and Graeme Barclay, the Construction Director, would have summarised that in his reports. Those were not in the material provided to me. The relevant MUDFA Committee Report around about April or May 2008 will provide the precise answer.

From the correspondence we have looked at in relation to the questions above, it was clear that, at that time, there was an anticipation of MUDFA running at least until the end of the first quarter of 2009 because that was when the Mound works and the gas main diversion were anticipated.

- (3) The likely effect on the Infraco works and contract (and the cost of the tram project) if the outstanding design (and approvals and consents) and outstanding utilities diversion works were not completed within the anticipated timescale?

The likely effect would be that the timescale would extend and some costs would increase.

- (4) The provision made in the risk allowance for the above matters?

There is a schedule that breaks down the risk allowances at that point in time - there was definitely an allowance for delay and there were definitely allowances for certain design changes, or potential design changes, within that element.

- (5) To what extent did TIE discuss the above matters with CEC?

All of those matters were covered extensively at the Close Report, in the approvals reports that were being circulated and signed off at those various approvals committees and they were also addressed at the TPB Committees that were giving authority to conclude the contract.

Present at all of those were a number of senior Council officers. I think Dave Anderson had taken up the City Development role from Andrew Holmes and Donald McGougan was the Council Finance Director. Certainly those gentlemen were in attendance and the reports were given to Tom Aitchison, the CEC Chief Executive, to permit him to utilise his delegated authority. I would have discussed matters that would feed into those committees and the formal members of those committees included individuals such as Willie Gallagher, Dave Anderson, Donald McGougan, and David Mackay.

54. The pricing provisions of the Infraco contract were set out in Schedule 4 (USB00000032).

- (1) What was your understanding of the extent to which the Construction Works Price of £238,607,664 was a fixed price?

The Construction Works Price has to be read in conjunction with the negotiated term exclusions and Pricing Assumptions as set out in those documents. The price is based on the set of assumptions, and terms and conditions, that set obligations on Infraco to undertake matters. It also meant that if TIE or third parties undertook certain things or asked for changes, then that price can be adjusted. It is a clear and firm price based on the set of conditions, but it is not a guaranteed maximum price.

- (2) What did you understand to be the main exclusions, provisional sums, assumptions and conditions?

The schedule clearly identified a set of assumptions. It identifies what are provisional sums, what assumptions there are around value engineering, the status of design and the assumptions around the terms of completing that design and it also assumes that, for example, the MUDFA works would be complete in accordance with the Infraco as a particular programme.

Revision 6 of the MUDFA programme set out time milestones when the Infraco would be able to access individual parts of the network and clear off the utilities diversions at certain points in time. Those are some of the main assumptions but the document needs to be read as a whole.

- (3) In what circumstances did you consider that the price was likely to change?

At that time I was expecting some of those Pricing Assumptions not to be met, for example, we knew the design programme was different at that point because it was baselined at V26 and we were likely to be dealing with either a V29 or V30 around then so there would be an immediate Notified Departure associated with that.

It was likely that the provisional sums would be a different number because the whole point is they are a provisional sum, they are only an assessment. They might have gone up or they might have gone down and that was one of the reasons for identifying them as such and understanding some of the risk items. I would have expected, subject to all parties delivering what they were supposed to in utilities, to have seen some re-sequencing that would have had some impact on the Infraco. I would have expected it to be minor and containable within the overall risk allowance for delay. I would also have expected, if any third party stakeholder or the Council had come along saying they wanted to change the fundamental scope of works, for Infraco to do the works but it for that to come from a separate budget, not the tram budget.

55. In relation to the Value Engineering deductions shown in Appendix A of Schedule 4 of the Infraco contract (**USB00000032**):

- (1) What was your understanding of what would happen if the VE savings were not achieved?

There are provisional sums at Appendix B and there are value engineering opportunities and savings noted in Appendix C specifically. What the contract says is that, "*Subject to the provisions applying VE opportunities which are Design to Cost these VE opportunities are not simply targets but are fixed and firm reductions which are reflected in the Contract Price as at the date of this Agreement*".

You need to be sufficiently ahead of the programme to allow VE to be realised, it still has to be technically feasible to do it and the consents need to operate together with any other pre-qualifications. Provided all of that happens then we expect Infraco to progress and implement the VE opportunities, and then the price saving would materialise. If it is not implemented, which is covered in 5.6 of the Schedule, Infraco will carry out the works without the amendments to the required proposals and Infraco and TIE will agree a change to the milestone payments or price by confirming the value engineering reduction has not been made. The Infraco would be entitled to an increase in their price if it was not able to be achieved.

That is the process by which that VE opportunity would happen. There is a clear mechanism in the contracts that means that if the Appendix C items were not achieved as a result of either TIE not instructing under the key qualifications or another reason which was not an Infraco liability then the value was added back into the construction works price as set out in the contracts.

- (2) What were your views as to whether the VE savings were likely to be achieved?

At the time we agreed them, they were likely to be achieved and we expected to be able to issue those instructions at the appropriate times. In the Appendix D section to the Schedule (**USB00000032**) where they were a joint target, we were not sure if they would be achieved but we expected to make some progress and we may have been able to make some savings. We might have been able to make more savings in one heading and not any in another but we expected it as a realistic target for us to aspire to, albeit there was no guarantee that we were going to be able to meet that total.

- (3) In the event, were these Value Engineering savings achieved (and, if not, why not)?

It will be a matter of record when we go through the various accounts as to whether the original 25 items were all agreed and instructed and/or added back in accordingly. For example, there are elements like reducing ballasted track thickness from 300 millimetres to 200 millimetres. I am pretty sure that was achieved because that was straightforward and was factored in. We definitely had some arguments over number 22 which was about project management and integration and co-location resources so I am pretty sure that required BBS and TIE to agree savings in resources and facilities and I do not think we got to a final agreement on that.

However, if we went through the change control accounts on the contracts from 2008 until the end of the job, or at least my time there, I would be able to tell you where we got to in relation to Value Engineering savings. I would be happy to go through that and confirm to the Inquiry exactly what that looked like. I suspect about half were progressed and half had an issue or a problem or a reason by which they could not be fully implemented but I would be estimating. I would rather be accurate and check the records if I am asked for exact figures.

56. Schedule 4 of the Infraco contract (**USB00000032**) contained a number of Pricing Assumptions. At the time of Infraco Contract Close:

(1) What was your understanding of the purpose and effect of the various Pricing Assumptions in Schedule 4?

I think it is quite well defined in the document (**USB00000032**). If you read Section 1 that is headed 'Generally', it explains the only way that numbers change either up or down is in accordance with the provisions of the agreement. Therefore, this schedule sets out the various categories that would allow a change together with a mechanism for adjusting that. It makes it clear that you cannot be paid more than once for a particular element which is a standard clause to avoid double payment.

Infraco, I think, accepted very clearly with us that if something was omitted or able to be done faster or cost less, this was the mechanic by which there was a deduction from the contract price so that was clear and fairly understood that they accepted pricing assumptions, which allowed the price to go down as well as go up.

(2) What did you consider were the main Pricing Assumptions that were likely to change and result in Notified Departures and why?

One of the assumptions, other than for certain provisional sums, was that Infraco were not expected to do utilities diversion works. We knew there would be certain things we were going to ask them to do because we are building a retaining wall through the middle of a particular site, for example, and, that would be an example where their assumption did not hold true and, rightly, we would pay them extra for doing such works.

We expected there was a risk, not a guarantee, of some of the MUDFA revision 06 works not being completed in time. That was work being done by AMIS and we might have had to ask Infraco to re-sequence works or we would be liable for a degree of delay if those utilities diversion works were not fully completed in advance. We did expect if the Council amended more than normal design development, there may be additional costs to pay and that would be fair and appropriate unless those changes were driven by Infraco proposals. If a change was driven by an Infraco proposal

that is not a change to the original works price, and any associated time and cost would be to their account and not to TIE or CEC.

If it was because the Council wanted a different looking bridge or SDS's design changed for another reason, it was not Infraco's responsibility or fault and that would be a TIE change to be evaluated accordingly. However, that would have to be tested against this idea of what is normal design development.

As some structures were at an early stage of design in November 2007, which was the base date design information, I expected some not to fall under the category of normal design development. I also anticipated that there may be some third party or approval requirements that we needed to take cognisance of. For example, CEC had to agree third party terms with Forth Ports down in Section 1a and with the Edinburgh Airport in Section 7 to finalise whatever the plans looked like.

- (3) Approximately how many Notified Departures did you consider were likely to arise?

I think we ended up with 800 plus and I would be expecting more in the range of 60-100 rather than 800.

- (4) What did you consider to be the likely total value of the Notified Departures?

We were not in a position to calculate how many individual Notified Departures there were likely to be and what the total value would be. What we did was look at matters in relation to changes from construction works price and where that was covered in terms of our risk allowance or provisional sums.

That was the approach that we took so, for example, you would expect some element of utilities work being undertaken by the Infraco and some of that was covered in provisional sums and some in risk, on transfer of scope from the MUDFA contractor.

We would expect there to be an impact of some delay on a project like this so that is why we had a six month allowance of delay costs within our risk allowance. We would expect certain elements of design finalisation, or change that might not be purely third party driven; therefore, there was an element with the risk allowance.

We expected there were going to be changes in this job for things like utilities. There was always going to be an element of that but we were trying to minimise it by closing matters down and transferring risk to the Infraco as per the risk transfer matrix, albeit that was for a price.

In this type of light rail project you would also have a significant risk of the integration of the systems; that was pretty much entirely in

Infraco's risk and price so that was an area that did not have a lot of debate. It was all cleanly transferred to the Infraco and there was not a lot of dispute over that. It tended to be the design and civil engineering areas of interface that caused most of the dispute on this contract.

- (5) To what extent were the above matters discussed with CEC?

I have answered this already in question 53(5). It was recorded in the Close Report items. I think it was clear as to how the contract was intended to operate, what some of the risk and expectations were. We did some scenario planning around that and that was shared with CEC.

57. Pricing Assumption 3.4 of Schedule 4 (USB00000032) dealt with design development.

- (1) What was your understanding of the meaning of that Pricing Assumption, including which party bore the risk that design development would result in a contract change? See also your email dated 16 April, (TIE00017426), in response to a query from Andy Conway, in which you stated that the logic behind the November 2007 design freeze was that it *"allows for all normal design development at no extra cost"*.

As drafted and as per my email in April to Andy Conway we had Base Date Design Information (BDDI) which was all the information that was known about and shared in November 2007. In some cases designs were complete at that point, in other cases they were part way through; in one or two cases they were quite early in their process. I would have expected the principles of the design were clear in each of those examples on how the design was to be concluded.

They would have done an outline design principle statement in the first place, and it would set out how they would try to solve any problem. That would include detailed or outline drawings showing what it might look like.

If that progressed to conclusion I would expect that to be normal design development and what we expected the design and construction contractor to complete within their construction works price.

If, for any reason, the designer had to amend fundamentally their specification, shape or form we would expect that to be a change. The vast majority of what I expected from that design phase would be to continue under a normal design development. The Infraco had the chance, through the bidding period, from January 2007 right up to November 2007 to understand how matters were progressing. They had a clear understanding of exactly where the design was, they made comments about what they saw as

completed detailed design, it was reasonably detailed design and they did not have a particular problem with that. Their fundamental issue was that it was not all complete so it did not allow them to be certain on the price. I thought we were dealing with that very fairly with the approach on normal design development.

That was my clear understanding of the purpose of that language and determines the contract under Section 3.4.1 and Schedule Part 4. It came from the Heads of Terms written at Wiesbaden in December 2007 so it was no new language. It was the understanding and expectation that TIE and CEC had always discussed and anticipated. It certainly was not explicitly highlighted by the Infraco that they had an interpretation that meant any minor change was going to be argued as being beyond normal design development.

For normal design development I want them to finish off the job and if they have got some fine-tuned tweaks that they can make it better or cheaper to build and still satisfy what we need, that would be a benefit they retained. Equally, I was not expecting them to come with their hand out for every penny "extra".

Infraco interpreted the final version of this clause in such a way that there was virtually nothing in their view that fell under the terms of normal design development and everything in their view was a TIE change. Therefore, they felt they were entitled to argue for additional time and additional money. This was one of the major areas of dispute between us and that emerged from probably late 2008 onwards. It was not evident to TIE and CEC when we signed the contract.

58. Schedule 4 defined the "Base Date Design Information" as "*the design information drawings issued to Infraco up to and including 25 November 2007 listed in Appendix H to this Schedule Part 4*".

Appendix H of Schedule 4, however, did not list any drawings and, instead, simply stated that the BDDI was "*All of the Drawings available to Infraco up to and including 25 November 2007*".

- (1) Are you aware why Appendix H of Schedule 4 did not list the drawings comprising the BDDI? (See, for example, your email dated 29 April 2008 which appears to envisage that Appendix H would list the drawings as per the Infraco Proposals, **CEC01294321**)

I think when it was drafted, it would have been a hard copy list. However, the drawings were available both in disc format and via the electronic data room, with the same indexing and listing. Rather than print that out and convert it, we took that information to Infraco at that time and interpreted it accordingly.

The information would have been the same but it was not transferred into a hard listing at the back of the Infraco Contract, it

was just considered that we understood and knew the electronic access that Infraco had for all of that information and what versions of the drawings were in that data around about that time.

- (2) Did that cause any problems at a later stage (and, if so, what problems arose and how were they resolved)?

I recall a later argument by Infraco over the words "were available to" compared to the words "issued to" but they could see all they wanted in the data room and were deemed to have understood that. Their argument was that we did not issue them, as in physically give them to Infraco. I do not think that was really at the heart of their argument, it was more of an ancillary argument because the heart of their argument was the interpretation of design development and who was liable.

Both parties were clear on what was available to them and where it was chosen to be argued in formal disputes, it was part of the submissions we both put to either a mediator or to an adjudicator. Compared to some of the other themes I do not consider it the most significant difference between the parties.

59. At Infraco Contract Close the SDS contract was novated from TIE to BSC.
(1) What was your understanding in relation to who would be responsible for managing the design process after novation and for ensuring that all outstanding design (and all outstanding statutory approvals and consents) was completed/obtained on time?

That was Infraco's responsibility after novation because they were the client to SDS.

That said, we expected transparency from Infraco about how that was progressing and if there were any issues that the SDS provider reported to the Infraco, we expected to understand that very quickly. We could then help solve whatever that problem was: if there were issues on the approvals process for example, it was in our interests to get that resolved as quickly as possible.

Did that happen? Was there transparency?

It was mixed. There was some visibility; it tended to be a listing, from memory, of where the Council had not done what they said they would do. There was also a bit of silence about whether there were any deficiencies on the SDS or Infraco side. It was biased in terms of its communication but that did not stop individuals in all of the organisations trying to get it concluded where it could be.

Do you think that there could have been more transparency which would have resulted in TIE being able to help more like you were describing?

I think where information was available and was agreed we tried hard to get things resolved. We were not always 100% successful quickly but we tried hard. I think there could have been some more transparency, there seemed to be a little bit of reluctance as the Infraco were trying to work out how they were going to manage SDS.

SDS was not the slickest operation over the duration of the job, which was not all their fault, but there were areas they could have been better.

I think it is always better if you can have some transparency about what the issues are, then you can get clarity about who is supposed to be dealing with them and you can hold those individuals or organisations to account.

At a later point there appeared to be a side agreement between SDS and the Infraco which, in effect, seemed to encourage both SDS and the Infraco to seek to identify or amend things and argue they were TIE liabilities: things that would have increased change control and volume of business and revenue for the Infraco and SDS if they had to redo and undertake additional works. We became aware of that in 2010 and our lawyers formally wrote to both SDS and Infraco about that. I do not think there was ever a response, or at least I have never seen one.

We became aware of that side agreement as a result of an email that was inadvertently sent to a member of TIE staff. It referred to some kind of agreement. It was one of the construction managers who received it in error from Infraco and that is how Richard Jeffrey and I became aware of it.

- (2) What responsibility and powers, if any, did TIE have after novation in relation to managing the design process and ensuring that all outstanding design (and all outstanding statutory approvals and consents) was completed/obtained on time?

We touched on the transparency point and we have also mentioned some of the conditions in the Kingdom agreement that capped certain liabilities. It meant that beyond a certain cap level the liability reverted back to TIE or CEC once Infraco had discharged its liability and obligations. Therefore there were certain examples of responsibility that if the SDS provider did not perform beyond a certain point then there was a '*no further recovery*' from them or for the Infraco.

Therefore, if there was any loss or damage beyond that it was going to be TIE/CEC's problem. Factually there was an element of that post-novation so that is what we would describe as '*residual liability caps*' that sat with both TIE and CEC. We would expect, as I

said, transparency and monitoring of the design process and progress. As I said it was in TIE's interests to try and expedite that resolution almost irrespective of whose problem or fault it was because the last thing we wanted was further delay. I would say 'powers' is wrong, 'influence' is what we were trying to exert there.

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- (3) Do you consider that any problems arose from the fact that (i) changes to, and completion of, design was primarily under the control of BSC (as a result of novation of the SDS contract to BSC) but (ii) changes to design, or delay in completing design, could give rise to a departure from one of the Pricing Assumptions in Schedule 4 of the Infraco contract and, therefore, give rise to a Notified Departure (leading to an increase in the cost of the project)?

First of all the changes to, and completion of, design was primarily under the control of BSC. We were at arms-length from that. It had the potential to cause us difficulty and it was not easy to see where some of those items were clear. It is fair to say that there was a contemplation that changes could have happened in design or delay in completing design could have occurred.

Schedule Part 4 was intended, in our view, to give a clear allocation of responsibility for that. We expected, and believed that novation put an obligation on Infraco to effectively manage SDS to completion.

Additionally, there was a proper recognition at the start of the contract that there was going to be a notified departure to bring in line the design programme from V26, which was the November 2007 position, up to the May 2008 position which was V30/V31. We expected that to be a change and a one off change is part of that. We expected the Infraco to manage SDS going forward, incorporate the Infraco proposals for a consolidated set of designs, close out any outstanding completion of designs and we did expect there to be further change costs and potential time-generated results.

There was an obligation on Infraco to mitigate the impact of any issues or problems as a result. We struggled to see evidence of Infraco's active mitigation whether on this topic or many others. Part of that overlaps with changes to design or delays in completing design. We certainly did not expect the level of Notified Departures via Clause 3.4.1 over design development that eventually arose.

My expectation was they would not submit claims associated with what would be determined normal design development. Infraco clearly took a different interpretation to that. As we have touched on earlier, we were not aware, at that time, of any side agreement that BSC and SDS appear to have entered into. It did not appear to be in the interests of TIE, CEC or the public purse. It appeared to be in the interests of BSC and SDS from a commercial perspective.

Was any consideration given by TIE to that potential difficulty prior to SDS Novation?

There are two parts to that. One was would there be examples of legitimate notified departures, which we expected there would be especially if it was beyond what we would see as normal design development. Or, for example, if the Council delayed beyond their standard timing and approvals schedule and took ten weeks to approve something rather than the agreed eight weeks, that would clearly be a Notified Departure, and unless it was a bad submission that is not SDS or Infraco's fault.

We also thought hard about this issue around novation as well. One of the reasons we did it was to put the design and construction accountability in one place, with the Infraco contractor. If we left the SDS working for us and Infraco were funnelling information through TIE, to SDS and SDS were funnelling information back through TIE to Infraco, then that would have been inefficient and would have added friction and delay to the whole process.

60. We understand that a mobilisation payment of £45.2m was made by TIE to BSC.
- (1) It would be helpful if you could explain when the payment was made and the purpose of the payment?

As a principle, one of the things that Matthew Crosse and Geoff Gilbert were agreeing with the Infraco Contract was a schedule of milestone payments that would last for the duration of the contract. There are certain things that we would have expected the Infraco to have to do early in the job to help progress overall, for example, they might have had to place early orders for materials to secure them at the prices that they had tendered them on or to get into contract with the key members of their supply chain.

It is not uncommon for a milestone schedule of payments to be set out in this type of contract.

There was quite often an early mobilisation or pre-payment made, not because we had got works done on the ground but because the Infraco was making commitments to its supply chain. They would need X thousand tons of steel or concrete, TIE want to secure it at the best price and to make that agreement with their supply chain accordingly. If we had relied on them to fund that the overall price would have just gone up because they would have put the funding cost of that back on to the overall bid.

Those initial milestone payments were circa 20% of the construction works price.

Do you know when it was made?

We would need to look at the payment certificates. I would expect it was some time in June 2008. The way this would normally happen is that the contract would be signed, the necessary information would be evidenced and provided to us and I would then have expected an application for payment from the Infraco probably later in May. We would then have had a prescribed time within the contract to agree what was due and then there would be a number of days after that before the certificate was sent back to them confirming payment on a specific date.

The finance records should clearly show the applications for payment, the certificates TIE issued, any adjustments or deductions that were made against those applications and the confirmation of payment dates.

- (2) Are you aware of how the payment was accounted for in the final settlement between TIE/CEC and BSC?

If the final settlement is what we mean post-Mar Hall and concluding the project, I do not know because that was all dealt with by CEC and Transport Scotland and I think, Colin Smith, who was a special advisor to Sue Bruce from 2011 onwards. I did not see any of those agreements.

2008 (June to December)

61. Following Contract Close, a major dispute arose between TIE and BSC in relation to the interpretation and application of the Infraco contract and Schedule 4. By way of overview:

- (1) What were the main matters in dispute?

I think there were three topic areas. The first, which primarily drove the interpretation of Clause 3.4.1 was "what is normal design development?" Infraco's interpretation of that was significantly different from TIE's.

The second strand was that the value of estimates produced was excessive. As I have already said 200 plus agreed TIE changes were settled at about 52% of the original estimated value and that, for me, was evidence of significant over-charging by the Infraco and was quite wrong.

The third strand was the issue surrounding whether the Infraco should be progressing with works while Notified Departures and estimates were being agreed or whether they were entitled to wait until an estimate had been agreed. Our expectation was a) there would be some Notified Departures, b) that we would get a reasonable estimate from Infraco that we could agree promptly and

c) while we were going through that process, they would still progress works.

In the first few months of these matters arising, the Infraco did progress works, while we sought to agree the estimates. As matters became more polarised or there was a more obvious difference in the contract interpretation, they started to decide that they would not progress some of those works.

It was around September 2010 when they virtually ceased on anything other than the depot works. We kept a register of every single INTC received, the date it was received and the status it was at so whether it was agreed in principle, whether we had agreed the value of it, whether it was disputed or whether there were any other matters associated with it.

(2) What were the main reasons for the dispute?

I think I have just answered that. The legal interpretation of Clause 3.4.1, the legal issue surrounding whether or not the Infraco need to progress works meantime and the excessive estimates. We did not think they were abiding by the terms of the contract by making those submissions.

62. In total, approximately 738 INTCs were notified by BSC between Infraco Contract Close and Mar Hall in March 2011. By way of overview:

(1) Were you surprised by the number of INTCs?

Yes.

(2) What do you consider were the main INTCs in terms of value and importance?

I have already touched on much of this. One of the major areas of difference between us was the point we have just talked about which is the application of Clause 3.4.1 and this issue of normal design development. That was a very contentious difference between us and that had some knock-on effects. It was not just the physical side of things, it became an issue surrounding the need to redo it, whether it was delayed, whether it had changed and was it therefore all TIE's responsibility.

Another large example area would be associated with utility diversions and works. In principle we agreed that it was either a Notified Departure, or that it had the potential to be a compensation event under the contract. However, from a change control point of view, the primary issue when there was a MUDFA or utilities-related delay was that Infraco were not able to access the site, where and when they expected to, so it was a potential for delay. That needed to be evaluated on the basis of asking whether they could have

mitigated by going somewhere they could access, and had they demonstrated and mitigated all they could.

If it is helpful for the Inquiry the best way to look at this would probably be to look at the schedule of 738 INTCs. I can also recall at some TPB reports, probably during 2009, when we were approaching some of the Dispute Resolution mechanisms we wanted to trigger. There are slides that summarised the main groupings of the differences between us.

63. The Construction Director's Report for the meeting of the Utilities sub-committee on 4 June 2008 (CEC01302139) noted under Overall Performance to Date, that a total of 15,288 metres (against a planned 24,322 metres had been undertaken), including 86 chambers (out of 140 planned chambers). Under Period Progress it was noted that there had been improvements in Leith Walk (Foot) and Shandwick Place where outputs were circa 80%, but that remaining sections indicated similar outputs as before, at circa 65%. Overall progress in the period was 56% of planned progress. Cumulative progress was six weeks behind, and two weeks against the critical path. By email dated 3 June 2008 (CEC01288728) Tara Edgar circulated that report.

In an email on 3 June (in the same chain) Willie Gallagher stated "*I have just reviewed this report. It worries me that all is not well. You would never have picked this up from the TPB formal report; there are issues all over the place*".

In another email on 3 June (in the same chain) Graeme Bissett stated, "*I do think the reporting here and in the TPB papers (which I assume is the TS Report) is not sufficiently detailed to disclose the vital signs. For example, the Committee Report says we are nearly 40% behind on physical progress, but there is nothing I can see which relates this in a rationalized way to the commentary that programme is 6 weeks behind and will have just two weeks Infraco impact; nor is there a cum cost versus related budget analysis which should relate to the physical progress and programme*".

- (1) What were your views on these matters?

I do not agree that you could not pick up the information from the TPB report. Most of the TPB reports included summary of output and if you look at the matrix it is clearly set out. The key players at the MUDFA sub-committee that Willie chaired and I and others attended, including Susan Clark and Stewart McGarrity, were key TIE officers in the management team. We went through those matters in detail. I think the information is there and I think Graeme Bissett is saying, "*Can you bring that to life in a better illustrative way*".

- (2) Do you consider that the problems with the utilities works in the first half of 2008 were fully reported to the Tram Project Board?

At summary level for the TPB, yes, they were. We could have provided the full utilities detailed report but that was the purpose of having the MUDFA sub-committee to set up and go through those issues and items, take them on board and work through them. The TPB had delegated that sub-committee to scrutinise those matters and it was chaired by Willie Gallagher, which was a reasonable way for the TPB to deal with it.

If you read question 64, David Mackay makes a point of the ongoing issue of Carillion resources and supervision and Willie talks about TIE and Carillion underestimating the complexity of managing so many worksites. That feels to me like there is a very good TPB awareness of issues. Clearly Willie and I, David Mackay and others were discussing that robustly and openly in early June so I would say there was clear visibility at that time.

Perhaps Willie was emphasising that he wanted the written work to draw some of those things out but the TPB was a combination of written report, presentation and opportunity to challenge the question of highlighting any issues which were clearly done in that report.

64. The Tram Project Board met on 4 June 2008 (**USB00000005** at page 5). The minutes noted (page 7) that you appraised the Board of current MUDFA progress *"including the close out programmes, the current two week impact on the Infraco critical path and Revision 7 of the programme"* (slides presented to the meeting, **CEC01312258** at page 6, noted that Revision 7 of the Programme was being finalised to enable any impact to be mitigated). David Mackay raised a concern over the *"ongoing issue of Carillion resource and supervision"*. Willie Gallagher explained that *"both tie and Carillion had underestimated the complexity of managing so many worksites"* and that areas that affect the Infraco critical path were being prioritised (page 7).
- (1) What was your understanding of these matters?

Clearly part of that note reports matters I conveyed or presented so my understanding is as stated at that time. I think there were about seven work sites or work fronts open at that time. That was more than originally anticipated when AMIS priced that job. We were expecting to work on a lesser number, conclude them and move on to the next but because of some of the delays it meant that to recover time, we needed to operate on more work fronts in different areas. That meant there was a stretch on Carillion and TIE's supervision and management resources.

We were doing it to mitigate impact of previous delays and both organisations recruited additional resources to help support those additional work fronts, so there was additional cost being expended

by Carillion and TIE. We could have gone back to the original baseline number of work sites but that would have taken longer to complete areas of work. We would have needed fewer people but it would have extended the period. In overview, that would have then caused the potential for additional delay to Infraco which was more expensive than the delay or the additional resource of MUDFA.

- (2) What problems had been experienced in managing and undertaking the MUDFA works?

I have talked about this previously: Knowledge of the asset location; condition of assets from the SUCs; congestion in areas that sometimes frustrated diversion routing as planned; some design changes including SUC components; delay in design from SDS; delay in response and approvals from SUCs; some under-resourcing; some practical constraints around traffic management about having too many adjacent sites open that could grind the city to a halt.

There needed to be some modelling done and traffic management prioritisation as we could not work simultaneously up Leith Walk, around St Andrew Square and down Constitution Street. That part of the city would have been grid-locked from an access point of view.

- (3) What was your expectation at that time in relation to whether the utilities diversion works would be completed before the Infraco works?

I think, at that point, we were in the process of trying to agree a Revision 7 programme which was aimed to mitigate any significant effects on the Infraco. We expected there may be some minor impact but we were prioritising to clear areas in the order the Infraco programme required. In some cases they were behind their programme as well and while it is not what we wanted to do, there might be some areas where if they were a bit slower getting on to a particular element or site, then it was not causing them extra delay if MUDFA took another two or three weeks to clear that particular area.

We were trying to clear as much as we could in accordance with the original commitments and timescales and where we had to prioritise doing that in conjunction with the Infraco team.

65. A meeting took place on 10 June 2008 between you and Scott McFadzen to discuss TIE's concern over BSC's mobilisation and other issues (DLA00001673).

There followed emails on 18 and 20 June 2008 between you, Willie Gallagher and Richard Walker (CEC01345997).

You continued to be concerned in August 2008 in relation to slow mobilisation and that there had been no attempts by BSC to halt the “slip to the right” in the contract programme or to “pro-actively progress matters”(CEC01165082).

(1) What were your views on these matters?

Infraco had changed some of their supply chain, they had selected sub-contractors to do packages of work so they were doing very little of this work themselves. They went to other civil engineering contractors and got them to come in and do packages of work. It seems that caused an element of delay in getting that supply chain lined up. That was nothing to do with approvals or issues associated with TIE. It was Infraco’s responsibility to mobilise and manage the supply chain.

There was a legitimate point around what design information was available. We were dealing with the change from Version 26 to Version 31 as a Notified Departure and considering if there was an opportunity for us to instruct Infraco and SDS to put more resources in to catch-up some of that design. We were considering whether to pay for that to help get matters back on track. We were intending to have a constructive dialogue. We knew the problem because that design package was not coming forward as assumed back in November 2007 but we knew so were looking to draw a little bit of time back and get some effective work done.

It felt like there was a degree of inertia from the Infraco, they were not really getting started though also not all of the design was ready, which was not their fault . It is back to the question earlier about obligations to mitigate. It felt like there was a lack of energy to make progress.

(2) What steps were taken by TIE to try and resolve these matters?

We were considering acceleration measures associated with design; there were high level conversations between me, Willie Gallagher and Richard Walker around trying to get Scott’s teams energised and doing more; we need to understand whether we did or did not have a problem. It was a big factor that we started getting some production underway.

66. Emails between yourself and Steve Hudson of Carillion in June 2008 noted discussions in relation to a MUDFA Rev 07 Programme (CEC01346377). An email dated 30 June 2008 from Keith Gourlay, Carillion, noted certain MUDFA Commercial Issues/Concerns (CEC01291405). An email dated 6 July 2008 from Steve Hudson (CEC01342171) noted “Overall I maintain my view that MUDFA continues to operate under a *lastminute.com* ethos”.

- (1) Were the price and programme for the Infraco works based on MUDFA Rev 06 and, if so, why, given that the need for a revised MUDFA Programme (ie MUDFA Rev 07) must, presumably, have been in contemplation prior to Infraco Contract Close?

Yes, the pricing programme for the Infraco works were based on MUDFA Rev 06, it was an agreed pricing assumption and we have, in previous questions, been over the reasons as to why we had to set out those agreed pricing assumptions.

At that time in the run up to May and contract signing both Carillion and TIE were looking at all the ways they could to achieve that MUDFA Rev 06 programme. We came to the conclusion during June 2008 that we were going to have to refresh and revise the programme to a Rev 07.

- (2) What were your views on Carillion's concerns noted in the above emails?

I think there were two strands to that. One was that there were bits of contract administration we touched on before where TIE had made an instruction and we would have needed to make sure it was fully and properly supported with any relevant paperwork.

I think both parties needed to make sure they tightened up on that day-to-day contract administration so that it was functioning well. There were historical issues of difference around the delay and disruption that had happened that was not Carillion's responsibility, for example, certain provision of drawings and designs from SDS.

Dennis Murray, my Commercial Director and Keith Gourlay, Carillion's Commercial Director were working through discussing some of the principles about how that might be resolved and fairly valued. There was an entitlement that Carillion were due some extra money. The issue here was to get to conclusion on how to fairly assess what that was.

In addition, there was good focus on what was still needed to be delivered. They were trying to get as much focus on the physical area as possible and make sure other elements could be properly progressed. I think both Steve Hudson and I thought there was work to be done on both sides on the contract administration and we wanted to ensure that Graeme Barclay and Andy Malkin were adopting a constructive approach to resolving the difficulties we touched on before. I remember some workshop issues to try and resolve making that process better.

The "*lastminute.com*" comment: If we were still waiting on information from say a statutory utility such as Scottish Water or BT that did not allow us to give the instruction to Carillion to go and deliver the works. We were trying to bring some of those things

properly forward but it was not going to be fixed overnight with some of the statutory utilities. Steve Hudson would rightly point out it was not Carillion's fault something arrived late, however, there were areas where they were trying to constructively deliver certain elements of the job. Carillion are also emphasising the fact that they have also got some heads of claim here that they are trying to seek to recover additional monies. It is a normal commercial contracting environment but my view at that point was that there was willingness by Carillion, and certainly from Steve Hudson as their senior leader, to try and effectively come up with a constructive solution that was fair to Carillion and fair to TIE.

67. The Tram Project Board met on 2 July 2008. The minutes (CEC01237111) noted "*MUDFA progress is improving, but is still not as good as the project team would like. Critical areas include the Foot of the Walk, Haymarket and St Andrews Square*" (para 2.5). In relation to Programme, it was noted that a number of significant project milestones were behind programme "*but were either not critical to the end date of the project or critical elements are being prioritised and non-critical elements delayed*" (para 2.10). It was also noted that "The close out plan for aligning Infraco Proposals with the SDS design (particularly roads and OLE) is being finalised and SB will report to the next TPB on the associated programme and costs" (page 7, para 2.14). It was noted, "*SB summarised that the primary risk register is currently light on Infraco specific risks and that a thorough review is already underway dealing with specific risks, especially mitigation plans*" (page 8, para 6.1).
- (1) What was your understanding of, and views on, the matters noted above?

There was some improvement in progress and I think the comments are self-explanatory. There was no doubt that we needed to look at the mitigation or sequencing issues we were trying to work with. This was on the main Infraco programme some of which was their issues and some was slow mobilisation so it was a joint effort to close the gap on the contract programme.

My approach here was that until we agree it is appropriate to bring into scope we are going to carry on with base scope.

- (2) What "Infraco specific risks" was the risk register light on and why?

The overall project risk register ran from the early years of the tram programme and dealt with early matters including consents, land purchase, getting the Tram Acts, SDS design and utilities diversions. We were now moving into a more detailed infrastructure construction phase for the main Infraco works and the Tramco works. Therefore, it is a natural progression from some of the early points that were being retired as risk register items.

68. In July 2008 a Peer Review (led by Malcolm Hutchison) was carried out (CEC01327777).

The report noted, under MUDFA Lessons Learned, that *"The fact that the completion date remains uncertain (works 60% complete) will have an increasing impact on the Infraco works"*.

The report noted, under Contract Issues, *"It is unclear to the review team where risk lies for design development. BBS and tie in interview considered risk lay with the other party"*.

(1) To what extent did these matters cause you concern?

Recommendations were made to cover a range of matters, some of which acknowledged the approach that had been taken and suggested some further refinement.

They developed quite a lot in the 'MUDFA Lessons Learned', new traffic management issues and areas that might apply to the main Infraco contract. This was probably the first time that flagged up the eventual dispute around design development. The schedule of outstanding works was captured in the BBS contract and it was unclear to the review team where risk lay for design development. BBS and TIE each considered the risk lay with the other party. There was not, at this stage, a particular recommendation tied to that element but there were recommendations about other things such as site monitoring.

Initially, we looked at this report as a good broad ranging Peer Review. It made some suggestions for improvement, acknowledged some good practices and arrangements that we had in place and we focused on the nine recommendation areas that came out of that, many of which we already had underway.

The individuals on this Peer Review are very experienced industry professionals. You have got people like Andy Sloan from a geo-technical point of view, Willie Gillan is transport, Peter Strachan from railways and Mike Heath who did the Croydon tram. There was a very high level and experienced set of views on that and I think there was a lot of value in doing that particular review. They made some constructive suggestions that we then put forward to implementation.

(2) To what extent were you aware of these difficulties prior to Infraco Contract Close?

My view was clear, we thought we had the risk of design development transferred within the terms of the contract and we expected that risk to be taken by Infraco. We interpreted the language that was utilised in that clause to mean that Infraco were taking the risk of normal design development. However, anything beyond normal design development would have been a TIE risk which is what we would have expected.

I was not aware of that specific difference in interpretation beforehand at all and I recall during some of the conversations, probably in March 2008, that I made clear to the likes of Richard Walker that I was expecting him to complete normal design development and I was not getting any pushback from him about that.

- (3) To what extent were these matters discussed with CEC prior to Infraco Contract Close?

I think most of that has already been covered in the various Close Reports. Clearly this Peer Review happened after Contract Close, it was the start of July 2008. However, we reported them to the Tram Project Board so we would have stated that we covered that in whatever the appropriate July TPB minute would have been.

Could you also please consider your email dated 4 June 2008 (CEC01280044) and explain your comments in response to Mr Bissett's request to list the five things that TIE had done best in relation to the procurement exercise and the five biggest mistakes or weaknesses?

I have effectively answered the question in the email with my bullet points. Graeme asked for '5 things that we did best' and 'our 5 biggest mistakes' and what I then did was I embed my comments in my reply.

This was me being very transparent around the good and the bad and things we could do better on. The purpose being to try and learn from that so that others in the future a) did not get to the areas that could have been better and b) repeated the good things and would be able to reinforce that.

69. The Tram Project Board met on 30 July 2008. The minutes (CEC01053601) noted that Susan Clark gave an update on the MUDFA works and that the team was still working to get MUDFA finished by the end of 2008 (page 6, para 2.5). Willie Gallagher is noted as stating that "*rather than being design driven, the MUDFA delay is driven by poor logistics and management and that the Board should not be unduly worried about progress*" (page 6, para 2.5). It was noted, under Programme, that "*Infraco was now claiming that the current delay is due to poor IFC drawings and that they want to be paid to accelerate the programme. The counter to that argument is that tie has delivered and BSC has not been ready to mobilise. WG is holding further talks at a senior level*" (para 2.12). Under Finance, it was noted "*DMcG (Donald McGougan) again expressed his concern that the spend for the full year does not meet the current target of £151m*" (para 2.16).

- (1) What was your understanding of, and views on, these matters?

I think the reason Susan was delivering this report was because I was on annual leave so I was not at that particular meeting. It is therefore difficult for me to give a flavour to the dynamic of the meeting.

In terms of the observation that Willie Gallagher made I do not know the context in which that was said so it is difficult to comment. Historically there were design-related delays. We certainly did have some issues around the management of logistics basically that we talked about. Regarding the comment that "*Infraco was now claiming that the current delay is due to poor IFC drawings*", from recollection, there was quite a lot of conversation between Willie and Richard Walker about BSC having now signed a contract and being unready to start. BSC were using reasons they saw as being TIE's responsibility to, in effect, hide behind their own delay or failure to mobilise.

There was also the fact that the Infraco did not have their supply chain lined up in the way that we believed that they should have. It would also be fair to say that regarding IFC drawings, if you go back to the Rutland Square Agreement, there was a commitment from BSC to accept the SDS risk at that point. That is something that contractually was their problem now.

I think, for me, at that stage it felt a bit like Richard Walker was trying to defend poor performance and mobilisation from BSC and draw attention to other matters.

The final point on that was Donald McGougan expressing concern regarding full year spend. From memory, there was a timing issue and funding issue. Transport Scotland had a commitment to make grant funding up to the maximum of £500m. In doing so each year, Transport Scotland, on behalf of Scottish Ministers, would agree with CEC the expected forecast of spend in a year. I do not think this was a contentious issue, it was just about an expectation and forecast of what would we expect to spend in the year so they could plan accordingly.

70. An email dated 4 August 2008 from Tom Hickman, Programme Manager, TIE (CEC01298593) attached a report on the current status of the draft MUDFA Rev 07 Programme that showed potential clashes with the Infraco programme (CEC01298594).

- (1) What were your views around that time of the prospect of the MUDFA works being completed before the start of the Infraco works?

I think from that information it is likely they would not be entirely complete across the whole route before the start of all Infraco works. We were working to mitigate the impact both by prioritising

any MUDFA completion activities and by looking at the Infraco programme.

71. The Tram Project Board met on 27 August 2008. The minutes (**CEC01053637**) noted, under MUDFA, that “*SB acknowledged that productivity was increasing but was still not at the level expected. He added that Carillion had finally accepted that changes were needed, both in personnel and delivery and that these were being implemented*” (page 6, para 2.6).

Under Designs and Consents, it was noted that generally progress was positive and that key areas of concern included Forth Ports and roads Technical Approvals (para 2.12).

- (1) What was your understanding of, and views on, these matters?

I think what I said under items 2.5 through to 2.8 in those minutes, under MUDFA, covers my views at that time, and is all self explanatory.

72. By email dated 17 September 2008 (**CEC01130811**) Colin Brady, BSC, sent a proposal for amending the Infraco contract to facilitate urgent changes, where time was critical, to prevent delay to construction operations in progress (**CEC01130812**) (revised versions were discussed see eg **DLA00001329** and **CEC01125115**). Further correspondence took place. Matters had not been resolved by January 2009 (see eg Michael Flynn, Siemens, email dated 16 January 2009, CEC01119821).

- (1) What was the need for and purpose of that proposal?

The initial Project Director for BSC was Scott McFadzen and by this point I think he had moved on to another Bilfinger Berger job and Colin Brady had taken over. From memory, Colin was there from around September 2008 to February 2009 when Martin Foerder came over from Germany as Project Director.

The Infraco contract is a bespoke contract which means that it was written for this particular project. It is not one that has been developed through standard forms or over time. As a consequence, there was a proposed change mechanism that had been discussed, at length, between Infraco, DLA and TIE. DLA were clearly of the view that it worked effectively. The original contract change clause had been fully approved by the Legal Affairs Committee and had been reviewed by CEC and DLA. Therefore, if we were changing something we risked unpicking part of the contract.

It seemed this was the start of BSC getting to a point where they felt they needed a formal TIE change agreed promptly to allow them to progress works.

At this stage, to be fair to Colin, he was doing this from a constructive and practical perspective and saying, “*We are really*

struggling trying to provide these estimates in the way we are supposed to under the contract, therefore we propose to introduce a definition called a critical TIE change whereby, when it is really important not to waste money or we need to get on and work, we will recommend to adopt that".

Andrew Fitchie had been involved in responding to and considering some of these drafts. I cannot recall is where we got to in terms of the final comments on that. Colin was aspiring to deal with what he saw as time critical issues and Infracore had not come anywhere close to providing an estimate as required by the change part of the contract.

I think our view at that time was "Yes, that is a change and so a *Notified Departure*". It seemed to take an inordinate length of time for any estimate to be prepared and submitted. TIE's view at that time was that the Infracore should be capable of producing something inside the maximum contract time period.

- (2) Was an amendment to the change mechanism in the contract and/or a protocol agreed (and, if not, why not)?

DLA were considering whether to put a new category of priority work instructions into the contract instead of replacing any existing clause. I do not recall a variation or amendment to the contract finally being agreed here. The first Minute of Variation, I think was the Princes Street Agreement but I do not recall us agreeing a change to this clause. The version that has been provided to me is an unsigned version so if it had been agreed I would have expected to see an executed version.

73. The Tram Project Board met on 24 September 2008. The minutes (**CEC01210242** at page 5) noted that there were issues around management direction and control from Carillion but significant improvement following an internal audit. Slippage on the MUDFA programme from Rev 06 to Rev 07 was currently four months (page 6). Slides for the meeting (**CEC01155850**) noted, under MUDFA, that "*Overall, programme is now predicting an end date of March 2009 with potential impacts on Infracore particularly if BT overlaps are difficult to address*" (page 4). Problems were noted with Design and Consents (page 8). Factors contributing to programme slippage included Design Change V26-V31, Mobilisation and Delivery Infracore, Design/Progress/Change V31-35 and MUDFA potential overlaps/conflicts (page 10).

- (1) What was your understanding of, and views on, these matters?

I think in terms of this issue around senior management change Andrew Malkin had left that role in Carillion at that time. Carillion brought in some replacement staff, after having an interim leader.

There were also some safety performance issues and items, at this time or previous, where some major supervisory cables for Scottish Power had just been missed, it had been uncovered but not damaged so there was a big focus on the methodology and approach to certain things and improvements on that.

I think Carillion had accepted they had got a few things wrong. When Carillion's leadership team was not as strong as it could have been there was an action to me to go through that with the CEC team, Duncan Fraser and Andy Conway, so I could be briefed and it would cover the quality of things like reinstatements when they were finished.

74. We understand that in late September 2008 BSC submitted an application for payment in relation to various claims for Notified Departures.
- (1) What did these claims relate to?
 - (2) What discussion was there within TIE (and between whom) of these applications for payment? What were your views?
 - (3) What was TIE's response?

It would be really helpful to have the document that is referred to in the question because I have not been provided with it. If I could see that application for payment from BSC in September then I could be quite specific around answering that question. I would anticipate it relates to the INTCs that were raised by BSC through their interpretation of Schedule Part 4 and particularly Clause 3.4.1 in relation to what is beyond normal design development.

Are you aware of Richard Walker's voluntary statement, and comments that TIE rejected the claim in its entirety and Willie Gallagher apparently promised to sort out his team and that the account would be brought current through the October payment?

I do not know anything about that. I have not seen any voluntary statement from Richard Walker.

Can you provide a general comment on the Application for Payment process in relation to Notified Departures?

Normally when an application for payment would come in, it would come to Dennis Murray and Frank McFadden and their respective teams who ran the Infracore contract. Frank had a senior commercial manager who looked at that who would recommend to Frank what should be certified. If there were any contentious items or issues they would be escalated to either Dennis or myself so I would have had a discussion with those individuals on contentious points.

I imagine this would be one of the contentious points around these change items and potential Notified Departures. There are two

parts, firstly, do we agree it is a change and secondly, have we got an estimate that we agree with.

Normally every month Infracore would make an application for payment and we would certify what payment was due under the contract. That as base case would be any relevant milestones that were completed and any change items that had been agreed and had been satisfactorily completed. In certain circumstances, we may have made an assessment of what a change item would have been and made a payment on account. However it depends on what information we had available to us and that would only be in circumstances where we agreed it was a change.

For example, where there was a change associated with a structure which is being built and is making good progress. Infracore might think there was £100k of extra work, we might think it was £50k of extra work, but we will work towards an agreement. We may make an initial payment on account of £30k or £40k because we think that is at least due. We then need to agree what the final value would be before we would make up the balance to £50k or whatever was agreed. We would have to a) agree it was a change in principle and was entitled to under the contract and b) that they had actually done the work that was covered by it.

Each period that would be a core activity of the relevant commercial teams to review that application for payment and recommend what gets certified by TIE and that would be something that I would tend to see the final version of or have a discussion around any contentious points on the application.

75. We understand that BSC submitted a further (or repeated?) application for payment in October 2008.

We understand that Richard Walker made a presentation to Mr Gallagher around this time with photographs and drawings showing the problems encountered by BSC with the utility works and access to the site (WED00000025).

(1) Do you remember what that application related to, what discussion took place within TIE (and between whom) and what was TIE's response?

The same point I think. I would need to see the Application for Payment for October 2008.

I think this is a Chief Executive level document. It is high level as opposed to having lots of detail. It shows areas where there are utility works still underway and to be fair to BSC, Richard Walker is highlighting that they are supposed to be in this area but MUDFA works are still underway. I understand that point.

There is then an area that was due to be occupied on 6 October but clearly it is not ready because the MUDFA works are still

underway. TIE would agree that is a Notified Departure and one of those pricing subjects has not been met, therefore BSC are not able to start at that location. We would expect two things from that, that they would look at mitigation opportunities or alternative sites they could access and records of what impact it is having, giving us an estimate because they would be due monies as a result of this.

That is what I would expect to flow from that if there was a formal application or other items and that is how we would deal with it.

- (2) Were you present at Mr Walker's presentation and, if so, do you remember the purpose and content of the presentation and TIE's response?

I do not recall, I do not think I was present. Richard Walker would tend to prefer to meet Willie Gallagher as the TIE Executive Chairman rather than meeting the Project Director.

76. By letter dated 13 October 2008 (DLA00001671) Mr Walker suggested a structured approach to progressing matters.

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

There appears to have been a conference call on 14 October 2008 (see the reference to such a call in DLA00002766 and DLA00002768)

- (1) What was your involvement, if any, in these matters? What were your views?

Willie Gallagher is identifying the issues and items, putting a marker down, then suggesting that Frank McFadden as the Infracore Director for TIE is the person that would work with his team to start taking forward the day-to-day operational issues. If there were items to be escalated Stewart McGarrity was proposing a structured approach with Stewart, myself, Frank McFadden and Dennis Murray doing that on TIE's behalf.

I do not remember that particular conference call on 14 October but I might have been on leave. None of those issues were new issues coming out of that letter.

77. An email dated 22 October 2008 from Graham Christie, Carillion (CEC01140099) listed the major items "*which are currently detrimentally impacting or likely to detrimentally impact the MUDFA completion programme*" including TM constraints, incomplete design and unforeseen and congested utilities etc.

The latest review of progress against programme gave a forecast end date of November 2009.

- (1) What were your views on these matters?

Graham Christie was a senior Project Director brought in by Carillion to reinforce their team. What he was identifying here was a

number of issues he perceived were going to cause him difficulty to complete the MUDFA revisions on time.

Some of the issues were repeats of known issues that were nothing to do with either TIE or Carillion, for example, existing utilities either unforeseen, congested or at the wrong depths compared to what the SUC has specified. In addition, there were some design-related issues or items that were described and where there was still some outstanding information. There were also some technical queries (TQ's) where the contractor has found something different from what the designer had anticipated and expected and he is asking the designer what he wants done about it before he carries out the work.

It is a pretty systematic run through the challenges that the MUDFA contractor has to overcome prior to completing all of their works, emphasising matters that are outwith Carillion control. It says very little about any areas of issue or eventual deficiency from Carillion.

78. We understand that Willie Gallagher resigned as TIE's Chief Executive and Chairman in late October 2008 and that David Mackay became interim Chief Executive of TIE.
- (1) What was your understanding as to why Mr Gallagher ceased to be Chief Executive and Chairman of TIE?

Willie resigned, he did not go into particular detail as to why. It was a sudden decision.

79. In an email dated 18 November 2008 you noted that "*the lack of an agreed commercial position with BSC has been holding up completion of various alterations to the designs submitted for Prior Approval*" (CEC01125370).
- (1) Why was the dispute between TIE and BSC holding up the completion of design by SDS and the obtaining of outstanding approvals and consents?

The initial email is from Damian Sharp to me stating that despite discussions between me and Richard Walker SDS are still reporting all of the changes on hold as they await a BSC Change Order. As BSC are now the client for SDS they need to instruct SDS around any items that need to be adjusted, changed or otherwise.

This relates to certain elements to go into the prior approval process to get planning permission, albeit the very last one is actually on line 1b so it is not a line 1a particular element. I suspect, from memory, these are some of the items that were part of a potential change that BSC thought was a change under the terms of the contract, some of which we would consider were not.

From reading the email trail it looks like Richard Walker and I had agreed that they would progress them but they have not actually

done that or they have not turned that into an action or an instruction.

The first one talks about a retaining wall, I think it is at Edinburgh Airport tram stop. The next is the Gogarburn retaining wall and that delay is inhibiting the completion of those items. I would suspect that would be beyond normal design development so not particularly an issue for us and Infraco. We would agree that probably one was a change.

I would expect that these should have progressed. It looks like, whilst there might have been others that were contentious, these ones were not contentious so we expected the Infraco to take these forward to a conclusion and get them approved.

80. A letter dated 1 March 2010 from Martin Foerder, BSC, to TIE (CEC00578330 at para 3) 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.
- (1) What was your involvement in that matter?

Clearly there was involvement in the matter around what revised programmes were submitted on 2 June 2008. An example would be one of the first Notified Departure changes we expected, this V26 to V31 SDS change which we have already discussed.

We agreed, in principle, it was a TIE change which appeared in Notified Departure mechanism. A lot of iterations took place between SDS, the BSC planning team and the TIE planning team to try and get to an agreement on what was a fair impact of the delays moving from V26 to V31. TIE's planner was Tom Hickman and Infraco's planner was Steve Sharp. They liaised with the Jason Chandler team from SDS as to how that worked through.

I imagine my involvement would have been in escalating that to try and get to a conclusion and dealing with the likes of Colin Brady as we tried to settle what the impact was going to be. Therefore, primarily, it was a programme issue so Tom Hickman, our lead planner, who worked for Susan Clark, would be making sure.

- (2) What agreement was reached (and between whom) in relation to the revised programme on or around 17 December 2008?

I would have expected a piece of correspondence with the attached programme going back and forward between BSC and TIE in December 2008. This is an aggregation of a number of differences, disputes and assertions from the Infraco and TIE running up to and including February 2010. I do not think it really illustrates the

particular point. I would expect to see a letter or an exchange of correspondence between TIE and Infracore around about mid-December confirming that agreement on the revised programme on the 17 December 2008.

The letters would probably be from Martin Foerder to me and vice versa. That was the formal flow of correspondence, although it might well have been Colin Brady because I do not think Martin had started until 2009. The parties could not agree quickly around the impact of those design delays and any consequences they had. We were looking at different ways of trying to resolve that which is why it took a number of months.

81. We understand that you and Stewart McGarrity met with Richard Walker and Michael Flynn on 16/17 December 2008 (see **CEC00652924**).
- (1) What is your recollection of the main matters discussed at the meeting and the outcome?

We were looking at Princes Street and the issues that needed to be addressed in order to successfully undertake those works. The city was expecting work to be carried out on Princes Street from March 2009 and there were a number of matters that BSC and TIE were not in full agreement on. There was therefore a risk that the project, as a whole, could be embarrassed by the fact that we had negotiated this slot to deliver the work and BSC were refusing to deliver it.

At this point in time quite a lot of extensive enabling works for diversions on to George Street for the buses were being undertaken so a lot of preparatory work was in place with regard to that. Therefore, what it covered was that there are certain instructions that were required from TIE to BSC for things that might have been considered extras.

There were elements around making sure that Siemens mobilised their teams, which BSC responded to TIE regarding ducting options and a lot of practical things to get ready for doing work associated with Princes Street.

Following on from that we talked around certain elements of changes, or potential disputed changes and we were also discussing things like Carrick Knowe ground conditions. There was a confirmation that the depot contractor Barr was due to start in early January so that was just confirming the depot was going to be available. There were also some Change Orders to follow for ground conditions at Edinburgh Park because we had not received an estimate so we needed that from BSC.

In effect we were trying to work by agreement to deal with these change items on these particular topics. Then there was some re-

programming work to be done on the off-track sections to try and make sure it was being dealt with and had been mitigated as efficiently as possible.

There is reference to Tom Hickman and Steve Sharp leading the planning activities as we have discussed and it sets out some expected assessments for completion dates. At this point in time we had 250 INTCs and we were seven months or so on from contract award.

It would have given comfort to both CEC and TIE that matters were being progressed and, also, comfort to BSC that if there were genuine changes, they were being progressed to a conclusion. If there were areas of dispute then it was clear which ones were in dispute. That is what that meeting discussed and it is pretty well covered in that minute.

82. The Tram Project Board met on 17 December 2008. The minutes (**CEC00988028**), under MUDFA, again noted that "*Carillion performance was slower than anticipated*" (para 2.11). In relation to Infraco, it was noted that there were ongoing discussions with BSC, collectively there had been insufficient progress but a proposal had been agreed to give BSC comfort in areas where they perceived they were exposed. There were noted to be "*access issues*" at Haymarket and Leith but there were no impediments to work at the depot and airport (para 2.15).
- (1) What was your understanding of, and views on, these matters?

I think the access issue that is referred to will be down to the MUDFA works not being complete for Leith and Haymarket and the challenges around traffic management arrangements. MUDFA works needed to be completed while then creating spaces for bits that had previously been completed but needed access for the Infraco. We could not take both sections of the road at the same time in practical terms.

In paragraph 2.11 it refers to Carillion not achieving their intended plan. We anticipated at that point given the volume of extra working activity that, in relation to the risk allowance for the MUDFA related works specifically, most of it was being drawn down at that time. There is a governance point that is covered in paragraph 2.12 as well, if we are settling claims with Carillion one of the things in our Operating Agreement between TIE and CEC was that the Tram Monitoring Officer was content with the proposed settlement. There was an action for me to go through that with Marshall Poulton. I have taken him through that paper as to why it is a fair settlement and entitlement with regards to Carillion.

At that meeting BSC had confirmed their support for the Princes Street closure and that they could not see impediments to work at the depot or the Airport, they were mobilising their contractor to

work in the depot. At that point in time, they were saying there are problems on Leith Walk and Haymarket but they can get into the depot and they can do works at the Airport. They also acknowledged there were some areas of comfort and instruction that were being progressed by TIE at that time.

- (2) What were the “access issues” at Haymarket and Leith?

It may have been complete at the area the Infraco wanted to work at but because MUDFA works were not complete at an adjacent area, we could not allow simultaneous traffic management to go on because we would have locked up the city. We had to wait for the adjacent Infraco utilities works to be completed in order to free up the access space for the Infraco.

Events in 2009

83. On 7 January 2009 Parsons Brinckerhoff produced a Report on As-Built Drawings for the MUDFA Contract (CEC01119469) showing a scope shortfall in these drawings.

- (1) It would be helpful if you could explain the concept and purpose of an “As-Built drawing”? Which party required to produce such drawings? Why was there a scope shortfall in such drawings?

On a basic principle, an as-built drawing is a piece of information that is usually produced by a contractor or their contracted designer to identify what works they have actually done. They may have had to adjust a design, perhaps because they found an obstruction to go around, therefore, what they must do is mark-up exactly what they have built. That is the “as-built” part of the drawing.

That is then handed back to the statutory utilities provider or owner of that asset. If you ever have to go and do work at that asset again there is a record of how it was left. It is a requirement under the Construction, Design and Management Regulations that, as a principal contractor, you provide that information back to your client, in this case TIE, and we are obliged to then give that back to the statutory utility company or authority. In this case that could sometimes be CEC because it might have been their asset, for example, street lighting that was affected.

There was a dispute around this idea of a scope shortfall where the MUDFA contractor believed that their contractual obligation was only to mark-up the design drawings and not convert them into a final ‘as-built’ drawing. AMIS’s view was that as it was not asked for under the contract, it was not their obligation and if we wanted them to do it, it would cost extra. They also said we had SDS consolidating the drawings and that it would surely be better to get them to do some of that work.

Most utilities contractors do red line mark-ups on drawings and then it goes back to the utilities provider so they can mark it up on their records. If you have made some adjustments and given the obstructions, congestion and amendments that had to apply on MUDFA, there was a fair volume of 'as-built' mark-up that was required. The red line drawing is then quite often that is then converted into a formal more polished drawing. I think AMIS's position, for the MUDFA contract, was that they required to do the red line mark-up on the drawings but they were not required to do anything more than that and they provided that back to TIE. It was then TIE's job to either get SDS to do it or give it straight back to the utility.

- (2) What problems arose from there being a shortfall of such drawings?

There was no doubt that AMIS were happy to do the red line drawings and they accepted that was their obligation. That provided a local reference point for the statutory utility or anybody else but it was not always the final 'as-built' format from that perspective.

In the cases where that was the case TIE had to go out and confirm elements of those particular works and get them completed. I think there were certain areas that were not particularly affected by MUDFA but were part of the overall design by SDS and there were gaps in the information we got. Therefore, we took AMIS red line drawings and converted them into a final set of 'as-built' rather than have an extended argument around it. We did not want to give it to SDS to do because they were already suffering in terms of their design delivery performance. We ended up incurring a separate cost to a surveying contractor to complete that as a package of work so we ensured that we could hand back what we were obliged to for the statutory utilities.

If it had been unambiguously defined within either the MUDFA Agreement or the SDS Contract of Obligations that would have been allowed for and budgeted and priced accordingly.

- (3) Did any scope shortfall in the As-Built MUDFA drawings cause increased cost or delay to the tram project?

I think it caused increased costs. I do not think it caused additional delay. The works were already done and the red line drawings were sufficient for the Infracore to understand what been converted so I do not believe it caused delay.

84. By letter dated 23 January 2009 (CEC01182823), BSC intimated a Compensation Event to TIE on the basis of the failure of SDS to achieve the release of Issued for Construction Drawings (IFC) by the dates identified in the programme in relation to Section 1A, Lindsay Road Retaining Wall.

BSC intimated a number of other Compensation Events to TIE in respect of other alleged failures to achieve the release of IFCs by the dates identified in the programme.

What was your understanding of the following matters:

- (1) Why were SDS unable to achieve the release of these IFC Drawings by the dates identified in the programme?

I could not tell you. In the first instance that was BSC's responsibility to manage them and ascertain if there was an impediment. SDS should have been telling us that, if it was factually correct but they were contracted to BSC at that point not to TIE.

- (2) Why did BSC consider that that gave rise to a Compensation Event? What were your views?

They had to identify and look through the trigger points or entitlement clauses. Clause 65 in the Infraco contract lists a series of headings as to where they believe they have an entitlement for compensation for delay.

If it was down to failure by SDS directly or BSC then I would expect that not to fall under the category of a Compensation Event. If they believed they were delayed for another reason perhaps because of a third party, like an approval body, then that would be a route by which they would seek to argue that it had an impact on their works. However, they would have to demonstrate and prove that.

This is a standard letter (**CEC01182823**) that BSC started to produce to deal with the contractual requirements and notifications that they are obliged to, so they do not fall foul of any contractual notice requirements. They talk about some very generic points but do say there is going to be a claim for extension of time, relief from damages and potentially extra costs. They say it was because the SDS had not issued this drawing on time. In this particular example they say it is also a factor whereby they have, a Notified Departure associated with a change in design development beyond what they would classify was their obligation. They do not give us any further detail; it is a standard pro forma.

I do not have a problem with a standard notification letter provided it is followed up with the detail in a reasonable and timely manner and it provides a proper explanation as to what has actually caused the problem. We had a significant number of compensation events. Sometimes BSC notified matters both as a compensation event and as an Infraco Notice of TIE Change which felt like they were covering both options.

- (3) To what extent, if at all, was the failure to achieve the release of these drawings by the due dates caused or materially contributed to by the dispute between TIE and BSC?

It depends on the particular example. If we are looking solely at the Lindsay Road retaining wall and take what they have provided at face value then they are arguing that it is because there is a change that is beyond normal design development.

If that was true and if we agreed it was beyond normal design development then either they should be compensated through change control or through the compensation event but not both. However, in this circumstance, I do not think the failure to achieve the release of these drawings by the due dates was caused by the dispute between TIE and BSC. What they are saying is something changed such that the SDS provider needed to change this design. In Infraco's view it is a change and either requires a TIE change and/or a compensation event notification.

My view would be if it was normal design development then that is Infraco's liability for that extra work to be done and not my problem and they should manage that to a conclusion. If it was beyond normal design development then it is TIE's problem and, therefore, they are due to be compensated for that.

- (4) Given the SDS novation to BSC, (i) why were BSC not able to take steps to ensure that SDS released these drawings on time and (ii) why was that failure not at BSC's cost (rather than at TIE's cost)?

I would expect BSC to take steps to ensure SDS released those drawings on time. If it got to a point where it was genuinely an additional change they would be entitled to more time and costs. If it was not due to that kind of change then the failure would be at BSC's cost.

85. We understand that a meeting took place between BSC and TIE on 9/10 February 2009, at which you were present, to discuss the dispute. Stewart McGarrity produced a note of the meeting (**TIE00089656**). (See also, for example, (i) TIE's slides provided in advance of the meeting, **DLA00003129**, (ii) TIE's note on BDDI, **TIE00665341** and BSC's response, **CEC01119885**, (iii) TIE's note on BSC Claim for Change from BDDI to IFC, **TIE00665342**, and BSC's response, **CEC01119886**).

- (1) What is your recollection of the meeting, including who was present, what was discussed and what was the outcome?

This is a note that Stewart McGarrity produced contemporaneously. At the start there is a bit of context setting that he had extracted from his email records and he is using it to frame matters when we talk about Project Pitchfork later in 2010. I think it is a fair recollection that he has covered on that note. Present were

myself and Stewart from TIE, Richard Walker and Michael Flynn from Bilfinger Berger and Siemens respectively, plus Michael Heerdt and Robert Sheen also from BB, who were primarily based in Germany but were over for this particular piece. I think Joseph Frenz from Siemens was also there.

Stewart notes that Siemens left after about half an hour on the first day of the meeting. I do not recall the specific reason why Siemens left but most of the issues and themes in dispute were related to Bilfinger Berger in the first instance. These things were primarily big issues with Richard Walker and much less so with Michael Flynn.

It was mainly Michael Heerdt talking, supported by Robert Sheen. They thought any changes to BDDI are what they had contracted to get a change for, and we disagreed with that. They said that they could not provide us with prices because there were too many, it was too hard, they were overwhelmed with other things going on and it was really unreasonable for us to expect it. I fundamentally disagreed with that position; it was wholly unreasonable. They might then make an argument about an aggregation of delay or disruption or further costs that they have had to deal with but it was just not acceptable for them to say, "*It is all too hard*". They are a multi-national contractor more than capable of putting together some estimates.

When they did eventually produce estimates they were excessive and inflated. Stewart McGarrity makes a comment in italics underneath, "*The reasonable man is never going to accept that a Bilfinger and Siemens consortium found the project management of a linear rail project too difficult in the round. What have they been doing for 9 months given so little progress or a plan to progress*". What have all their surveyors and commercial people been doing if they have been sitting there for nine months and yet they cannot create some of these estimates that they believe is such a fundamental reporting part of their case.

Michael Flynn made a generic comment around concern over funding. They made the point that they believed CEC may have been misled or misunderstood over the extent of risk transfer to the contractor and Stewart and I both responded in a robust manner refuting that allegation.

Richard Walker made a comment that he believed that a gentleman's agreement he made in September (with Willie Gallagher) was the only reason anything was done and then Stewart's observation was that he felt that Mr Walker was "dancing on the graves of the departed", Willie having resigned.

They talked specifically about an adjustment in price from Wiesbaden being nothing to do with normal design development as

it was a "commercial agreement" and a negotiated increase in price.

On day two BB effectively reiterated the items above and set out, from Michael Heerdt, generally the approach that they would take forward as far as they were concerned. They conveniently forgot they were responsible for the design. Utilities were not their problem but design was. Stewart has probably resorted to some flowery language around disruption to programme and Mr Sheen's comment which he considers is not correct. Similarly, they reiterated their view on the BDDI/IFC point which became a more significant point of dispute moving forward. They talked about some of the issues or elements around what exposure they thought they had.

There was a comment made by Richard Walker that there was a general acceptance by TIE pre-contract of the project that it would cost £50m to £100m more than what was in the contract on 15 May. Our response was clear and robust - there was no general acceptance whatsoever. I never heard anybody talking about anything like that and I recall being quite concerned that Richard Walker thought that. He had certainly never previously said to me or anybody in my hearing that was the view and to suggest it was some kind of general acceptance was ridiculous.

I spent some time going through item by item, explaining why BB's proposition was not correct, but there was very little wish on their part to engage in specific examples. Michael Heerdt wanted to go back to the generalities at all times. Stewart's notes are pretty clear on the topics that were discussed and the areas that were challenged or refuted.

- (2) Mr McGarrity's notes of the meeting, (TIE00089656) record that BSC had estimated their projected outturn costs on the project as between £50m and £80m (comprising broadly £20m of direct costs due to Notified Departures/TIE changes, £20m due to extension of programme and £10m due to delay and disruption). What did these different heads represent?

For clarity, they were estimating their exposure, in addition to what they were contracted to be paid. They did not go into any detail around the £20m of direct costs; we interpreted that as things like ground conditions, some of which we would agree with, and things like Infraco's interpretation of '*beyond normal design development*' which was virtually everything. The extension of programme issue really related to delays and impacts that they would have had from things like failure to grant access because utilities work were still ongoing or they were awaiting design for reasons that were not Infraco's responsibility. They did not go into their calculation other than suggesting it was 70 weeks' worth of delay. The final part was a general assertion to the effect that, '*You have caused me a lot of*

hassle in delay and disruption so I am going to add something in for that' but there was no detail on those things. It is a common head of claim in these types of circumstances but can be pretty contentious to evaluate.

- (3) Mr McGarrity's notes (paragraph 8) record Richard Walker as having said that there was general acceptance by TIE pre-contract that the project would cost £50m-£100m more than was in the contract at 15 May 2008. What are your views on that suggestion?

I absolutely refute that, I do not agree with that assertion whatsoever and at no time did I hear that suggestion until Richard Walker uttered it on that day.

I heard after this that Richard Walker continued to assert and that he and Willie Gallagher had off-line discussions on this basis. I saw no suggestion of anything like that.

86. The Tram Project Board met on 11 February 2009. The minutes (**CEC00988034** at page 5) noted that the MUDFA work was now 65% complete (page 7, para 2.32). Slides for a joint meeting of the TPB and the TIE Board on that date (**CEC00988036**) noted, under Project Delivery, Infraco Progress, that there was disappointing progress with ongoing issues with delayed appointment and mobilisation of package/sub-contractors, design slippage and design changes, incomplete/delayed utility diversions, submission of estimate and agreement of change order and consortium integrated programme (page 4). Another slide, Project Delivery, Infraco Issues Resolution, noted that there was a "*significant risk of a major dispute with Infraco*", which was drawn from a number of issues, including: BSC's refusal to progress works which may be affected by a change which has not been subject to issue of an agreed TIE Change Order; BSC's failure to provide timely and/or competent estimates to allow a change to be assessed and if appropriate a Change Order to be agreed and issued and specific areas of disagreement eg responsibility for changes in design from BDDI to IFC (page 4).
- (1) When were the Tram Project Board first advised that there was a significant risk of a major dispute with Infraco? Had they been advised of that prior to that meeting (and, if not, why not)?

The first time that we had heard this £50m to £80m was during the two days beforehand. First of all I think that is a contemporaneous briefing to the TIE Board and the TPB that we have told them within 24 hours of receiving this unpalatable message from our contractor. That was the first time we were aware of the size and shape of the potential differences between TIE and the Infraco. I would also make the point that if we look back at some of the TPB reports in December and November of the previous year, ie 2008, it was clear that we had flagged some areas of difference and claims around alleged TIE changes and the interpretation of BDDI to IFC at that level. I think those areas of difference were clear for the TPB.

My other comment would be that this was the first time BB brought over reinforcements from Germany so perhaps that was a change in emphasis from the Infraco participants to bolster their position.

I would also say that from October/November/December 2008 onwards we were flagging numbers of changes while the Infraco were being very slow in mobilising over that same period.

87. A dispute arose in relation to the Princes Street works due to start in February 2009. After discussions and correspondence over a number of weeks, an internal TIE email dated 20 March 2009 noted that David Mackay and Dr Keysberg had that morning agreed the principles of an agreed amendment to the measurement and payment regime for Princes Street (CEC01009977). The dispute was resolved by parties entering into the Princes Street Agreement (CEC00302099) (we understand that an initial draft of the agreement was agreed on 20 March 2009, to allow work to commence on 23 March, and that the final version of the agreement was signed on 30 May 2009).
- (1) When (and how) were you first aware that there was a dispute in relation to the works at Princes Street?

Following the meeting that Stewart McGarrity and I had with Michael Flynn and Richard Walker on 16/17 December there were a number of actions and issues that were summarised. That included an explicit reference that said, "*BSC were committed to the work in Princes Street at that time*" so that is mid-December 2008. This was a big high profile issue that in December 2008, BSC were still committed to. On 9/10 February there was this meeting where they put forward this £50m to £80m estimate of additional costs. Later that month BB then announced they were not going to do the Princes Street work. They dressed that up, in argument, around particular instructions that they had not agreed, or otherwise, but it certainly was perceived by us that it was primarily related to the fact that they had just delivered this ultimatum around this significant price increase. It was another key lever to intensify the focus on the project and on TIE to try and extract an agreement to pay these additional monies.

Therefore, part of that was to refuse to commence on Princes Street despite their earlier commitments to do so and despite a range of enabling works that had been undertaken, which were progressed well by the Infraco. So that dispute emerged during February 2009 where they stated they were not prepared to take it forward under the terms of contract unless they were given the comfort that they were able to deal with change control matters in a timely manner.

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

The basis was the point that we have just discussed which was this issue of being perceived to be able to deal with progressing the works and what were expected to be a number of likely Notified Departures, TIE changes or compensation events but not being able to deal with them quickly enough through the mechanics of the contract to avoid unnecessary delay.

It was a very high profile piece of work that everybody had been conditioned and prepared for across the City of Edinburgh and beyond, including the Scottish Government. It would have been a very difficult position for all concerned if we were to say we were not going to do it having prepared for three months. I believe they used the timing of that in a way to try and enhance their negotiating position because, at that point, they had not got a satisfactory resolution to matters they considered changes and we did not. They wanted to use that platform to either get an agreement that was harmless to them, in that it was a cost plus or cost reimbursable type arrangement and, if it dealt with some historical matters at the same time, that would be a bonus for them.

- (3) What was your understanding of why BSC refused to start work on Princes Street?

I think that is answered above in (2).

- (4) How, and when, was the dispute resolved? What was your involvement in resolving the Princes Street dispute?

I attended negotiations with Infracore with David Mackay and a number of the senior TIE team. It was around developing and agreeing what became the Princes Street Supplemental Agreement (PSSA). At the heart of it was whether we could apply a degree of cost reimbursable mechanics to the works that were intended to happen in Princes Street; what would be fair to both TIE and BSC to protect our respective commercial positions, and, in making proposals and counter-proposals, to try and get to an agreed position that addressed the concerns raised by BSC. It was also about giving TIE protection in that it was not a blank cheque. There needed to be demonstrable proven costs.

Therefore, we were involved in detailed testing of those propositions, what the pros and cons of each of them were and how we could get to a place David Mackay and the senior TIE team found acceptable. Similarly, a place that the Infracore found acceptable to progress and ensure the City of Edinburgh got its tram infrastructure as planned, in Princes Street, during 2009.

We did reach an agreement in late March 2009, from memory. The date on this is 29 May 2009 but that is because this was further amended I am pretty sure. I think Heads of Terms were agreed at the end of March which we then converted because there was some work to be done on the detail.

We did start work in April to commence that element and then they concluded their Princes Street works in November 2009 the first time round. Regrettably there were areas of significant defects and inadequate work that needed to be redone later.

- (5) Why was it agreed that BSC would carry out the Princes Works at demonstrable cost (plus overhead and profit percentages etc)?

That was them demonstrating that it was a proper cost incurred so that they would have to demonstrate what resources and the weights and prices they were charged by their sub-contractors, plus they were entitled to an element of overhead in profit for the consortium as part of that.

It was agreed because it was a way in which that Infraco were prepared to progress the works. They believed it addressed the exposure they would have had by operating the contract mechanics. TIE and CEC accepted there were likely to be a number of compensation events or TIE changes that would have given rise to additional entitlement of payment to Infraco. It was, therefore, considered to be an acceptable way forward in the circumstances given that it was only a mile's worth of infrastructure that was being constructed at that time. We could test and see whether that demonstrable cost did become excessive or not in the circumstances and measure it against what the entitlement have been under the base contract conditions.

- (6) Did you consider that that was likely to result in the cost of the Princes Street works being greater than the sum allowed for these works in the Infraco price?

It would be greater than the basic sum but we would have expected elements of the risk allowance to address certain things from this area of work in any event. For example, if there was an impact of utilities diversions required then we would have expected that to be addressed, and similarly, if there was a delay element arising there was risk allowed. Therefore, compared to the base price, we would expect the cost to be higher but we would have expected the overall liability to be higher in any event.

88. A joint meeting of the Tram Project Board and TIE Board took place on 11 March 2009 (the minutes are **CEC00888781** at page 6). A paper by Stewart McGarrity, "Infraco Options Analysis" (**CEC00933931**) noted (at page 3) that the budget of £545m was likely to be exceeded in the

event of any of the following, namely: significant further delays to construction; re-procurement of the civil works; if TIE did not prevail in their contractual position with regard to Infraco responsibility for design evolution or the consortium's failure to commence work where dynamic management of the programme would have allowed; or in the event that a cost plus basis was agreed to settle the contractual disputes and programme.

The paper suggested that a "safety valve" of £30m was required.

The scope options included truncation of the phase 1a scope ie delivering a shorter tram line.

Slides for the meeting noted (CEC00933351 at page 9) the same issues as previously noted in relation to Infraco Progress but that works were ongoing at Gogarburn, Edinburgh Park Viaduct, Carrick Knowe Viaduct, Verity House access road, Princes Street and Leith Walk.

- (1) When did you first consider (i) that it was unlikely that phase 1a would be built within the budget of £545m and (ii) that truncation of the tram line may be necessary? When were these matters first reported to the Tram Project Board and to CEC?

The paper in here (CEC00933931) is a paper to the TIE Board and TPB with an Infraco options analysis which is referred to at the start. This is a paper that was prepared and submitted on 11 March 2009 and reflects back on the meetings held in on 11 and 19 February with the Infraco. It highlights the difficulties of poor progress by Infraco and a series of escalating disagreements which were heading to contractual dispute. It also highlights the scope and funding options if the outcomes of the first points were such that there was a risk of going over the £545m funding. This is a scenario planning exercise that was done in the three weeks since we sat down with the various Boards in mid-February. We were asked to go and consider the scenarios and this was the paper we came back with. All the scenarios were considered.

This would have been the point where we first considered some of those matters. That is what the Board asked us to consider. It was no surprise to them that we would have to think about safety valves of what additional funding options might be required and/or whether we had to truncate some of the scope. It was clear we needed to have an understanding of what options might need to be considered.

- (2) What works were ongoing at the locations noted above?

In simplistic terms there were structure works going on at Gogarburn, Edinburgh Park viaduct and Carrick Knowe viaduct because they were building bridges in those three locations. They were doing work to an access road round about the back of Verity House at Haymarket. They were doing preparatory work on Princes Street, including the preparation of service diversion works and I think they were doing some investigative work on Leith Walk.

However, if the detail is required then it is set out line by line in the Detailed Project programme.

- (3) Was there any reason why work was being carried out at these locations rather than at other locations?

We talked about the ground condition changes that were being issued I think in the January, those were done so that allowed the Infracore to progress with those works and there was no issue with regard to that.

However, and I cannot remember if it was at this time or later but I suspect, in these locations, certain changes had been agreed and, therefore, there was no reason not to be proceed in their mind, albeit they would not necessarily be working as speedily as we would desire.

89. By letter dated 24 March 2009 (**CAR00000560**) you advised Steve Beattie, Carillion, that following agreement of the MUDFA Revision 7.9 Programme, TIE formally granted an extension of time to the substantial completion of the MUDFA works (to 1 April 2009) and the Longstop Date (to 3 August 2009).

- (1) What was the purpose and effect of granting that extension of time?

It formally allowed additional time for the contractor to complete works and if it has been granted by us, as the client, it would have been on the basis that they had justified there were reasons it was not their fault and they required extra time to complete those sections of work.

There are penalties that trigger if they do not complete by a final completion date, usually called liquidated damages. It can also be good contract administration where the contractor is entitled to continue to undertake the works and, from his point of view, continue to claim any associated preliminaries and costs.

We would have assessed the fact that there were a number of activities and issues that had arisen that had meant Carillion, at this point, were not able to complete their works and for reasons that were not their fault, there was at least that amount of time that we required to allow them to complete those works. As I remember that contract had what was called a long stop date which meant that while works should substantively be complete by the completion date, in this case 1 April 2009, there was a long stop date by which any residual snagging, hand back of works or Health and Safety files were to be completed and for them to make up their final account.

If there was time required for them beyond those dates, they would not necessarily have been entitled to be paid for their preliminaries to do those works. It would be "at their cost" from a preliminaries

point of view, management costs etc because it would be deemed that we had granted all the extension they were entitled to and if they are there any longer it is their own responsibility.

We would still pay them if they did another 1,000 metres of diversions because they would get paid for physically what they do in the ground but if they needed a 20 man management team to look after that, it would not automatically be covered because they were doing works for which they did not have an extension of time for.

- (2) What were your views at that time of the prospect of the MUDFA works being substantially complete by 1 April 2009 and fully complete by 3 August 2009?

Strictly speaking contractually we would expect Carillion to accelerate whatever they needed to do in order to meet those dates because that is their responsibility. However, practically, they were not going to be able to get in to do the work at Princes Street until June. It was understood and expected that unless they were granted a further extension of time for any reason they were going to be liable for some of those management costs whilst that work was undertaken. We would expect to physically pay for elements of work completed in that time once done. I think, at that time, there was a plan for them to finish their diversions with the Infraco so they integrate works together allowing time to finish off particular elements.

- (3) What was the effect of that extension of time on the Infraco works?

We would have expected at that point that there would be either compensation events and/or Notified Departures due. Infraco would be entitled to notify us of that and then provide us with details of the appropriate impact on time and cost. At that stage I think it was difficult to be precise about the final impact of what that would look like but it was expected to have some kind of impact since Princes Street works could not be completed until the gas mains were diverted on the Mound.

90. A joint meeting of the Tram Project Board and TIE Board took place on 15 April 2009.

The minutes noted (CEC00633071, page 6, para 2.8), that *“DLA were confident of tie’s position with regard to the principle areas of contractual disagreement with BSC and this is to be supplemented by reinforcing technical analysis and legal opinion”*.

A joint paper by yourself and Mr McGarrity on “Strategic Options – Update and Forward Planning” (CEC01010129) noted (page 1) that TIE’s commercial strategy included a targeted dispute of matters through the contractual Dispute Resolution Procedure.

The paper also noted (page 2) that the Princes Street Agreement was *“consistent with obligations under the Infraco contract”*.

- (1) It would be helpful if you could explain TIE's strategy around that time in relation to the dispute with BSC?

This paper is an update on the paper presented the month before which included references around progressing works in parallel. It said that for areas of dispute we can use the formal contract Dispute Resolution processes to get to our final position.

The three options we have under that formal approach are mediation, adjudication or going to court. The approach was to prepare a position paper on each of the disputed topic areas such as BDDI to IFC, make sure we had clarity from DLA as our legal advisors about the comments, strengths and issues within the legal argument and bring in some additional technical analysis or opinion.

There tended to be different lawyers involved in Dispute Resolution as opposed to those who were involved in preparing or drafting contracts. So part of our approach was about making sure the relevant Dispute Resolution experts from DLA contributed to the approach.

One of our other strands was to try and leverage input from Siemens and from CAF who had an overall joint and several liability with Bilfinger under the contract and to consider whether or not if we were proved right under the DRP resolutions, then whether Siemens and CAF would consider a different partner. Alternatively, would they be prepared themselves to complete the works with the civil engineering sub-contractors already engaged by Bilfinger.

- (2) How confident were you of TIE's position in relation to the principal areas of contractual disagreement with BSC? How confident were you in the legal advice received by TIE? Did your confidence in the legal advice received by TIE change at any time (and, if so, when and why)?

At that time we were supported by Andrew Fitchie's paper at the time of the Contract Close. That was shared with CEC Legal and provided clear guidance and a recommendation that DLA were content with us contracting on the basis that we had. It also, particularly, drew out the risk allocation issues.

Around this time we started to get some input from a Dispute Resolution specialist from DLA, Stewart Jordan. He reviewed the issues and themes and we started to draft position statements or papers around the topic areas.

That allowed us to consider input from other specialists and I cannot recall any circumstance where anybody from DLA said they thought they had it wrong.

Around the time Richard Jeffrey joined TIE as the Chief Executive, he looked at the input we had received and considered whether there was some additional opinion he wanted from a fresh legal advisor. From memory, Richard instructed McGrigors and Brandon Nolan reviewed some of the key topic areas and issues. I think that was late 2009, early 2010 and was after we had gone through a number of the initial DRPs. Brandon was appointed and gave his considered opinion, which interpreted some of the design development clauses to be nearer what the Infraco position was.

By this point a number of the Dispute Resolutions had been taken to different adjudicators. They had tried mediation and there was no resolution on that. I would say we had a mixed set of results from the adjudicators which we will come on to later.

- (3) Did you consider that the Princes Street Agreement was consistent with obligations under the Infraco contract (given, for example, that the Princes Street Agreement was for the works to be carried out on a costs plus basis whereby the Infraco contract was described as a fixed price contract)?

The obligations to deliver a tram system under the Infraco contract that complied with the Employer's Requirements still held. The general securities and protection for the client were the same and they were still in the Infraco contracts. There was a change in the mechanism by which an element of the works are valued and paid for, including taking cognisance of the fact that there is likely to be either entitlement for additional monies as a result of Compensation Events or as potential items that would be construed as TIE changes under this contract.

Therefore, strictly speaking it is different in the way by which it deals with that element of it, but we had already satisfied ourselves that there were likely to be both TIE changes and Compensation Events arising as the works were undertaken on Princes Street. Therefore the Infraco were going to be entitled under the contract to a change to the construction works price for that element of the works.

We had reviewed that it and considered it appropriate. On balance, we thought it was an acceptable way to take it forward for that limited geographical area and we had a number of controls in place that we expected to sensibly consider as part of that and test whether or not it continued to give us fair value for money.

91. A joint meeting of the Tram Project Board and TIE Board took place on 6 May 2009. Richard Jeffrey had recently been appointed as Chief Executive of TIE. The minutes (CEC01021587, page 6) noted (para 3.5) that "*the BSC strategy to date has been not to accept any risk*". It was also noted (page 7, para 4.3), "*DMcG (Donald McGougan) queried the status of the design and where it was being held up. SB replied that there are*

two elements outstanding, the SDS design (some of which has been delayed by tie, some of which is delayed due to re-design) and the Siemens detailed design. He noted that there is no issue with CEC processing approvals”.

Slides for the meeting (CEC01026346, pages 10-13) noted that 341 INTCs had been received from BSC and that 27 Change Orders had been issued by TIE.

Under Utilities, it was noted (page 19) that overall, 73.1% of all diversions were complete, that Carillion had made an application for delay and disruption and that a strategy had been developed to close down MUDFA contract by the end of July and transfer the remaining diversions.

- (1) It would be helpful if you could explain the above passage in the minutes relating to design ie in what sections was design incomplete, why had the SDS design been delayed by TIE or required re-design, what were the problems, if any, with the Siemens detailed design and was it the case that none of the delay at that stage was due to CEC (whether in processing approvals of otherwise)?

I expect that if SDS design had been delayed by TIE that would be a matter where we had required third party or stakeholder agreement on. If it was delayed by re-design I would expect it was either an error by SDS the first time round or that there was a reason that it needed to be changed because Infraco wanted that to be incorporated. In terms of which sections the designs were incomplete, the version of the programme which was current at that point in time should show exactly what was available and what was complete or not. There was an obligation on the Infraco to monitor and progress SDS baseline design performance since the novation in May 2008. Infraco should have been reporting back to TIE on what they had done or what issues there were.

However, without that version of the SDS programme, it is difficult to be more precise on that. It would probably by this time be embedded within the Infraco Progress Report and the Infraco contract programme because that is the way we sought to get that consolidated and reported. I cannot say definitively because I have not been provided with all of the relevant paperwork

I think we made the explicit point that we were not aware of any problem with the way in which CEC were processing approvals at that point in time which I think was Donald McGougan's concern.

- (2) What was the basis of Carillion's Application for delay and disruption? How was the application resolved?

I have not been provided with a copy of the application. I expect it would have been tailored to the comments that were covered in the original Andy Malkin list and the subsequent Graham Christie list that dealt with the number of areas that were not contractually Carillion's responsibility, for example, traffic management constraints and delayed design information from the SUCs. I would

expect them to use those as the basis of their application for delay and the consequence that had on them to be able to deliver their original programme.

Where we felt there was some entitlement or there were items we could value under the contract we did so, sometimes by making an assessment on account, and we ended up with a difference in valuation between ourselves and Carillion. We could not resolve it at contract level so we went to formal mediation and I ended up agreeing it with the Carillion Regional Director Steve Kennedy.

- (3) Why had a strategy been developed to close down the MUDFA contract by the end of July and transfer the remaining diversions to another utilities contractor?

We had the view that Carillion were losing money on this particular job therefore either they were generating additional claims or they were not too keen at ploughing more resources into the job to conclude it. That was not good given they could potentially hold up the Infraco which would have cost TIE and the public purse even more money. They had a fairly challenging contract to deliver over the previous three years or so and I think they were 'tired'.

There were a couple of isolated locations that still needed to be concluded and, under the circumstances we decided to look at alternative providers. We ran a competition for other suppliers to do that work and Clancy Docwra and Farrans were successful. That allowed Carillion to finish off what they had and we resolved any outstanding disputes, claims and issues with them. It also meant that we were not asking Carillion to suspend works between where they had got to in July 2009 and come back in September/October 2009.

92. By letter dated 30 April 2009 (**CEC00322635**) you sent BSC revision 8 of the MUDFA Programme.

That resulted in an INTC from BSC, who asserted that *"tie's failure to procure the completion of the Utility Works in accordance with the Infraco programme, as evidenced by the MUDFA Programme Revision 8, constituted a Notified Departure. This Notified Departure, based on, inter alia, the current facts and circumstances differing from Pricing Assumptions 24, is a deemed Mandatory tie Change"* (per BSC's letter dated 4 September 2009, **DLA00001723**).

- (1) Do you have any comments on that? Do you agree, for example, that, in principle, a revision to the MUDFA programme resulted in a Notified Departure and a Mandatory TIE Change?

Yes, I agree with that and we would have expected the INTC notice along with a supporting estimate assessing how much, if at all, that had affected the works.

What we were trying to do was give the Infraco, as early as possible, advice that this was the latest forecast of when we thought these elements were going to be completed. It allowed the Infraco to understand and not waste time waiting for things that were not going to be ready in time. However, we would also expect them to look at options for mitigation. They still had an obligation to think about how they might re-sequence and the impact this might have.

- (2) Similarly, did, in principle, any change to the design programme result in a Notified Departure and a Mandatory TIE Change?

If it is the design programme associated with the utilities work but then has a consequence on Infraco, yes. If it is the design programme associated with the Infraco works themselves then it depends what has caused that change to the design programme. If it is an Infraco change or an Infraco proposal, it is not TIE's liability. I was expecting Infraco to manage SDS to get them to do what they are supposed to do and only if that does not happen for a reason that is outwith BSC or SDS's liabilities would I expect them to address it as a Compensation Event or a TIE change or Notified Departure.

If it was as a result of an Infraco proposal or an action or inaction by BSC or SDS and it was their liability then, while it is technically a Notified Departure, I would not expect to be compensating them for it because it was fundamentally their failure to undertake their obligations under the contract. We did have a number of debates about over how it was not appropriate to say there would be a Notified Departure if it was the Infraco's failure that caused the problem. Clearly if by contrast it was a TIE, CEC or third party related responsibility that generated that, then it is likely to be TIE's responsibility, which we would evaluate.

93. By letter dated 15 May 2009 (CEC00962138) you advised Steve Beattie, Carillion, that following agreement of the MUDFA Revision 7.9 Programme, TIE formally granted a further extension of time for the substantial completion of the MUDFA works, to 26 June 2009 (we should say that we are unable to find a signed version of this letter and so are not entirely sure if it was sent).
- (1) What was the purpose and effect of granting that extension of time? Why had that extension of time come so soon after the extension granted on 24 March 2009?

I think that recognised the requirement to complete works in the Mound and that the agreed access opportunity for that was May and June 2009. Consequently, if we agreed the MUDFA contractor was unable to gain access until that time then they are entitled to an extension of time to do that. I suspect it was not included in the previous extension of time letter that was sent in March because we were still confirming exactly when they could gain access and

that is why we subsequently issued the follow-up. I expect it was issued but it would be useful to understand if there is a signed copy somewhere.

- (2) What were your views at that time of the prospect of the MUDFA works being substantially complete by 26 June 2009?

The scope of works that we had issued to Carillion at that point in time is what we anticipated was going to be complete. What we did know at that point was there were still residual works to be completed at Haymarket and down at Forth Ports and that those were to be done by another contractor. If all things had originally been equal with no issues to deal with, we probably would have got the MUDFA contractor to do them.

However, as I have said, we chose to let them finish the works they had and we sought another contractor, Clancy Docwra, to go and do the works at Haymarket and Forth Ports. So there was utility diversion works but it was not being done under the MUDFA contract because the MUDFA contractor was Carillion. It would be disingenuous of me to say that the MUDFA works would be substantially complete whilst not acknowledging that there were further utility diversions to take place, but the original scope of instructed MUDFA works were expected to be complete by June.

94. A joint meeting of the Tram Project Board and the TIE Board took place on 3 June 2009 (the minutes are **CEC00983221**, page 5).

Slides for the meeting (**CEC01007729**, page 6) noted that overall 77% of all diversions were complete, that a strategy to close down the MUDFA contract by the end of August had been implemented and sections 1a (Newhaven Road to Haymarket) and 7 (Gogar to Edinburgh Airport) were out to tender.

In relation to utilities, all of the "off-road" section were now complete (ie from Haymarket to Gogar, with the exception of Gogar to the Airport), namely, sections: 2a (Haymarket to Roseburn Junction); 5a (Roseburn Junction to Balgreen Road); 5b (Balgreen Road to Edinburgh Park); 5c (Edinburgh Park to Gogarburn); and 6 (depot).

The Finance slide (page 8) noted "*We continue to report against an as yet unapproved outturn estimate for Phase 1a of £527.1m which includes a risk allowance of £35.7m for Infraco*" and that "*After allowing for the costs of Phase 1b postponement of £6.2m ... there is headroom of £11.7m against the total approved funding of £545m*".

- (1) Given that the MUDFA works in the "off-street" sections from Haymarket to Gogar appear to have been complete by this time, what was your understanding as to why BSC did not progress and complete the Infraco works in the off-street section?

At this point it was either as a result of BSC's failure to mobilise or undertake works that were entirely their issues or were residual elements of INTCs they needed to have agreed with TIE before

they were prepared to start work. It all comes back to this issue of design development change between BDDI and IFC.

- (2) The Finance slide for this meeting appears more positive than the report to the TPB on 11 March 2009 (referred to above) which noted that the budget of £545m was likely to be exceeded if any one of a number of scenarios occurred, that truncation of the tram line was an option and that a “safety valve” of £30m was required. Had anything changed between these two meetings? Which report gave the truer position?

The report on 11 March set out the scenarios as we were asked to address and we gave our considered opinion of the range of options at that time. It would be fair to say that the following couple of months had seen some good progress from Infracore on Princes Street and that the MUDFA related works had continued to progress. We saw no new deterioration of progress. It would also be fair to say that the finance report that concludes that outturn estimate of £527.1m, assumed that we were expecting to resolve the matters that related to key disputes or contract interpretation in the manner that supported our position as opposed to the BSC position.

Therefore, we are assuming that we are going to be successful in our arguments around BDDI to IFC changes; we are assuming that we are going to be successful around our challenge to the Infracore as to why they are not progressing works and we are assuming we are going to get reasonable and fair estimates.

That is the context of the report provided on the slide and I think it would be important to emphasise that the report on 11 March 2009 was a legitimate scenario planning the report that identified the risks and the issues that might need to be resolved.

At that time that report was also produced before the PSSA was agreed so there was no contemplation of successful agreement of the PSSA by 11 March 2009, as that was still to be resolved.

95. An informal mediation took place between TIE and BSC between 29 June 2009 and 3 July 2009.
(See, for example, the position papers produced by TIE on the following topics for the mediation: Value Engineering (**CEC00951731**), On-Street Supplemental Agreements (**CEC00951732**), Off-Street Issues: RRRW, Gogarburn Bridge, Carrick Knowe Bridge and Depot (**CEC00951733**), Misalignments between Infracore Proposals and SDS Design (**CEC00951734**), Hilton Hotel car park (**CEC00951735**), Evaluation of Change (**CEC00951736**), Evaluation of EOT (TIE Change No 1) (**CEC00951737**), Earthworks Outline (**CEC00951738**) and Agreement on BDDI (Drawings) (**CEC00951740**).

- (1) It would be helpful if you could explain who was present at the mediation, the matters discussed and the outcome?

The mediator was Eileen Carroll, she was the Deputy Chief Executive of the Centre for Effective Dispute Resolution.

Also present were myself, Susan Clark, Dennis Murray, Martin Foerder, I think Ronald Brueckmann from Siemens, as I do not think that had changed to Miguel Berrozpe at that time. There were some supporting commercial professionals from Infraco like Kevin Russell of BB and Alfred Brandenburger from Siemens. I think there was also representation from CAF (David Steele).

We discussed a range of topics; value engineering, potential On-Street Supplemental Agreements beyond Princes Street, off-street issues, the Russell Road retaining wall, Gogarburn Bridge, Carrick Knowe and all matters relating to changes from BDDI to IFC. There were topics around who was responsible for correcting matters between the Infraco proposals and SDS design.

The position papers that we had were shared. There were similar papers from the Infraco.

What the mediator was trying to do was make sure both parties clearly understood the other's position to make sure there was no misinterpretation or assumption. She would look for any common areas or a way forward that could be agreed. Sometimes we had tested all we could so it would be about trying some different avenues to take things forward. At that point there was the option to go to the next stage of Dispute Resolution which would normally be adjudication.

We took a week to go through all of the items to see if we could reach an agreement and conclusion. I do not recall it being tremendously successful and we did not walk away thinking we had resolved everything between us.

- (2) What was your involvement?

I led, listened and supported certain key submissions on each of the items. I made sure TIE's position was effectively communicated to Infraco and listened hard to Infraco's position, to understand it and ensure I picked it up and interpreted it properly. Also to consider any areas of common ground that we could move these things forward.

I recall Eileen Carroll made up a minute or record of the mediation but that has not been provided to me.

96. By letter dated 1 June 2009 BSC advised TIE that it would issue an invoice for £3.2m in light of TIE's acknowledgement that it would not proceed with the construction of phase 1b (TIE00339741).
On 1 July 2009 BSC issued TIE with a sales invoice for £3.2m (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).
By letter dated 4 August 2009 TIE advised that they would pay the sum in the invoice under reservation (TIE00339746).

- (1) What did that sum and work relate to?

It goes back to what we discussed earlier about the Kingdom Agreement. If TIE chose not to progress the work to take forward line 1b, assuming that it had received a competent estimate from the Infraco, then TIE was obliged to pay £3.2m .

- (2) Why was the invoice issued at that time?

I think it was in response to the fact that there was a formal notification that line 1b was not going to proceed at this time. It was around 28 May 2009 where it was clear that we were not going to be able to progress line 1b within the funding envelope. We received an estimate from the Infraco which was significantly higher than their original estimate, therefore it was going to be entirely unaffordable within the funding that was available. It was unlikely we were going to receive any additional funding to address that.

- (3) What are your views on the matters listed in TIE's letter dated 4 August 2009?

It is under my name as the employer's representative but it is signed by Susan Clark. I may have been on leave at that time. My concern was that BSC bid a price for line 1b as part of their original offer back in 2007 and that required to be updated in advance of May 2009. They proposed a fixed price for that but it was circa three times their original estimate; no extra scope just three times the original price, so even compared to their normal estimates of change that was excessive.

It raised concern over how fair and legitimate the offer was in their original bid, and whether it was deflated. Had they shown a low number to make it more attractive for TIE and CEC to pick their consortium rather than their competitor? That was my concern, as it felt like they had misrepresented their bid price.

We were therefore putting a marker down to confirm we were obliged to pay the £3.2m but that we thought their estimate for 1B was grossly inflated and/or their original bid was wrong, so we could choose to come back once we had reviewed it further .

- (4) Why was BSC's proposed fixed price for phase 1b (of £134m) almost three times the bid price (of £49.7m)?

That is exactly what I asked them and I never got a satisfactory answer. They said it was their updated estimate in light of our experience operating the Infraco contract, or words to that effect.

97. By email dated 2 July 2009 (CEC00766380) Stewart McGarrity circulated a draft Estimate Range Sheet (CEC00766381) which showed how the (undrawn) Risk Allowance had increased from £19.7m when the budget was approved (at Infraco Contract Close) to £112.3m on a worst case scenario (and which was subject to a number of exclusions including, for example, future INTCs and Tie Changes).

By way of overview:

- (1) Did you agree with the general break down of the risk allowance at that time (including, for example, that the largest sums in the risk allowance were in respect of "Delay-EOT2 and future" and "Design (including BDDI to IFC)"?)

I think generally the categorisation and grouping of matters was sensible and in some of them there was quite a wide range of options covered of a best, medium and worst case. These issues around whether or not we were going to be successful in our argument on BDDI to IFC resulted in ranges of £12m to £20m to £30m depending on what view you took around the issue.

Until these issues were resolved, we could not know whether the cost is at the bottom end of that range or nearer the top end. Some of them changed very little compared to some of the original assessments and budgets but some of them had quite a significant increase.

There were other areas around the extension of time arguments that if our position was successful, their extension of time would be greatly reduced, whereas if Infraco were successful in their arguments then there was going to be a significant liability that might have been in the £15m to £20m, ie nine to 12 months of delay as opposed to our original assessment of around six months. It was susceptible to success or failure on some of these particular points but it was a reasonable ranging document at that point in time.

- (2) Were the figures in these draft documents (or similar figures) reported to the Tram Project Board and CEC around that time (and, if not, why not)?

I am sure that, at this instant in time, the figures in these first draft documents were tested with the likes of Richard Jeffrey and David Mackay. I would have expected the next one or two TPB meetings to have some of the detailed information that we would have then shared. I cannot recall exactly when that was first formally put on the table. It might be in some of the presentations but I would have

expected an informal discussion initially with the key representatives both from CEC and the remainder of the TPB.

To put some of this in context, disappointing as it was around some of these potential cost increases, this was us comparing an authorised total scheme of circa £545m worth of funding, potentially becoming circa £600m, and was the final answer that would increase the total original commitment by around 10%.

- (3) Why had the risk allowance (and the total estimated cost of the project) increased so dramatically?

Primarily it was as a function of the emerging issues of difference in dispute with our infrastructure contractor. The risk allowance at that time of Contract Close did not take cognisance of the interpretation of BDDI to IFC that the contractor later sought to apply. It did not take cognisance of the fact that BSC chose not to start or mitigate impact of some of the MUDFA works in the way that we thought they were obliged to. BSC did not take cognisance of the fact that we had more MUDFA delays than we expected, albeit there was an allowance for up to six months' worth of delay. There was a change that we were required to deal with at Burnside Road that was our liability under the agreement with Edinburgh Airport Ltd. There were some other areas that we expected to have a risk of circa £2m against the VE and, with the difficult relationship with Infraco, circa £4m of that VE would not be delivered, therefore it was to go back into the construction works price.

Those are examples, but the main causes for the increase are extra delay, BDDI to IFC issue - they account between the two of them for circa £40m of the total amount of £92m.

- (4) To what extent do you consider that that increase (or the risk of such an increase) could have been foreseen prior to Infraco Contract Close?

It could not have been foreseen in relation to the BDDI to IFC interpretation and the legal advice that we had. I did not expect the Infraco contractor to be so adverse to doing any work and finding reasons not to start. I do think we could have probably been more pessimistic around the utilities-related works and perhaps made some additional allowance for some of the potential problems there. Anybody doing that work would have found it difficult, whether Carillion or any other contractor. The constraints that were put around this, for traffic management reasons and with their relationship with the statutory utilities, made it difficult work.

It was surprising just how little was known by the statutory utilities and the City of Edinburgh. That would be the main one I would say in hindsight that we should have allowed for certain things differently. I would not have expected delays the way they turned

out and I certainly did not anticipate some kind of side agreement between the SDS and Infraco, which would exacerbate the elements of delay and change control generated from design.

98. A joint meeting of the Tram Project Board and the TIE Board took place on 8 July 2009.

The minutes (**CEC00843272**, page 6) noted, under Project Delivery (Utilities), that 77% of utilities diversions were now complete, that Carillion works continued to be slower than programmed, with justification in some areas, and in others down to poor performance, and that BT and SGN works were progressing on or ahead of schedule.

The section 7 contract (Gogar to Edinburgh Airport) had now been awarded to Farrans who were now on site and on programme (it being noted that the cost of these tendered works was less than that budgeted for Carillion).

A tender was out for the utilities works in Section 1A (Newhaven to Foot of the Walk), parts 3 and 4.

Slides (**CEC00783725**) set out (pages 10 and 11) the preferred option of a Formal Contractual Approach and the options of reducing BSC's scope, ending the Infraco contract and other scope options (ie truncation).

- (1) To what extent do you consider that the slippage in the MUDFA works was justified and to what extent was it down to poor performance (and by whom)?

Again, it is difficult to recollect all the practical examples. However, my recollection of that time was that Carillion were completing works in the Mound/Princes Street and they were due to be finishing off works at Haymarket, which was the element they were particularly challenged with at that time. The other utilities works that were done by the statutory utilities such as BT and SGN were progressing sensibly.

We also discovered additional scope that needed to be completed, for example, where we needed to do an extra diversion or where something got added to the baseline. I think that is the point around Carillion. I think they were getting tired and it was coming to an end of a scope of work so they were going to start demobilising their people, and they would be looking to move on to other projects even though they were still concluding this work. That was also part of our weighing up whether it was time for them to finish off what they were doing and get Farrans to do Section 7 or Clancy Docwra to do Section 1a accordingly. I think we ended up with Clancy's finishing ducts at Haymarket because Carillion did not finish that entirely. It was hard work, I accept that, and it was unexpected in some circumstances but they could have come up with better solutions I think in some of them.

- (2) Give that the MUDFA works were initially due to be completed by the end of 2008, why were BT and SGN works still being undertaken in July 2009?

We have covered this in previous questions. However, for example, SGN works could not be undertaken during the winter months

because of the demand on the gas supplies in Edinburgh so we were not allowed to do some of those works until the spring at the earliest. There was also work there that needed to be done whilst we were taking advantage of the Princes Street blockade, therefore it could not be done until April, at the earliest, when that blockade started.

With regards to BT, this is around definitions. The MUDFA works were creating new chambers and new ducts and then the next step was for BT to come in and cable those ducts and do the jointing and transfers of the circuits. That element was always going to be undertaken by BT as they have that skillset. In the programmes for both Infraco and for the overall project programme, there were always clear windows where we expected BT to come in after the MUDFA contractor had completed their work. One of the areas for mitigation of delay was that we had asked, and we got, BT to undertake work on a 24/7 basis and paid them to do it because it shortened the period of time by which they needed to cable particular elements. However, they did not cable whole sections and connect whole sections so if there was an obstruction problem that might have held up a whole section until it could be resolved and handed back to BT.

There were certain minor things that also needed to be covered such as connections into the old tenements in Leith Walk that was never really on anybody's radar until 2007/08 because we did not realise there were these local connections that needed to be replaced. We did not have the powers to go into the tenements to do that because they are outwith the limits of deviation, therefore we needed to get the SGN contractor to do that and pay SGN to pay their contractor to do it.

These were some of the examples where not all of the full scope was understood at the time.

- (3) What were your views around that time on the best option for TIE to follow in relation to the Infraco dispute and completing the works and the prospects of that option being successful?

As stated in the slides, we felt it was most appropriate to use the mechanisms within the contract to get certainty and seek to validate our position and to get the Infraco to then progress on that basis. If Infraco's argument was preferred by the adjudicator then TIE would need to decide whether to fight it or accept it and deal with the consequences of that. The challenge of doing that was that it was going to take some time to work through, it was quite labour-intensive and expensive in advisor costs.

Equally the Infraco was entitled to take matters to Dispute Resolution, not just TIE, so both parties could have taken different

matters forward at different times with set timescales for response. I think that was the right strategy and approach whilst still trying to work collaboratively and effectively with the Infraco in jobs like Princes Street. However, when you have a background of very significant differences in dispute it is not always easy for everybody to be constructive around that.

99. A joint meeting of the Tram Project Board and the TIE Board took place on 29 July 2009.

The minutes (CEC00739552, page 7) noted (para 3.3) that the overall completion of the utilities programme was at 80% with full completion scheduled against all areas in November 2009.

Richard Jeffrey presented his quarterly review (CEC00376412) and noted (page 3) the following problems as having been “baked in” from the beginning, namely: risk management strategy; procurement strategy; design/design management; contractor appointment/behaviour; and optimistic estimates.

- (1) What were your views on these matters?

Regarding the utilities element, we moved forward in the month and another 3% was completed and we were dealing with the old infrastructure at the Mound. One of the challenges we had was looking forward and working out how to conclude the overall programme of work. Farrans were progressing with their work, SGN and BT were continuing to do works and I think about then we were in the process of appointing Clancy Docwra to finish the works in 1a. It looked like a realistic programme to complete.

Looking at Richard’s overview, he talked about some of his fundamental concerns or problems that he considered were embedded in from the start of the process. He talked about risk management strategy, procurement strategy, design, design management, contractor appointment/behaviour and optimistic estimates with regard to that. It notes that he felt that it was a very difficult process getting into contract with the Infraco, that it was a very clunky and extended process between October 2007 and May 2008 and the behaviour was much less constructive than we would have expected. The procurement strategy of going so early to that preferred bidder with so many open issues was, I think, a big challenge and we suffered for it.

In terms of optimistic estimates, it depends on how you view these matters. The utilities example is a good one, where there are an awful lot of unforeseen problems arising and, we were probably too optimistic, even although we had massive risk allowance for utilities work, it was probably still not enough given some of the infrastructure that we were trying to deal with.

I think one of the helpful things that Richard did when he came into the business was to look at things going forward. He notes in this he had a dedicated professional team and clear focus in certain

areas. He was allowing members of his team to focus on particular singular areas and take those matters forward to help address some of these difficulties or challenges. That was the thrust of what he was trying to build going forward. We were having regular, probably daily, discussions around how we were making progress on these kinds of matters.

Princes Street had just been settled by the Supplementary Agreement approach. One of the key questions in his mind was whether it was an appropriate way to deal with all on-street activities or not, depending on the behaviours of the contractor. That would help him finalise the strategy that he would recommend to the Board and to CEC going forward.

100. By email dated 31 July 2009 (TIE00031088) Martin Foerder sent Richard Jeffrey BSC's "Final Settlement Proposal" (TIE00031089). We understand that discussions then continued in the second half of 2009, in particular, in relation to the on-street works. We further understand, for example, that parties met on 6 October 2009, and thereafter, to explore the possibility of using the Princes Street Supplementary Agreement as the basis of a wider On-Street Supplementary Agreement
- (1) What was your involvement in, and views on, these discussions?

The Final Settlement Proposal document was something that Richard received after we had gone through the mediation marathon. There was clarity so BSC understood what TIE's position was in all of the matters and we understood much better what BSC's position was.

What this note did was crystallise, from BSC's point of view, what approach we wanted to take forward if we could come to an agreement between TIE and BSC. If not, it was confirming we would just need to go to formal Dispute Resolution.

Infracore restate their views on extension of time entitlement, they summarise their position on BDDI to IFC and they make a proposal saying they need to measure all the drawings, measure every single change and they will give a 4% credit for our normal design development. I think that is an untenable position but that is what they proposed. I think they knew it was unlikely to be accepted.

They also clarified that there were certain elements of the PSSA that they did not like. They talk about needing an independent quantity surveyor to value items because their estimates and our review of their estimates are quite a significant distance apart.

I have outlined my involvement in and beyond some of these discussions and I did not think some of the positions they adopted were appropriate or valid or balanced. There is no doubt that their OSSA proposal moved the balance of risk much more towards TIE

and the Council and, therefore, there was virtually no risk on the Infraco in doing those works. That was a very unattractive proposition to take forward and eventually we talked over an extended period of time over whether it was going to be possible to do a deal on that. We eventually concluded that it was not going to be possible because, in our view, we could not justify that it was fair value for money for the public purse.

Part of our concern was that we thought BSC had fundamentally underbid the elements of on-street working in the original price and this was a way to avoid them taking those losses and actually they would make money on this part of the job.

I was not interested in penalising them. I was interested in ensuring the offers made were fair offers, tendered on the original evaluation of the two bidders. They were both close financially in the evaluation of that. It is not fair to excuse BSC from their obligations here by changing this half way through, that is not fair to the other bidder and it is, in effect, BSC manipulating their position. I think, certainly from a TIE and a personal point of view, I had a fundamental problem when they were trying to do that.

It is not the right thing to do in the circumstances and it would not have been an acceptable position for public authorities to support.

101. We understand that some of the utility diversion works were carried out by the SUCs, who then charged TIE for the cost of carrying out the work.

We note, for example, an email dated 4 August 2009 from Gregor Roberts (TIE00666203) which stated that the Turnhouse roundabout diversion was budgeted to cost £1.9m, that SGN had undertaken the work and invoiced TIE £2.9m (which TIE had paid) and then invoiced TIE a further £500,000, with a potential £170,000-£300,000 to follow.

- (1) In general, what utility diversion works were carried out by the SUCs, rather than by the MUDFA contractor?

In summary, medium pressure gas main work was undertaken by SGN. Similarly, SGN's contractor undertook works in the tenements, in Leith Walk particularly.

Where there was work that was outwith the limits of deviation in Constitution Street we utilised, I think, Scottish Power, Scottish Water, Scotia Gas Networks and British Telecom contractors because we did not have the powers to operate outside the limits of deviation.

When we were doing telecoms-related works, the MUDFA contractor put in the necessary manholes and ducts and the statutory utility, be it Virgin Media or BT, for example, did the cabling and the jointing from that perspective. SGN and BT also did their own design work for what those diversions would be and

provided those to SDS to incorporate or consolidate into an overall consolidated design. SDS tended to do the water diversions on behalf of Scottish Water and some of the ducting and spatial work.

- (2) In general, did the work undertaken by the SUCs end up costing significantly more than budgeted for (and, if so, why)?

I do not think you can answer that generally. There were specific examples of where it was different and the SGN example was one of those where there would have been particular circumstances.

I think what you have to reflect on is that the agreements with the statutory utilities were governed by an agreement between CEC and each of them for the purposes of undertaking the project. They used some of standard rules that any developer would when undertaking works under the New Roads and Street Works Act. You would agree with the SUC on the scope of what was expected. If they were doing the work they would provide us with an estimate and we would commit to pay the actual cost associated with it.

If our contractor was going to do the work, in this case the MUDFA contractor, then first of all the SUC had to agree it was a fair rate for that job and we had some issues getting that agreed with SGN.

Secondly, we provided that information to the SUC and paid our contractor to do it and if there were any credits, or what is described as betterment, where they upgraded the asset, they allowed us a credit back, whether it was work that they did or work that we did.

There was very little risk that the statutory utilities held in this process; it was really all by the developer, which, in this case, was CEC, with TIE administering on behalf of CEC.

We did have a number of discussions and debates when trying to finalise the overall betterment costs for a number of statutory utilities to get to conclusions on. I recall involving specialist quantity surveying firms - Corderoy's was one that we utilised - who were pretty familiar with some of the mechanics of operating this betterment mechanism so that we tried to best represent the position for the public and make sure the statutory utilities properly credited the project. However, there were certain liabilities that we had because we wanted these diversions done. Turnhouse was an example where there was a big gas main with difficult access issues and items had to be concluded on that.

- (3) Do you have any comments on why the Turnhouse roundabout diversion works by SGN appear to have cost so much more than budgeted for?

I cannot recall and I would need to see the papers from and communication on that to answer that fully. Perhaps this is a question for SGN.

102. The Tram Project Board met on 26 August 2009. The minutes (CEC00848256, pages 6 and 7) provided an Overview of Current Progress with the Infraco and Utilities works.

In relation to utilities, you provided a summary of the increased scope over and above the tendered utilities quantities (ie 46,575 metres and 295 chambers compared to an anticipated 27,188 metres and 190 chambers), it being noted that *"Most of these scope increases can be attributed to a combination of inaccurate utilities records, unknown apparatus, congestion/obstacles and resulting re-design and alternative routeing"*. While there were value for money benefits arising from the increased scope, these would be tempered by programme impacts.

Carillion were at 96% completion (although challenging areas remained to be completed at Haymarket and York Place/Broughton). Farrans were undertaking the utilities diversion works to programme at the airport and were expected to be completed by the end of November 2009. Tenders for the Section 1A (Newhaven Road to the Foot of the Walk) utilities were under review and a recommendation to award would be made in mid-September.

The minutes (page 8) set out that the matters that had been chosen for the formal Dispute Resolution procedure were as follows, namely:

Tranche 1 (Extension of Time 1 and Hilton Hotel car park)

Tranche 2 (BDDI Gogarburn Bridge and BDDI Carrick Knowe Bridge)

Tranche 3 (BDDI Russell Road Bridge, BDDI Earthworks in Section 7/Gogar to the Airport and Value Engineering)

Tranche 4 (to be notified, but encompassed Extension of Time 2 and SDS)

Tranche 5 (Edinburgh Park valuation, had been agreed at £50k without the need for DRP, against a claim of £450k).

- (1) What were your views on these matters?

At this point we had closed down the scope of works we expected Carillion to finish and they were 96% complete on what we had instructed them to do under the framework. By this point we were in the process of appointing Clancy Docwra for Section 1A and Farrans were progressing the works in line with the programme out at the Airport so it was going fine and they were expected to be complete by the end of November 2009.

We knew we were anticipating 46,500 metres and 295 chambers, a very significant increase compared to the original scope of 27,000 metres and 190 chambers. Therefore, whilst there would be some more value for money in the project and further upgrading of the infrastructure assets in the vicinity they touched, that was going to be a great benefit for the SUCs. It was not necessarily a big benefit for the tram project but we needed the utilities out of the way.

The people who used this infrastructure were going to get a benefit because it was all new and upgraded and much more of it than was expected. This was a small silver lining considering the amount of disruption and the additional cost that had been incurred.

(2) Why were the items noted above chosen for the Dispute Resolution Procedure?"

It was about trying to resolve points of principle. There was an issue around time and delay which was Tranche 1 so it was about the extension of time associated with MUDFA. Also we believed the Infraco should have just started at the Hilton car park and got on with the job.

Tranches 2 and 3 related to the BDDI to IFC argument relating to particular structures. Tranche 4 was anticipating the next bundle of time-related issues and further SDS delays. Tranche 5 was about the way in which Infraco actually valued their estimates so this was the over-charging issue that we were trying to deal with.

At the time we had proposed to use this Edinburgh Park viaduct example where they sent us a bill for £450k but we finally agreed it at £50k. It later became an issue around valuation so that specific example was they were going to a formal DRP but some others were likely to follow once they had been crystallised. We were trying to get those principles agreed and make sure we took matters forward hopefully in line with a successful resolution, in our favour for each item.

Even if they did not get resolved to our satisfaction, at least we would understand the adjudicator or mediator's decision and that is why we took that particular approach. For me this was us putting into practice the generic strategy to take things through the DRP route to get matters crystallised.

103. By letter dated 25 August 2009 (CEC00846312) Carillion advised that due to "numerous items of additional works and delaying events" a Further Extension of Time for Completion was required to 14 December 2009.

By email dated 4 September 2009 (CEC00790176) Philip Kolan of Carillion sent a "Schedule 4 Rates and Prices Submission Road Map" (CEC00790177) which set out Carillion's view on the reasons for the delay in the MUDFA works, in relation to Carillion's claim for a further Extension of Time.

(1) To what extent do you agree and disagree with the main reasons for the delay in the MUDFA works as set out by Mr Kolan (CEC00790177)?

I would expect to see a formal response back from either myself or Graeme Barclay on this. I have not seen that in the documents provided to me and I think it would be necessary to have that to answer this question.

I would have replied agreeing that there may be entitlement but asking for them to value it, and saying that in other areas there would be no entitlement because it was as a result of their deficiency or their failure. I think there will be a specific response on that in the TIE and/or Carillion files.

The Prices Submission Road Map (CEC0790177) is the claim, in effect from Carillion. It sets out all the issues and arguments that Carillion had and why they thought they were entitled to additional monies. In essence, from memory, it crystallised the areas of difference between us and Carillion and the fact that we were prepared to certify the amount of money for their final account and they had a number of millions of pounds more that they were claiming. That is why we ended up in mediation to try and address differences between the two parties.

I suspect these were the elements that were brought forward to the mediation we had with Carillion to try and resolve the MUDFA contract and I think that happened at some point in the autumn of 2010.

104. There was a joint meeting of the Tram Project Board and TIE Board on 23 September 2009.
The minutes (CEC00842029) noted (page 7, para 3.3) that works had commenced at several locations under clause 80.15 instructions (Carrick Knowe Bridge and Russell Road Retaining Wall). Overall, Infraco progress was 8.3%.
Slides for the meeting (CEC00849011) gave an update on the Utilities work. The Carillion works were 97% complete (Haymarket was forecast to be complete at the end of November, excluding gas abandonments; York Place – Picardy Place required a technical solution; Leith Walk gas and water decommissioning was to be complete by November).
The Airport works by Farrans were well advanced with completion forecast by mid-October.
In Tower Place – Newhaven, tenders had been returned and were under evaluation, with works expected to commence in October.
A slide (page 11) gave an update on Infraco progress.
A slide (page 12) noted that the original open for revenue service (OFRS) date was July 2011, that an Extension of Time (Prog Rev 1) had been agreed changing that to September 2011 and that an Infraco Rev 2 programme submission showing an OFRS of October 2012 had been rejected by TIE, who considered that an OFRS of February 2012 was deliverable.
- (1) For the avoidance of doubt, why had TIE given instructions under clause 80.15 in relation to certain works but not others?

There was a separate dispute about the mechanics and operation of the way in which the change process in clause 80 worked and the obligation for Infraco to commence works, when there had been a Notified Departure. Infraco's position in all such circumstances

CEC0790177
should be
CEC00790177

was that they were required to submit an estimate for the impacts, both in time and cost, of whatever that Notified Departure or change was. In their view that had to happen prior to the progression of any works.

TIE were seeking to utilise one of the clauses under the contract to enable the Infraco to proceed whilst that agreement of an estimate, or acceptance of this change and valuation, was still work in progress. Both parties were then working to agree what that was but they would continue to construct the works including the element of change, as necessary, so it did not further delay the programme.

What we were trying to do was get works to be progressed whilst we were seeking to either resolve that disputed point or agree an estimate. That was the reason for targeting that. Those locations were selected – Carrick Knowe and Russell Road retaining wall – because they were structures that were at, or near, the critical path of activities. The supply chain was mobilised on those sites and they had started work on them already but this was about getting them to effectively continue to perform.

As a principle, we did not believe we needed to issue clause 80.15 instructions but we chose to do it at these locations because we did not wish to have a technical argument around contract administration later on. That is why we targeted those particular areas. We had that discussion with DLA in terms of contract and interpretation and legal advice on that.

(2) Do you have any other comments on the above matters?

Regarding utilities, we identified that the scope was 97% complete compared to the start of their works back in 2006/07. They had a piece of work they were planning to finish within the next couple of months at Haymarket. There was some gas work we needed to tie in with Scottish Gas Networks that was likely to happen thereafter but the diversions would have been completed and there were, in effect, two other things to consider from the Carillion scope.

At York Place to Picardy Place, we needed a big chamber in Broughton Street and that was proving very difficult to find the right access to, so at that point we did not have a technical solution about how we were going to build it with acceptable traffic management arrangements.

There were some abandonments and water decommissioning to plan at Leith Walk that was expected to be undertaken in October/November before the Christmas embargo.

The two other packages that we had not put to Carillion were the Airport that Farrans were undertaking sensibly, clearing the utilities out of the way there, and a tender for Tower Place to Newhaven which was line 1a down at Leith Docks. That was eventually awarded to Clancy Docwra.

105. An adjudication decision was issued on 13 October 2009 by Robert Howie QC in relation to the Hilton Hotel car park works (**WED00000026**)

Adjudication decisions were issued on 16 November 2009 by Mr Hunter in respect of the Gogarburn Bridge (**CEC00479432**) and Carrick Knowe Bridge (**CEC00479431**).

On 4 January 2010 Mr Wilson issued his adjudication decision in relation to the Russell Road Retaining Wall Two (**CEC00034842**).

(1) To what extent, if at all, were these adjudications intended to establish principles of wider application, or provide guidance, in relation to the other matters in dispute?

Each of the individual adjudications were targeted to answer the question that had been put the adjudicator and nothing else. They were not empowered to act as generic principles across the whole contract. The Infraco and TIE were however expecting to have a guide from the adjudicator's decision that would suggest how some of the issues were being considered. Therefore, it was an opportunity to test the referring parties' views and whether or not they were likely to be supported. I think both parties intended to consider it as guidance on the strengths, or otherwise, of the respective arguments and the areas of difference between us.

(2) What were your views on these adjudication decisions, including the extent to which they favoured TIE or BSC (both in relation to whether a change had occurred and in relation to the value of that change)?

My view is that the results were mixed. Some favoured, or supported, TIE's view and others favoured, or supported, the Infraco proposition. The Hilton Hotel car park upheld our view that we should have started some time ago without further instruction.

There was a mixture of results around the BDDI to IFC dispute and, on balance, it tended to support the Infraco interpretation. I think most of those were around the principles of the change and not necessarily the valuation.

We felt it was disappointing from a TIE point of view that the adjudicator tended to support some of the principle points on BDDI to IFC and we were not persuaded at that time if that was correct. Moreover, the adjudicated evaluations tended to be more in the range TIE had proposed rather than at the level of Infraco's claims.

Some of the adjudications were just on the principle, some of them were on valuation as well. Later some were just pure valuation

issues. There were a couple later around Tower Bridge down at Section 1A where there was a credit because they did not require any particular work. Infraco proposed a very small amount of credit and we proposed a larger amount of money back and the adjudicator settled much nearer our view.

Out of the 300 plus changes that were agreed by the time of Mar Hall, on average, and compared to their original value, the ones that were agreed by the two parties settled around 52%.

- (3) Did these decisions give you any pause for thought as to whether TIE's strategy, including its understanding of the contract, was correct?

We said our strategy was to use the levers in the contract, including the Dispute Resolution mechanism, to try and get Infraco to progress the works whilst fairly accepting that if we were liable for a change, we would rightly pay for it.

What was key for TIE was creating a fair evaluation as opposed to the initial estimate submission by BSC. That part of the strategy was absolutely in line with what we said to the Board about how we were trying to progress these DRPs.

One really important piece, apart from the overall frustration that everybody had around having disputes, was that the whole project was slowing up and the slower it went the more money it was costing in extensions of time and preliminary costs. None of that was adding any value to anybody, whether it is Infraco management costs, whether it is TIE or CEC costs, this all adds to the overall bill at the end of the day which is not a good thing.

106. The Tram Project Board met on 18 November 2009. The minutes (**CEC00416111**, page 7) noted that the Board approved the issue by TIE of a Change Order for a settlement of Extension of Time (EOT) 1 of £3.524m (being 7.6 weeks EOT for the impacts of SDS programme V26 to V31). It was also noted (page 7) that the Board approved the interim award of nine months relief and six months costs in relation to the Programme to Complete (see also, for example, in that regard (i) paper by Susan Clark on Programme Agreement & EOT, **CEC00752774**, and (ii) your letter dated 13 November 2009 to Martin Foerder, **DLA00001717**). There was reference to setting up a sub-committee with delegated authority to enter into an On-Street Supplemental Agreement (OSSA), on a demonstrable costs basis (page 7). Slides for the meeting (**CEC00835831**) gave an update on Infraco progress (page 8) and Utilities progress (page 16).

- (1) It would be helpful if you could explain, in general terms, what EOT 1 was for and why it was settled for that amount?

It is well crystallised in the question. Extension of time 1 was the evaluation of the impact of the SDS programme change from Version 26 to Version 31 covering the progression from November 2007 to May 2008. All parties had agreed that was a Notified Departure, the first one we dealt with under the contract.

In these specific circumstances it was to say that they are entitled to an increase in the overall contract price of £3.5m. Therefore there were two parts: BSC were allowed extra time to complete and there was a cost impact when their people were on the job for longer with regard to that.

We had to evaluate how much extra time Infraco would require to have staff on the works. The Infraco contract had details of rates and prices for people and resources where they would be required to stay for longer. This was a fairly straightforward quantity surveying or commercial management activity.

- (2) To what extent had provision been made for that in the risk allowance at Infraco Contract Close?

In total there was a consolidated extension of time into an overall allowance of six months. You are talking something in the order of £10m to £12m that was allowed for that extension of time element.

- (3) It would be helpful if you also explain what the reference to an interim award of nine months relief and six months costs related to?

The nine months relief is relief from application of liquidated damages. If the contractor does not complete works by the time he is contracted to complete them, he is liable for liquidated damages and there are four milestone completion sections within the contract, Parts A, B, C and D. There were different levels of damage in each of those. If we gave relief it meant that the time allowed to complete is going to be extended beyond the original date. Relief only allows them not to be liable for damages. It does not mean that they are entitled to any costs they have in that extra period of time.

If we then agree associated costs that is the second part of the equation. You could have a situation where we say, there might be entitlement to relief and damages because of something TIE have done, so there is an entitlement to extra time, but BSC may also be liable or culpable, for certain things they should have done but did not. TIE would not pay for others' errors or omissions so there would be no recompense for the cost but what TIE would not do is ask them to pay the damages.

We wanted to shield them from damages and we saw it as fair to assess that, circa six months' worth of costs were the clients responsibility but the three months that would take you up to the nine in total, were the Infraco's liability because they had not progressed things when they could have. That was the rationale between those particular elements.

- (4) Was TIE's intention at that stage to enter into an OSSA, on a demonstrable costs basis for the remainder of the on-street works? What were your views on that?

This was November 2009, we had nearly completed the Princes Street works under the PSSA. There were elements that were practical for both parties. From a TIE point of view we were uncomfortable around the PSSA because it started to move matters away from the core Infraco contract and, but for that one mile section of the whole route, there was not a major change to the contract.

If we had then agreed an OSSA, one of our concerns was whether it fundamentally changed the contractual basis upon which the Project had been bid. The unsuccessful bidder could argue that having initially awarded it fairly CEC/TIE had then materially changed terms. There was concern around the procurement rules and the possibility of a challenge by the unsuccessful bidder.

However, more importantly, it was felt that some of the areas where Infraco were seeking to move forward were too biased to their preferred position. Our view on their submission was that perhaps they did not get their offer 100% right and this was them trying to ensure or guarantee that they definitely did not lose money on this section of work and that they recovered profit or benefit.

There was a mechanic under the PSSA to deduct part of the total reimbursable costs from the original price. They were not keen on that particular mechanic to operate in exactly the same way under the OSSA. There was certainly a difference between our positions and it was not automatic that an agreement would be made.

107. There was a joint meeting of the Tram Project Board and TIE Board on 16 December 2009.

The minutes (**CEC00473005**) noted (page 6, para 2.1) that agreement had yet to be reached with BSC in relation to a set of On-Street Supplemental Agreements for the remaining works from Haymarket to Newhaven and that BSC had indicated that they were not prepared to commence works without these.

It was further noted that "*The Board approved the necessary additional and robust steps to be taken in the short term to target and enforce the full range of commercial mechanisms available within the Contract*".

- (1) Do you have any comments on these matters?
- (2) What was the commercial strategy discussed and agreed at this meeting?

The TPB was reflecting that there was a great deal of work going on to physically complete the Princes Street works on time for the end of November but whilst that had been achieved there was no softening of Infraco's commercial position. They were still not prepared to work on any other on-street sections without an OSSA and they were arguing hard on the issues of change or other principles in the off-street section.

Therefore the TPB were clear that TIE were expected to continue with the strategy set out which was the robust use of the contract terms and Dispute Resolution to resolve the difference one way or another. The TPB were very supportive of the approach TIE was taking, which had been shared with them over a number of months.

Events in 2010

108. An email dated 22 January 2010 by Stewart McGarrity (CEC00554138) noted a number of concerns relating to the delegated authority rules, the risk allowance, the total estimated cost and the reporting of these matters.

- (1) What were your views on the matters in that email?

What Stewart McGarrity and I originally discussed was concern around making sure our internal governance and delegated authorities were properly regulated from a financial perspective. It was an important part of our job to make sure that we were operating within the correct governance arrangements and, consequently, we were at a point where we were approaching the limits of the original delegated authorities associated with the risk allowance.

We drafted the note to the Executive Team of TIE around how to take those steps going forward to deal with the fact that it was clear that there was going to be an increase above the £512m AFC against the agreed funding limit of £545m. We did not have any delegated authority from TEL or from the TPB to expend monies above the existing limit so we wanted to make sure that we addressed that properly.

- (2) Do you consider that it was reasonable to "draw down" from the original risk allowance of £30m in respect of items that had not been originally or adequately included in the risk allowance (eg increased utility costs and additional costs on Princes Street) or ought, instead the project estimate, budget and/or risk allowance have been increased to reflect these items?

There is an element of practicality around that. It is a risk assessment not a guarantee. It is an assessment of what is

appropriate at that particular point in time. Some risks were retired without being required to be used, others were found to require significant additional funding for circumstances that were different from the time they were originally assessed.

The point about risk allowance is that it is not a guarantee or a fixed number, it is the best assessment by the team at the time as to what may be required and is what the funders agreed was appropriate at that time. It was also subject to external review.

We were in the process of refreshing some of the forecasts around likely expenditure in some of these areas and clearly the results of adjudications were going to affect what would be required to complete the work we had done on some of our original forecasting.

- (3) The email refers to *“a plan to take all the pain of budget reset in one hit”*. What was your understanding of any such plan to reset the budget in one hit? When was it discussed and agreed (and between whom)?

There had clearly been a lot of discussion about the risks of £545m not being fully adequate for completion. The debate around the team was do we sit with a single number or consider a likely range based on unknowns that were still being worked through.

Some of these papers were reported to the Council or were formal submissions for increased funding above £545m and some of the matters are therefore considered in the public domain. That is difficult when you are dealing with what is a contractual and commercial negotiation. If you tell the general public there is ‘X’ tens of millions additional funding available that is not going to encourage your contractor – with whom you are in dispute - to keep their prices sharp. That was a factor that was discussed so we preferred to have ‘one hit’ rather than a series of incremental increases which might allow information to flow unhelpfully into the public domain.

I am sure all the options were discussed across the TIE team, making sure Richard Jeffrey, David Mackay and others were well informed, as they wished to undertake additional informal briefings with other TPB members and other key stakeholders from the client side.

- (4) It may be suggested that the approach to the risk allowance noted above, together with a plan to reset the budget in one hit, would, inevitably, result in underreporting, and/or delaying the reporting of, the increasing costs of the project. What are your views on that suggestion?

My view is that at no time were the TPB or the relevant members of that Board, including CEC members, Transport Scotland and

others, unaware of the risk of cost pressures and the reasons for those. We had robust debates about the strengths and weaknesses of the relative arguments for each of those things. We had not published a formal revised budget requirement, but that was partly for the reasons we have just discussed. There were a number of assumptions and uncertainties around what that final requirement might be. It depended on various disputes, what TIE, CEC and the Infraco could do to minimise delay because that would have reduced everybody's costs and what the results might be from the ongoing formal DRPs.

My clear belief is that CEC were very keen to expedite a resolution and they managed that. It was in nobody's interest to increase the cost to the public purse and for this to become a bigger and bigger problem. The thrust was about trying to resolve it promptly but fairly as opposed to paying a big sum of money with open-ended potential for the liabilities.

109. By letter dated 19 February 2010 (**CEC00574090**) you advised BSC of the findings of TIE's review of the Estimates provided by BSC in relation to the INTCs.

(1) What was the purpose of that review?

This was about covering, on record, that TIE had systematically looked through what the Infraco had done. We had identified out of the hundreds of notifications issued by BSC how many we had received in full accordance with all of the requirements under the contract.

Less than 10% were received within the agreed contractual timescales and even then there were a number of calculations or gaps in the information. Also, from a valuation point of view, there were significant differences when we applied the rules of the contract in valuing these elements.

(2) What were your views on BSC's Estimates?

I think I have covered that particular point.

110. By letter dated 19 February 2010 Martin Foerder sent TIE a detailed offer for a Supplemental Agreement covering the remainder of the On Street Works (the letter and offer are both **CEC02084034**).

By letter dated 26 February 2010 (**CEC00368373**), Richard Jeffrey rejected BSC's offer for a Supplemental Agreement covering the remainder of the On-Street Works.

A meeting took place on 2 March 2010 between TIE (Richard Jeffrey and Stewart McGarrity) and BSC (Richard Walker, Mr Flynn and Mr Campos) (notes were taken by Torquil Murray, **CEC00574841**).

Mr Walker replied to Mr Jeffrey by letter dated 3 March (**TIE00086932**) and sent another letter (for your attention) of the same date (**CEC00655822**).

- (1) What was your involvement in, and views on, these matters?

In terms of process Martin Foerder is the Infraco representative, he would formally make that offer to me in the first place, as the TIE representative. Because it had been a matter that was subject to escalated discussions between the likes of Richard Walker, Michael Flynn and Richard Jeffrey, which is the level above Martin and myself, there was a response and then a meeting between Richard Jeffrey, accompanied by Stewart McGarrity, and the senior UK reps of Bilfinger, Siemens and CAF.

From a personal point of view, there was a lot of input and discussion between myself, Richard Jeffrey, Stewart McGarrity and others around TIE's view to see whether we could come to a conclusion on the on-street activity. Unless this matter could be resolved, it was going to be impossible to build the tramway through the on-street section of the city with Infraco. This was a quite distinct issue that Infraco said they were not prepared to undertake on-street works in accordance with the existing terms of the contract.

The Infraco wanted to extend the Supplemental Agreement that applied to Princes Street. When you go into the detail of the letters there is a focus that deals with that on-street point which we have just mentioned. There were also some examples or areas where they talk around the off-street elements and, clearly, there is an attempt by both parties to see whether there is an opportunity to get some agreement and some progress on the off-street works whilst we are still looking at the debate on the on-street works.

Around the time we started to see that, after a couple of months of their work in Princes Street, the quality of the product we were getting, the solution of the system and the way it is integrated into the road was not fit for purpose and their work did not achieve the specification.

111. By letter dated 1 March 2010 (CEC00578328) Martin Foerder noted that TIE had sent 312 letters in the month of February 2010 alone.

- (1) What was TIE's strategy at that time? Why were so many letters sent?

TIE's strategy, at that time, was consistent with what we had said earlier, which was to utilise the contractual levers to try and ensure that Infraco discharged its obligations and we got to resolution on areas of difference.

One element of that was making sure there was an administrative trail that covered off a response where we are obliged to respond to the Infraco, and any questions that they have asked.

Martin's point was a little hypocritical given that, as can be seen in the header on his letter (reference 4888) there had been 4,888 letters sent by the Infraco to TIE. I would suspect there were on average probably more than 300 letters per month coming from the Infraco.

There is no doubt that we got to a place where TIE did write several thousand letters, as did Infraco. We had to try and make sure we met our obligations properly by responding if they had asked us something, and also to ensure that they were meeting their own obligations.

Normally if you have a lot of adversarial or more difficult issues, you do tend to get much more formal correspondence. The correspondence was not all contentious, but it was probably indicative of the level of formality both sides felt they needed to get into because there was no consistent trust between the parties.

(2) Was that indicative of a change in approach by TIE around that time?

No, other than we were making sure we were up to date in terms of our contract administration. Previously we had made more use of emails and telephone calls and even although we still did that we would perhaps follow that up with a formal letter. We were concerned and did not want informal communication to be misunderstood, or misused, by the Infraco.

112. The Tram Project Board met on 10 March 2010.

The minutes (**CEC00420346**) noted (para 2.1) that Richard Jeffrey provided an update and explained the targeted work undertaken in a number of areas, namely, Performance Audits, Design, Programme, On-Street Works, Contractual Mechanisms, Relationships and Behaviours, Financial Context and the Way Forward.

After discussion of the strategic options the Board approved a strategy that included the following (see also TIE's Project Pitchfork Report dated 12 March 2010, **BFB00053258**):

- Continue to pursue TIE's rights under the existing contract with vigour and seek acceptable resolution of the main disputes in accordance with the agreed plan.
- Actively address affordability and incremental options, including operational and financial viability.
- Reach a resolution on the key matters with BSC.
- Confirm a new way of working with BSC which mitigates against further dispute risk.

(1) What is your understanding of the strategy approved by the Board at this meeting? In what way did it differ from any previous strategy?

The strategy was consistent with the direction of travel that was set out from the middle of 2009.

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should be
CEC00142766

At this point we were starting to see the emerging issue around the quality of work that was actually installed on Princes Street. It was a new problem that we had to resolve. We then had to look at what we could do going forward to try and not get ourselves into a place where there were new and different risks coming into the equation. At the same time we had to ensure not to leave matters where BSC's continuing behaviour might generate further disputes.

The second document (**BFB00053258**) is not TIE's Project Pitchfork Report dated 12 March 2010, it is a Project Phoenix proposal from 2011.

113. On 23 March 2010 McGrigors, Solicitors, provided a Report for TIE Limited on Certain Contractual Issues Concerning Edinburgh Tram project (**CEC00591754**).
- (1) Why had McGrigors been instructed? What were your views, in general, on McGrigors' report?

Richard Jeffrey wanted to have a fresh pair of informed eyes on legal matters, given at this point in time we had gone through a relationship for many years with DLA supporting both TIE and CEC. A number of areas had gone to formal adjudication with external adjudicators, who undertook a number of different points. A sufficient number said they preferred the Infraco argument as opposed to the TIE argument, hence not supporting the DLA interpretation. He therefore wanted to have a separate legal opinion.

McGrigors produced a report with regard to that and I think the punch line point for me was Brandon Nolan's opinion on the BDDI to IFC wording. Mr Nolan's opinion was that the way that final drafting was concluded, effectively neutered a normal design development obligation on the Infraco. We had a clear understanding there would be an element of design development that was the Infraco's obligation and this second opinion said it did not give that obligation on the Infraco, and, whether they choose to or not, it allows them to argue for many minor changes in design development and completion that then become Notified Departures. They then become automatic TIE changes, which means TIE need to pay for them if there is a cost or time impact.

That was, I think, a clear shift from where our legal interpretation was at that point in time and I think that was one of the reasons Richard wanted fresh eyes or a second opinion.

- (2) To what extent did you consider that it provided support for TIE's understanding of the contract and strategy for resolving the dispute?

It did not support the position that we had taken. We had already done a bit of ranging on what might be an appropriate valuation of the risk if Mr Nolan's interpretation was right and, therefore, those issues both of the delay and the direct cost impacts were then a liability that TIE and CEC were going to be liable for.

114. The Tram Project Board met on 14 April 2010. The minutes (CEC00245907) noted (page 6, para 3.1) in relation to utilities, that Clancy Docwra were expected to complete the utility works in Haymarket and at Lindsay Road by the end of April. Farrans works in Leith Walk were expected to be completed in mid-May.

It was noted that the original estimated work scope was 27,000 metres of utility diversions, that the current volume completed was 46,000 metres (being 170% of the original scope), that 94% of the revised expected scope had been completed and that the expected final volume was 49,000 metres of diversions (ie 181% of original scope).

In relation to the Infraco dispute, it was noted that there had been no positive change in behaviour which was, in fact, becoming more entrenched.

It was agreed that the current engagement within the available contractual mechanisms should continue, in parallel with the strategy presented by the Executive Team.

- (1) Do you have any comments on these matters?

It is a factual statement of where the emerged scope of the diversions was at that point in time. Clancy Docwra were completing works down at Lindsay Road and Carillion had ceased to work at Haymarket. Clancy were to return in January to finish off and were scheduled to finish in April. Farrans were doing work on the gas reconnections and abandonments in Leith Walk and they were expected to be completed in mid-May.

That all said, I do not think those particular elements were critical to the on-street section, it was more about going into tenements and final abandonments. This against a backdrop of a point where TIE and the Infraco have not been able to agree an approach by which the Infraco can go and do on-street works that both parties find acceptable. TIE are saying they should be doing on-street works on the areas that have been cleared and are available and Infraco are refusing unless they have an On-Street Supplemental Agreement, or similar, in place.

I think Farrans had also completed the Airport diversions before Christmas so that was another area available for the Infraco to progress in.

I do not know if it is covered in the minutes, but around that time David Mackay, as the Chairman, met Kenneth Reid, Bilfinger

Berger Board Director, to try and move forward some of the points of principle and differences. There was an exchange of letters, I think, in March/April on that to try and resolve it. There was a fairly consistent approach from Bilfinger, the parent company was supporting the approach that the local team were taking and that is not surprising.

115. A spread sheet dated 21 April 2010 (**CEC00334258**) set out the responsibilities of TIE's senior personnel and noted the requirement to "*Lead the team to deliver the Project by February 2012, at a price of £575m, safely*".
- (1) We note the reference to delivering the project at a price of £575m. Were TIE, in effect, working towards delivering the project for that price, even though a formal increase in the budget does not seem to have been sought or approved?

I think we have covered the general point around the ranges of potential final cost. However, trying to answer this specific question, I believe at that time Richard Jeffrey, as Chief Executive, would have agreed a set of objectives with David Mackay, as the Chairman. What this then tried to frame was a set of objectives that were appropriate to cascade to me, as the Project Director, and to Susan Clark, Frank McFadden, Dennis Murray and the rest of the TIE senior team around how we could help contribute to successfully achieving what TIE and CEC sought.

The use of a number like £575m was probably a fair reflection that would be in the ranging that we did internally at that point. It is accepted that no formal budget changed or had been agreed with our funders. I think, at that time, our working range and estimate would have suggested a mid-point outcome of potentially £592m.

Therefore, what Richard and David were doing was setting us a target. It was not good that it was £30m more than the overall available project funding but if it could be delivered, at that point in time, it would have been a good answer. Therefore, it is setting an objective for us to try and achieve.

116. An email dated 26 April 2010 by Stewart McGarrity (**CEC00332138**) attached a spread sheet (**CEC00332139**) and noted that, on the face of it, the Airport to Haymarket could be delivered within £545m, the Airport to York Place might be delivered for £545m to £570m (depending very much on the programme and the nature of the commercial settlement with BSC) and that the Airport to the Foot of the Walk might be delivered for £600m to £630m (again, very much dependent on the programme).
- (1) What were your views on these figures, and options, around that time?

This is building on some of the scenario planning that was talked about over previous months. I am pretty sure Dennis Murray, my commercial Director, Susan Clark, from a programme point of view and I were contributing, discussing and debating various ranges.

Stewart McGarrity would have consolidated them and we certainly would have reviewed them with Stewart.

The purpose of this was to deal with BSC saying that if they were going to deliver an Airport to Haymarket section, it could, potentially, still be delivered within the funding envelope currently committed to if we do no further work on the on-street sections. If we adopted a truncated route into the centre of the city to York Place, they are saying it is, potentially, in the range of £545m to £570m and if you want to go down to the Foot of the Walk but not as far as Newhaven, that could be in the range of £600m to £630m. In all of these areas, pretty much all of the utilities, by this stage, were complete with the exception of Picardy Place.

(2) Were these figures discussed with CEC?

I expect so. I would also have expected that it would have been raised specifically with the likes of Dave Anderson who is another TPB member. However, primarily I am sure that debate would have been with Donald McGougan because it was about some of the funding options.

117. By email dated 2 May 2010 (**CEC00348327**) Stewart McGarrity noted certain concerns in relation to the reporting of the utilities final costs (following an email dated 13 April from Gregor Roberts, in the same chain, attaching a spread sheet setting out the utilities costs, **CEC00348328**).

(1) It would be helpful if you could explain, by way of over view, what the spread sheet showed?

MUDFA did not cover all of the utilities costs. MUDFA was the multi-utilities diversion contract. AMIS (later Carillion) as the MUDFA contractor completed work done under that particular contract. Then there were other elements of costs that were subsequently undertaken by MUDFA .

They did work at the depot in general muck clearance which would have been work that the Infracore were originally obliged to do and, therefore, the funding and budget would have come from the original estimate the project had for such Infracore works. So that £5m around the depot excavation was actually something that Carillion did under the MUDFA contract, but was funded from a transfer of budget.

There were other things that we would be paying statutory utilities directly on, subject to betterment.

This spreadsheet summarises those items and identifies the things originally under the MUDFA contract in that first section (A). Then there is a group of other things that were always planned to be delivered by BSC. For instance there was the sewer at the South

Gyle access bridge that had to be done in conjunction with that bridge.

Section (C) was utilities delivered by others but managed through TIE's Infraco team so that was for example Farrans doing some of the work out at Lindsay Road and at the Airport.

So on the utilities side, it was not all MUDFA works, but the vast majority was related to the MUDFA. The CoWD is cost of work done, so at the point this was produced that is how much had been recognised as work that had been done and liabilities we had to pay for.

- (2) It would be helpful if you could give an indication, even in very general terms, of the extent to which the increased cost of the utilities work was due to (i) diverting additional and unexpected utilities and (ii) other factors including eg the delay in Parliamentary approval, problems with IFC designs (ie delay and quality), stakeholder requirements and traffic management issues. Is that all on this?

To get an accurate assessment on this you would need to go through all the change control papers that are in the MUDFA contract. A useful reference would be the TPB Report of April 2010 (CEC00245907) where there were 170% of the original volumes actually undertaken compared to the original estimate. What that does not give insight into are, for example, where there has been delay or re-work because the design was not complete.

There are also examples, as we have talked about, of these additional requirements on things like traffic management and stakeholder issues.

I can talk about it qualitatively but it is hard to quantify it specifically without doing the detailed analysis.

There was a delay at the very start of the MUDFA works back in late 2006/early 2007 and I think it was not until something like May 2007 when we finally got both the final Parliamentary approval through the Tram Acts so we had permission to commence.

118. By email dated 4 May 2010 (CEC00348327) you attached a table (TIE00682918) setting out the betterment sums forecast (£9,683,300) and the amounts agreed but not yet received (£2,333,500).

- (1) How (including by whom and when) had the forecast betterment sums been arrived at?

BT, Telewest, Cable & Wireless, Verizon are all telecoms providers and we have power providers in Scottish Power, gas in SGN and a water provider in Scottish Water. Each of those bodies have got their own regulatory regime created with the privatisation of utilities in the 1980s and early 1990s.

4 May 2010
should be
2 May 2010 from
Stewart McGarrity
to Steven Bell

As a general principle, they have what is called a regulated asset base and it has a profile of age and functionality and they are allowed to charge their customers to recover for renewals in the life expectancy of that asset base. Normally if there was no "betterment" and we were coming along to do something and it required their input, they would give us an estimate and we would agree to pay that estimate. They would do it for us and we paid.

In this case, we are doing a multi-utilities diversion contract because it is better value for money. We might be putting multiple utilities into the one set of trenches or when we are disrupting the same particular area, therefore, we want to agree with them that our contractor will show you the costs that we have done and we might ask them to do certain bits which we would pay them for. If however, when we have finished, the SUC has a better or more up to date asset, which they would have in many circumstances, we then got credit for the betterment.

The MUDFA contractors were also people that worked on utilities before. There was a set of guidelines that we worked through and included in what was called the C4 estimates.

So this table tries to set out the things that the SUCs agreed in principle were going to be regarded as betterment.

I am assuming this table was produced in May 2010. We had received only £3,300 from BT, that was probably just one of the early sections because we agreed it by section not in its entirety. There was a decent chunk of SGN money paid.

We had received £3.3m in total from the SUCs. We had an agreement in principle for a further £2.3m, mainly between BT, SGN and Scottish Water that we would expect to get when those sections were signed off and completed. There was also an area that we thought we were due but we had not agreed yet with the utility of £4m which was mostly the BT part because there was a massive amount of work that we were doing for them but they were proving quite problematic to reach agreement with. There was also a potential opportunity, depending on the way in which the betterment rules were finally applied and/or whether or not we want to ask the relevant regulator to intervene on our behalf. That would be if we thought the individual company was being unfair.

To give any detailed answer I would need to see the numbers and papers at that time. It would probably be an area where the rules of the game are quite helpful for the SUCs and not particularly helpful for any project promoter. It does not matter if it is the tram project or anything else, it is hard work to get some of this resolved. Scottish Water were pretty fair in their approach, but BT were hard work.

Being paid £3k out of a potential £4m or even a potential £6m, is not satisfactory.

- (2) In general, were the forecast betterment sums received (and, if not, why not)?

In terms of what was forecast or potential opportunity, I cannot recall whether we had received significant elements of the betterment sums in by the time I left the project. It should be a matter of record.

119. A letter dated 21 May 2010 by Martin Foerder (**CEC00328161**) noted (at numbered paragraphs 2 and 3) 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*”.

- (1) What proposals or offers were made by TIE in that regard? What was BSC’s response?

The specific offers are detailed within the TIE letter of 1 April 2010 [**CEC00328162**] which addresses in some detail a number of topics including the proposals to reimburse reasonable costs whilst compensation events and/or TIE changes were being evaluated and/or agreed. BSC’s response was clearly set out in their letter of 21 May albeit both pieces of correspondence also covered other issues.

120. Further adjudication decisions were issued (1) on 18 May 2010 (by Mr Hunter, re Tower Bridge) (**CEC00373726**) and (**CEC00325885**), (2) on 24 May 2010 (by TG Coutts QC, re Section 7A-Track Drainage) (**TIE00231893**) and (3) on 4 June and 16 July 2010 (by R Howie QC, re Delays Resulting from Incomplete MUDFA Works) (**CEC00375600**) and (**CEC00310163**).

- (1) What were your views at the time on the outcome of these adjudications (both in respect of whether a change had occurred and in respect of the value of any such change)?

The first one was in relation to Tower Bridge and I think that was a valuation argument. Less work was required than in the original proposal and the original BDDI and Infraco accepted a reduction in the contract price was appropriate. So we should have been getting money back. However, their offer was minimal. Their original submission was for payment of around £400k and when we looked at it in more detail we sought a credit of nearly £400k back. We could not agree between us therefore we took it to adjudication for valuation and the final decision was within £100k or so of our assessment and about £700k away from Infraco’s assessment. They were trying to take money from the public purse and it was just not valid.

The second one was track drainage, our view was there was sufficient detail on the drawings to mean that an experienced contractor would have sensibly developed that drainage and it was not a change. Infraco said it was too underdeveloped and they had to do quite a lot more. They wanted money as part of the change. In that one the adjudicator was nearer Infraco's position.

On the MUDFA one, again, that was probably one that I think was much closer to our interpretation. We had a view as to who should have progressed those elements of works and what entitlement the Infraco should have had to relief. I think Robert Howie's conclusion was satisfactory to us.

The final one, I think, from Robert Howie, related to the operation of Clause 80.13 or 80.15 and whether Infraco were obliged to progress the works. Howie found in favour of the Infraco.

121. By letter dated 4 June 2010 (**CEC00298078**) Anthony Rush, TIE, wrote to Nick Flew, Managing Director, PB (Europe), advising that the design was still incomplete, including the on-street track.
By letter 5 August 2010 (**CEC00337893**) DLA 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"*.
- (1) What was your understanding of, and views on, the matters in these letters?

Tony is flagging that PB had not finished their obligation under the Infraco contract and he alludes to the side agreement. As we understood it, that side agreement protected both PB and Infraco to the disadvantage of TIE, CEC and hence the public purse. Andrew Fitchie's letter for DLA (**CEC00337893**) is reiterating this theme that there seemed to be a remarkably high volume of design changes which were causing claims under this design development dispute. It appeared to TIE that under this side agreement it was in both PB and BSC's interests to have lots of these design changes. Andrew then asks for evidence of such an agreement and reminds them of their obligations as part of the Infraco contract to disclose any such agreement. I am not aware that there was any response to that letter. Such an agreement would be highly detrimental to the fair value obligation under the contract.

122. On 8 June 2010 TEL formally notified CEC that the funding envelope of £545m was likely to be exceeded in order to deliver phase 1a (**TIE00084642**).
- (1) Why was formal notice given at this time (but not earlier)? Ought formal notice to have been given earlier?

There was a formal Operating Agreement between TEL and CEC, just as there was a formal Operating Agreement between TIE and CEC, because they are both companies controlled by CEC. That set out the rules of obligations in governance terms for the

Directors of those organisations. One of those things was to provide a formal report each year against certain criteria.

You would need to ask David Mackay or the Executive team of TEL, from that time, as to why that was written.

However, I think the reason that funding point is made at that time is because it is the milestone at which there requires to be a formal report to CEC under the Operating Agreement.

123. The Tram Project Board met on 30 June 2010. The minutes (CEC00244400) noted (page 7, para 2.1), under Workstream A (Termination of the contract), that the Board authorised the issue of a Remedial Termination Notice to BSC. It was noted, under Workstream B (whereby BSC completed part of the project and TIE re-procure the remainder on an incremental basis), that intensive negotiations were ongoing with BSC, including in relation to obtaining a Guaranteed Maximum Price (GMP) and programme. In relation to the works in Section 1A, it was noted (page 11, para 3.4) that you recommended that BSC complete the civils related works in Section 1A that were in progress at present (Tower Place Bridge and Lindsay Road Retaining Wall) and that no new sections of works be commenced at this time. The Board ratified the decision that the current ongoing civils works be completed.

- (1) Do you have any comments on these matters?

This is around taking forward the agreed commercial strategy and using all the levers on the Infraco contract.

Two of those levers are Remedial Termination Notices (RTN) and Under-Performance Warning Notices (UWN). They are tools for the client to say to the contractor that they think they are not performing as they are obliged to under the contract.

It is what you might describe as a nuclear option in that the client is saying they are going to go and find somebody else to finish the job. There could be a massive claim against the contractor later on however there is likely to be a lengthy legal argument in court.

One thing that was probable was that not much work would be getting done on the tram system while that debate was taking place. Before taking that forward TIE would want approval from the TPB. TIE also consulted the Dean of the Faculty of Advocates at that time, which was Richard Keen, QC. We did that in conjunction with DLA and Andrew Fitchie.

It was also noted that, in parallel with the RTNs and UWNs, we were seeking a guaranteed maximum price to complete a portion of works to close down our risk as a client. This was irrespective of which line options were progressed. There were works that BSC

were undertaking via their sub-contractor at the bottom of Constitution Street to Newhaven, on Tower Place Bridge and at the Lindsay Road Retaining Wall. Therefore, for the purposes of what you might call future-proofing, TIE wanted to ensure those pieces of work were completed. It would mean if the line was ever extended down to Newhaven in the future that civil engineering work was done and would allow track to be laid.

124. The Tram Project Board met on 28 July 2010.

The minutes (**CEC00013703**) noted (page 7, para 2.2) that, in relation to Workstream A (Termination) a consultation had taken place with Senior Counsel on 8 July and TIE was in a position to progress to issue of a Remedial Termination Notice. Work was underway to prepare estimates for the costs associated with termination.

In relation to Workstream B it was noted (para 2.3) that BSC would submit a Guaranteed Maximum price by the end of July and that BSC had confirmed that the design was sufficiently progressed to allow a fixed price to be established.

Dave Anderson, Director of City Development, CEC, confirmed that sufficient CEC resource would be applied to outstanding technical and planning approval processes to conclude these matters and remove potential blockers.

(1) Do you have any comments on these matters?

On Workstream A, the termination item, I think it is covered in the answer above. Following on from the initial consultation Richard Keen reviewed the appropriate evidence and it was considered as being appropriate to do that if we so chose.

Workstream B, the guaranteed maximum price, went under the title of 'Project Carlisle' and that was a strand that had been developed with Tony Rush and BSC. They made the point that there was not going to be an argument about insufficient design and the need for a design development clause or caveat. It should be a guaranteed maximum price whether design is complete or sufficiently complete, and that BSC will deal with any risk around design completion within the price they submit. That was not the case when the original Infraco contract was executed.

The third part in relation to outstanding technical and planning approval processes and to remove potential blockers, I suspect that there would have been a status report from SDS at that time dealing with what still required technical or prior approval.

I think the only residual area might be around Infraco finalising their on-street detail works, given the fact that they had a significant failure in their design solution in Princes Street; little bits of on-street work at Haymarket and little bits going through the Gyle. I suspect, that might have been a technical approval they were waiting to get signed off.

- (2) What technical and planning approvals were outstanding and why?

That would be in V40 or whatever version it was by then of the SDS report that would be incorporated in the BSC formal progress report. They were submitted every four weeks and would contain the precise answer. I cannot recall any particular big issues with that and I think Dave Anderson is saying that with the correct resources there would not be a problem from a CEC point of view.

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

Under the proposal BSC offered to complete the line from the Airport to the east end of Princes Street for a Guaranteed Maximum Price of £433,290,156 and 5,829,805 euros (less the amounts previously paid), subject to a shortened list of Pricing Assumptions.

BSC's proposal was rejected by TIE by letter dated 24 August 2010 (CEC00221164), in which TIE responded with a counter-proposal of a construction works price (to BSC) for a line from the Airport to Waverley Bridge of £216,492,216, £45,893,997 to CAF, the amount to SDS to be determined and a sum of just under £4,922,418 in respect of Infracore maintenance mobilisation, Tram maintenance mobilisation and Infracore spare parts.

- (1) Which party instigated the Project Carlisle proposal and why?

It was instigated by TIE in conversation with BSC to try and see if we could progress a solution that allowed us to put a guaranteed maximum price around getting a tram system up and running in Edinburgh, albeit, it would be curtailed from its original length and scope and be delivered over a different timeframe. This ran in parallel with the RTN strand of work. There was also a third option to continue to have the argument and try and encourage BSC to operate under the existing contract. Effectively that was a default option, should we not accept whatever their guaranteed maximum price proposal for Project Carlisle was or we did not follow the RTN route to a conclusion.

- (2) To what extent were you involved in the Project Carlisle proposals and discussions?

Myself, Dennis Murray and others contributed to that and obviously shared the areas of perceived risk in the pricing assumptions issues and items that we had before. We also had some conversations around the integration of Siemens systems, should an option be to stop work and start up again in the future with another contractor.

Obviously, in that circumstance, because those are proprietorial Siemens systems that were being used, you are stuck with either going back to Siemens at whatever price they want to provide them for or provide a licence to use them if that was the scenario.

- (3) What were your views, in general, on the Project Carlisle 1 proposal and why it did not resolve the dispute?

It was a legitimate proposal to explore if we could come to a satisfactory conclusion, however it greatly increased the risk profile, at a high price to the city. It did not resolve the dispute because the price that was submitted felt extraordinarily high at that time, essentially £100m more for less of the route, which was pretty poor and not good value for money.

126. On 7 August 2010 Lord Dervaird issued his adjudication decision in relation to the Murrayfield Underpass Structure including, in particular, whether, under clause 80.13 of the Infraco contract, TIE were entitled to instruct BSC to carry out Notified Departures without a price having been agreed in advance (**BFB00053462**).

- (1) What were your views on the outcome of that adjudication decision (including the extent to which the decision favoured TIE or BSC)?

The decision that Lord Dervaird came to was firmly supporting the Infraco's interpretation. It was a clear disappointment.

127. On 20 August 2010 CEC officials were given a high level summary of TIE's Project Carlisle Counter Offer (**CEC00079797**).

The cost of a proposed phase 1 (Airport to St Andrew Square) was estimated at between £539m and £588m, the cost of a proposed phase 2 (St Andrew Square to Foot of the Walk) was estimated at between £75m and £105m and a combination of these phases was estimated at between £614m to £693m.

- (1) How and by whom were these estimates arrived at? What part, if any, did you play?

My recollection is that it would have been baseline work undertaken with our commercial team, Dennis Murray and his colleagues, together with our FD Stewart McGarrity and Stewart's Deputy, Gregor Roberts. I am sure there would have been some overview and input from Torquil Murray or some other QS input that looked at the estimating and ranging.

Certainly I would have discussed and reviewed the outputs of that, as would Stewart and the rest of the Executive team.

I would have challenged the rationale about how we got to those numbers and the underlying assumptions. If that is what was played back to CEC, it would have been something I understood and supported. I do not recall the session on 20 August.

128. The Tram Project board met on 25 August 2010. The minutes (**CEC00013818**) noted, in respect of Change Requests and Risk Drawdown (page 9, para 3.2) that drawdowns and future commitments to planned payments to the end of Period 5 2010/11 now totalled £47,519,184

and that the remaining risk balance based on the approved QRA plus the additional funding was £800,000.

The Board were asked to, and did, approve a recommendation in the Period 5 Change Paper to increase the Project Control Budget by a further £5m to October 2010.

- (1) It would be helpful if you could explain that entry, including, the Project Control Budget (ie how much was it, when and why was it fixed), the process by which drawdowns were made on the risk balance, the effect of that on the Project Control Budget and why approval was sought from the Board at that stage to increase the Project Control Budget by a further £5m?

This is back to the issue of appropriate internal governance and financial control. This is TIE going through the practical mechanics of proposing an amendment to deal with items in the short-term, within the existing funding envelope, before we get to any revised funding agreement.

The Project Control Budget is what is formally authorised to the Tram Project Director and the TIE Chief Executive to expend money up to a particular point before we would have to ask the TPB for further authority. I think we moved the Project Control Budget to £530m around April 2010, therefore still within the funding envelope. Then, in period 5, which is what this question is around, the August, the application was to increase it by a further £5m so it went to £535m.

It effectively meant that I had virtually no headroom around what was either committed to or otherwise at the end of August 2010 and this forecast forward gave me elbow room to deal with matters to October 2010. Then there had to be a further review and I think we requested an increase to £540m. I think, we made a final request to £545m before we got into the mediation at Mar Hall in March 2011.

129. By letter dated 11 September 2010 (**TIE00667410**), BSC submitted its "Project Carlisle 2" proposal to TIE, in which BSC offered to complete the line from the Airport to Haymarket for a Guaranteed Maximum Price of £405,531,217 plus 5,829,805 euros, subject to the previously suggested shortened list of Pricing Assumptions.

By letter dated 24 September 2010 (**CEC00129943**), TIE rejected BSC's proposal.

Mr Foerder responded by letter dated 1 October 2010 (**CEC00086171**).

- (1) What were your views in general on the Project Carlisle 2 proposal and why it did not resolve the dispute?

I think by this time there was probably a fairly crisp and short exchange. There were a lot of parallel conversations with Mr Kitzman who was a Bilfinger Berger Executive. He was having developing discussions with Tony Rush to try and come to a conclusion.

In essence, Richard Jeffrey's letter rejects a letter received from Martin Foerder which stated Project Carlisle 2 was Infraco's full and final proposal. It makes a number of critiques and criticisms with some of the elements that TIE put forward previously. Richard Jeffrey's view was that we had been working with Mr Kitzman and were likely to reach a position where we could at least have a proposal that could be discussed.

We rejected the letter because there were still too many proposed changes from some of the core important elements of the Infraco contracts. From Infraco's point of view they still wished to include too many pricing assumptions and elements that would have allowed them opportunities to submit a request for change.

The other important point is the reinforcement of the requirement for best value and adherence to the public procurement rules and making sure we got a fair value guaranteed maximum price, with appropriate payment milestones. The final offer Infraco made was too expensive and not fair value.

In Martin's original letter of 11 September, he stated a number of promises and commitments made by key representatives to resolve a number of outstanding issues, for example third party approvals, to allow them to reduce their exclusions or caveats but, unfortunately, not one of those commitments had been met.

I think in its most simplistic terms, the parties were still quite far apart at this point despite a number of channels of communication to try and see if an acceptable price and programme approach, with associated terms and conditions, could be agreed.

Martin Foerder's reply on 1 October 2010 (CEC0086171) summarises their view that there are irreconcilable differences between the stated positions and, until such time as TIE increased the amount it was proposing, Carlisle was likely to fail. I think that was around the time they demobilised so there was very little work being done and we saw that as a parallel escalation of their position at that time to try and put additional pressure on TIE and CEC to come to a conclusion.

The 5,829,805 in euros was on the tram contract, the tram vehicles themselves, I think there was an issue associated with a price change but I would need to double check. That was not a disputed difference between us, it was agreed, from memory.

130. Between 9 August and 12 October 2010 TIE served ten Remedial Termination Notices (RTNs) and three Underperformance Warning Notices (UWNs) on BSC.

The RTNs and BSC's responses are found at (CEC02084518 to CEC02084529). The UWNs are (CEC00378695), (CEC00167342) and (CEC00164758).

In response, BSC both denied that the RTNs constituted valid notices and, in some cases, also produced Rectification Plans.

- (1) In general, what were your views on TIE's RTNs and UWNs?

We have touched on this already but generally speaking the use of RTNs and UWNs was in line with TIE's strategic intent of using all the contractual mechanisms to require Infraco to perform the works.

It was in line with what we had tested with the Boards and we had their confirmation that they were content to proceed and we had specific advice from senior counsel around the competence of the notices. I think in addition to that Alastair Maclean who was the Head of Legal for CEC had also seen the advice from DLA and Richard Keen, QC and had been well briefed. Alastair was advising Tom Aitchison, the Chief Executive of CEC at the time, around potential options and consequences.

The point about RTNs was not to automatically get to a termination, it was to try and get a plan by which we resolved serious issues. I would reiterate that what we wanted here was for Infraco to perform the Works, we were not trying to find a route to terminate the contract because we knew that was going to be a highly intensive process and that it had potential risks.

The UWNs were for significant breaches of contract, performance below the standard that a competent contractor would deliver. They do not have the automatic follow-on of an RTN. They are very strong statements of unsatisfactory work.

- (2) In general, what was BSC's response?

The Rectification Plans provide timelines which show the sort of things that needed to be done in order to address X, Y or Z. The general strategy of Infraco's response was a twin-track response which was to claim they were not competent notices but, just in case they were wrong about that, there was also a Rectification Plan.

- (3) Were any of these RTNs and UWNs taken further by TIE, and if not, why not?

There was a fair amount of debate during the first quarter of 2011 as to whether we should progress on the agreed Board strategy of using all the levers of the contract to get Infraco to either perform its obligations or move to a conclusion to that contract. The next obvious step for us would be to give Notice of Termination of the contract. Ultimately, a decision was made that a final mediation proposal, which was to be held at Mar Hall, was put forward as a

way to try and resolve the dispute. There was a robust debate about the pros and cons of mediation versus termination.

131. The Tram Project Board met on 22 September 2010. The minutes (**CEC00014055**) noted (page 9, para 5.1) under Utilities, that all remaining on-street utility, remedial and snagging works had been on hold until after the summer embargo and the recent Papal visit. BT continued to progress their telecom re-cabling activities on-street, with cabling works in St Andrew Square, and Torphichen Street ongoing. Cabling work at York Place would commence in Period 7.
- In relation to progress overall it was noted (pp9-10) that 48,300 metres of 50,000 utilities diversions (ie 97%) were complete.
- In relation to off-street construction 35% of works were complete. In particular:
- The Gogar depot was 60% complete.
 - 8 out of 16 bridges were under construction (and were about 44% complete).
 - All 3 culverts were 100% complete.
 - 6 out of 17 retaining walls were under construction (and were about 19% complete).
 - Systems: 1400 metres of track was installed (12% complete); 2 substations were under construction (12% complete); and work in relation to overhead lines would commence in autumn 2010.
- In relation to Project Expenditure, 70% of the authorised funding of £545m had been spent.

- (1) Do you have any comments on these matters?

It is a factual statement of progress at that time. It is aggregating together a number of key chunks and drawing out very clearly at this instant in time that 70% of authorised funding had been committed and expended.

It is distilling the likelihood that we are going to need more funding if we are going to complete that original scope as intended. It was bringing to life some of that and trying to suggest that half of the bridges have been started, some of them were subject to dispute still with Infracore and of the ones that had been commenced, they were just under half complete. Therefore, slower than everybody would have expected at this point in time.

132. On 22 September 2010 Mr Porter issued his adjudication decision in relation to the Depot Access Bridge S32 (**BFB00053391**).
- (1) What were your views on that adjudication decision (both in relation to whether there had been a change and in relation to the value of any such change)?

It is a big decision because there are two parts to it. One was about the core bridge itself and that was a BDDI to IFC argument and the second part was about the way in which it had to be built because of some of these differences. It required an additional cost of what was described as 'temporary works' that we would allow the contractor to build. Mr Porter decided it was definitely a Notified

Departure. For the first part he valued it at circa 60% of the submission, so it was £797k as opposed to £1.3m and in temporary works it was just over £400k as opposed to about £600k. Therefore, we would say that, disappointingly, he has decided it is a Notified Departure. I think we had the view that there were certainly some elements of change but nothing like the extent that Infraco had proposed. It probably cost us about £1.2m at the end of this particular decision as opposed to nearly £2m from the Infraco's submission.

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

(1) What works had been carried out by BSC after Infraco Contract Close on a "goodwill" basis?

Firstly, TIE did not accept this language that Martin Foerder uses on 'goodwill'. BSC's argument was that all works that had been triggered under an INTC, in their view, were 'goodwill works'. Their view was they were not obliged to do anything until a TIE Change Order had been issued to an agreed value or, at the very least, an estimate had been accepted and a number agreed. We did not accept that position because to do that that means they do not do anything until you have gone through the whole cycle which could take up to 28 days, or longer.

There were a number of items we had not received estimates for, we had only received about 40%, so we did not accept the terminology that anything they did after that point would be "goodwill".

(2) Why did you understand BSC to have decided to stop carrying out "goodwill" works?

Around August/September 2010, that was when TIE moved forward using all their contract levers including RTNs and UWNs. My view is that BSC considered those as an escalation and responded by saying their interpretation under this contract was that they were not obliged to do any of this work, if they do not have an agreed Change Order.

(3) What was the effect of that decision on the tram project?

Contractors stopped work with the exception of Barr Construction who was finishing off works at the depot. Little moved forward materially over and above that.

134. The Tram Project Board met on 21 October 2010. The minutes (**CEC00014175**) noted (page 11, para 4.2) under Change Requests and Risk Drawdown, the changes and risk allowance status at Period 7.

It was noted that "Following the delegated authority from TEL to the TPB authorising the use of the £545m funding envelope and the subsequent approval to increase the budget to £535m in Period 5 2009/10, tie is now seeking formal approval to increase the budget to £540m. This additional funding of £5m would be added to the Project Risk Allowance. This was approved by the Board".

(1) It would be helpful if you could explain that entry?

I think it is quite clear when read in conjunction with question 128. At this point in time this had two formal adjustments. Adjustment one was in period 1, 10/11 from £512m to £530m and adjustment 2 was in August from £530m to £535m. This is proposed to be adjustment 3; £535m to £540m.

135. By email dated 12 November 2010 (**CEC00113758**) Gregor Roberts circulated a note (**CEC00113762**) and spread sheet (**CEC00113763**) setting out the estimated costs for the different options.

(1) How and by whom were these estimates arrived at? What part, if any, did you play?

This overlaps with some of the previous questions but draws together some of the strands on questions 125 and 129 relating to Project Carlisle. I think by that time Stewart McGarrity had left as Finance Director and Gregor Roberts was the acting Finance Director. Gregor would have worked that up with Dennis Murray in the commercial team. It would also have gone through Susan Clark from a programme perspective and I reviewed the consolidated version.

(2) What were your views on these estimates and the different options?

I thought the estimates were a fair summary of where we were, given the information we had and the constraints or assumptions that were included. It is also fair to say they were universally suboptimal, ie we were not getting the project that we all aspired to get but they were the practical ones available to us at that time given the direction and options we were asked to test and explore, with the Board, over the previous 12 months. They had varying degrees of risk associated with them.

136. The Tram Project Board met on 17 November 2010. The minutes (**TIE00896978**) noted (page 7, para 2.1) that TIE continued to administer the Infraco contract assertively and that several sessions with Senior Counsel had been undertaken and were scheduled. CEC were also taking legal advice on these matters.

It was noted that the Board authorised Richard Jeffrey to approach BSC with an offer to enter into a process to seek a mediated settlement.

In relation to Progress Overall, Design was noted to be 80% complete (and Construction Off-Street was 38% complete).

It was noted (page 11, para 3.3) that a mediated settlement had been reached with Carillion under the MUDFA contract (see TIE00094413).

- (1) Do you have any comments on these matters?

I would agree that we were continuing to administer the Infraco contract assertively. As has been previously mentioned we had met with Richard Keen on the RTNs and UWNs and CEC were also taking legal advice on these matters. I cannot remember who the CEC legal advisors were, it was not DLA or McGrigors. I suspect it might have been Brodies but I cannot recall. CEC were certainly testing matters with an external legal firm. Again, we were continuing to follow the levers in the contract to see if we could unblock issues of difference to try and make progress.

It notes progress on off-street had moved from 35% to 38% which is not startling progress but I would have expected that to slow down given the fact that everything except the depot was pretty much shut down. It says the Board authorised Richard Jeffrey to approach BSC with an offer to seek a mediated settlement.

- (2) Why was design only 80% complete? What were the problem areas (and why)?

Again, I would need to read the relevant Infraco and SDS progress report to confirm. I suspect most of the remainder was finalising the integration of the Infraco proposals into the final design. There might have been some of the later structures that were getting finalised or getting a final sign off from CEC but most of these would have related to final outcomes and planning proposals with the Siemens style systems drawings. There may still have been the odd third party item, like Forth Ports final obligations.

- (3) What was the basis of Carillion's claim? Why was a mediated settlement reached?

I think I have been through most of those matters.

However, in simple terms, we had not been able to achieve agreement on the account through the normal commercial manager progress. Carillion submitted an application for payment that we did not agree with and then they could not accept our final valuation of it.

We then had three choices. We could go to mediation to see if we could come to an agreement, we could formally take it to Dispute Resolution and adjudication or we could go to court. The difference

was too far apart to solve at project level but we felt it was possible that a mediated session might allow Carillion to better understand our perspective and they could explain their rationale and entitlement. The senior representative for Carillion was Steve Kennedy. He led from Carillion's perspective and I led it from TIE's perspective.

137. On or about 26 November 2010 Lord Dervaird issued his adjudication decision in relation to Landfill Tax (**BFB00053475**).

(1) What were your views on the outcome of that adjudication (including whether it favoured TIE or BSC)?

This was partly a debate around BSC undertaking their obligations with a view to mitigating costs under the contract and pursuing fair value. There was a time window on this contract, legislation changed and if at the start of the job Infraco had applied for this exemption, TIE's view was that it could have been granted and there would have been less Landfill Tax to pay in total.

Consequently the price changed, with a TIE obligation to pay. There is no disputing the value of it; it is a set charge per cubic metre of material that goes to landfill.

Lord Dervaird decided that there was not an obligation on Infraco to apply for that in that time window and, also, that you could not have guaranteed they would have been granted the exemption. The decision therefore supported Infraco's position.

138. The Tram Project Board met on 15 December 2010.

The minutes (**TIE00897052**) noted (page 7) that the Board agreed that any further discussions around an agreed exit with BSC should consider the route between St Andrew Square and the Airport as a minimum deliverable.

In relation to Change Requests and Risk Drawdown (page 11, para 3.2) it was noted that "*following the delegated authority from TEL to the TPB authorising the use of the £545m funding envelope and the subsequent approval to increase the budget to £540m in Period 7 2009/10, tie is now seeking formal approval to increase the budget to £545m*". The Board agreed that request and further agreed that the TPB would request that the TEL Board formally write to inform CEC that the funding envelope of £545m had been reached and required to be extended.

(1) Do you have any comments on these entries?

I think they are clear factual statements from a funding mechanics and delegated authorities point of view. We are moving on two months from the last submission. The issues around an agreed exit with BSC and St Andrew Square to the Airport as a minimum deliverable, were the Project Carlisle proposals.

EVENTS IN 2011 (including Mar Hall and the Settlement Agreement)

139. The Tram Project Board met on 9 February 2011.

The minutes (TIE00897064) noted (page, para 2.1) in relation to the forthcoming mediation, that Vic Emery (the new Chairman of TIE, TEL and the TPB) considered that the option of continuing on under the existing contractual terms which may lead to either party adopting unilateral action leading to termination of the contract, *"is not a realistic option against the background of litigation risks and it was agreed that such an outcome would represent a failure of the mediation process"*.

(1) What were your views on the preferred option at that stage? What were your views on the option of continuing on under the existing contractual terms?

As discussed a couple of months beforehand, Richard Jeffrey had been asked to take forward the option of a mediated resolution. In parallel, at that time, we continued to run with the threat of a potential termination through the use of the RTN process. There is no doubt there was going to be a significant legal and cost risk as well as reputation and impact for all concerned, having committed £500m for potentially not completing the project.

I think Vic Emery was right to highlight the issue as there were some significant litigation risks if we were to follow through matters to a conclusion via a disputed termination.

My view would also be that any termination initiated by TIE would be fought by Bilfinger Berger and Siemens, particularly from a reputational perspective, even if they had a less strong argument. Considering their reputational impact, they could not afford to be seen to be the reason by which this scheme had failed so I think Vic was right for elements of that. He had just taken over as the TEL and TIE Chair because David Mackay had stepped down in December 2010. He had come from a different sector, shipbuilding, and I think there was a genuine hope what with a new Chair at TIE/TEL, a new Chief Executive at CEC and what was hoped to be a constructive engagement with BB and Siemens.

I think there was a view, particularly from Sue Bruce and Vic, that this was worth a robust effort at mediation given the new faces. They appeared willing to listen hard to the issues.

It was certainly CEC's view that mediation was worth trying before committing to what would be a long, expensive and potentially damaging pursuit of litigation. We wanted to make sure we had tested a final high level mediated option which is why we got commitments from the German and Spanish leadership to come over. There was also representation from Transport Scotland on behalf of the Scottish Ministers, that was Ainslie McLaughlin and clearly Sue Bruce was there from a CEC point of view.

140. On 24 February 2011 BSC provided its "Project Phoenix Proposal" 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 (**BFB00053258**).

(1) What were your views on that proposal (see eg your email dated 6 March 2011 in that regard, **CEC02084639**)?

The attachments to my email of 6 March, particularly **TIE00355086**, **TIE00355087**, **TIE00355088** and **TIE00355089** are documents that I prepared in conjunction with members of my team such as Susan Clark and Dennis Murray. As such they fairly reflect my views at the time on BSC's Phoenix proposal. What I was seeking to draw out in these documents was to identify which areas there was agreement upon and which areas where our positions remained apart. This email was sent not only to senior TIE personnel and legal advisers but also to CEC legal and Colin Smith, special adviser to CEC's Chief Executive. This was to allow these parties to have an informed discussion around the relative benefits or changes in responsibility arising from the proposal.

141. Mediation talks took place at Mar Hall between 8 and 12 March 2011. TIE prepared a mediation statement (**BFB00053300**) as did BSC (**CEC01927734**).

Sue Bruce delivered an opening statement on behalf of CEC (**CEC02084575**) and Richard Walker delivered an opening statement on behalf of BSC (**TIE00670846**).

We understand that a statement "ETN Mediation – Without Prejudice – Mar Hall Agreed Key Points of Principle" was signed by the parties on 10 March 2011 (the principles of which were then incorporated into a Heads of Terms document (**CEC02084685**)).

(1) Which organisations were represented at the mediation? Who were the lead individuals for each party? What was your role?

TIE was represented, the Infracore were represented through their constituent organisations of Bilfinger Berger, Siemens and CAF, CEC were represented and Transport Scotland was represented. There were also certain advisors to those organisations or companies, but those were the main participants.

The leads were Sue Bruce for CEC, Vic Emery for TIE, as Chair, and Richard Jeffrey as the Chief Executive, Richard Walker for Bilfinger Berger, as senior UK representative and Dr Keysberg for the parent company in Germany, Michael Flynn for Siemens UK, Dr Scheppendahl for Siemens in Germany, Antonio Campos for CAF and his boss as the senior Spanish representative, Ainslie McLaughlin for Transport Scotland and then there were various other supporting players.

I was there in support but Richard Jeffrey and Vic Emery were the lead TIE individuals.

(2) What discussion and negotiation took place that week? Was there, for example, a series of offers and counter offers?

There were some opening statements from CEC and Infraco and then the mediation moved into targeting particular topic areas with explanations of those from the Infraco and TIE perspective. There was then an opportunity to test and see if solutions could be found to some of the particular issues.

I explained TIE's position on matters like INTCs, what we were doing about the utilities diversions, debates around how they dealt with valuation of Infraco's estimates etc. Similarly, Martin Foerder would do that on behalf of the Infraco and both of us would be supported by key members of our team.

There was a mixture of relevant experts in the various organisations and what tended to happen was the principals from each of the organisations, Sue Bruce, Dr Keysberg, Dr Schnependahl, would listen to the submissions, arguments, debates etc and then there would be discussion over whether or not there could be some progress made. The parties were thinking through or developing some options, then debating them from their perspective. The mediator might then bring some key players together to talk things through. When we were discussing from a client side of TIE/CEC/Transport Scotland that would involve me, Richard, Vic and I think Colin Smith who was Sue Bruce's special advisor. There was also Alistair Richards from a Tramco perspective within TIE. Ainslie McLaughlin from Transport Scotland would have been in listening mode but he would be giving consideration and perhaps taking some discussion back to Transport Scotland to keep them and, potentially, the Scottish Ministers up to date.

Formally, TIE and CEC are client side and spoke as one voice with the Infraco another voice because they were the parties through the mediation. However, you would also get a decent debate on the Infraco side as well. What suits Bilfinger Berger might not be acceptable to Siemens. Likewise from a TIE point of view, CEC may say "*Actually if you took it like this that would be more workable for us*" therefore it is not as strict as TIE and CEC have exactly the same view and position and Siemens and CAF and Bilfinger having a unitary view.

One thing that was decided was CAF did not want to stay in the midst of the Infraco set-up, they wanted to novate those arrangements back out to TIE/CEC so there could be a simple straightforward transaction of tram supply (which was the original procurement contest).

- (3) To what extent, if at all, did TIE/CEC and BSC's positions change over the course of the mediation?

If you compare BSC's Project Phoenix offer of 24 February, to what was finally agreed, then that demonstrates the change.

The TIE and CEC position was that they wanted to, at least, get to St Andrew Square as part of any exit price. We wanted that to be part of the price that we agreed with the Infraco and the Infraco said they will agree the price on the off-street work but we are not prepared to take the risk for the on-street work. They were happy to agree to a target but that might change up or down depending on any unknowns that might apply. So they came up with a proposal with a price of £39m which could be adjusted as part of a target cost mechanism. If things cropped up that BSC claimed were not their fault there could be additional charges.

At that stage we did not agree to a price, but we said we would consider their proposed price and the principle that we might have to adjust it using a target cost mechanism. Firstly we needed to satisfy ourselves that £39m was about right and then agree there would be a target cost mechanism as opposed to a fixed price lump sum.

- (4) What was the outcome of the mediation ie what were the main matters agreed? Were the Heads of Terms noted above agreed at the mediation or in the following weeks or months?

I think the documents provide the appropriate understanding. A piece of paper signed at the mediation was converted into a non-binding indicative Heads of Terms that was tidied up legally the following day. Then there is a time period that was targeted, I think originally, about four weeks, to turn that into a formal Minute of Variation to the Infraco contract defining what the next steps were going to be.

- (5) What were your views on the outcome of the mediation (see eg your email dated 12 April 2011, TIE00686636)?

There were certain obligations and rights as part of this. BSC wanted to self-assure and self-certify to say they had done the work properly. From a TIE point of view that is a risk because they did not so it well for example on Princes Street. So, there were no rights for us. There was just an obligation that if it was not done properly Infraco were liable to fix it.

What I was trying to balance out in my email was that, fundamentally, I did not have a problem with the Infraco if that is what they want to do and they do it properly. TIE had a residual obligation under the ROGS (Railway and Other Guided Systems Regulations) whereby we needed to prove that we had assessed

the risks and properly assured that matters have been constructed properly and in line with design, properly signed off, insured etc. Whilst Infraco needed to provide a lot of that information to TIE, it was TIE who were the entity that were required to complete everything in respect of that, on behalf of CEC. We then get the Office for Rail Regulation (ORR) to sign off to say we are allowing you to run tram services over this system because you have shown it is built properly with due consideration to X, Y and Z. The difficulty I saw in here was if Infraco were opaque or obstructive about their self-assurance process and their behaviours then I would not, necessarily, have access to the information I needed to be able to discharge that duty. I needed the confidence that I would get that information.

Therefore, there was a debate around how that played to a conclusion. I think there are other emails on this which will help provide the full picture.

In relation to this email (TIE00686636) Richard Jeffrey asked me to take a balanced objective review of what was being proposed and give comments on behalf of TIE. That is what I did and this summary was one I agreed with Vic Emery. It gives an informed view, knowing what I know about Infraco's historical behaviours and I am acknowledging the fact that some of this could be considered as backward looking but I am not trying to go over old ground, I am trying to say "*This did not work before so if you are going to accept it now, you need to accept there is history that says it did not work before*". It does not mean it will not work in the future but there is a risk associated with it. I then, systematically, went through a number of summary points.

Some of those were comments made by my team but I supported all of them and they were points everyone needed to be aware of if we were going to make the agreement. I was not saying we should not have made the agreement, I just wanted everyone to be fully informed to assist in the decision making. I believe that some issues we could live with but others we were less comfortable with, although it was a CEC choice ultimately.

- (6) What did parties envisage would happen after the mediation to give effect to what had been agreed, and within what timescale?

There was a three or four stage process. Stage one was could the parties come to an agreement they were prepared to sign.

That then needed to be converted into formal paperwork, which it was, and that turned into a non-binding Heads of Terms.

There was then a Minute of Variation to the Infraco contract which would have made it an obligation on TIE/CEC and on Infraco to take forward these matters in line with the particular principles.

Parts of the early elements were to gain confidence from the parties to prove that behaviours on both sides had improved to each other's satisfaction. The agreement identifies specific early activities to be undertaken accordingly and it would then go forward into a position later in the year whereby the CEC Chief Executive would go back to the Council to confirm better behaviour had been seen all round and we now need to agree to a revised funding mechanism for overall costs.

142. An email in the evening of 8 March 2011 by Kevin Russell (TIE00686014) attached information that had been requested from BSC, including a table, "Indirect Cost Summary" (TIE00686019).
- (1) It would be helpful if you could explain what that table showed?

I think some of this was about supporting information that tagged on to Project Phoenix. This table then breaks suggested figures down by section.

The bottom line shows difference in Indirect Cost, that is the supporting management and overhead costs, including accommodation. It moved from £46m to £51m. Some things did not change, in fact the biggest change was in staff costs, it went up from £22.8m to £25.6m.

143. The Tram Project Board met on 11 May 2011 (the minutes are TIE00896987). Slides for a meeting of the TPB on 11 May 2011 (TIE00086026) included a slide (page 11) on Change Register Update.
- (1) It would be helpful if you could explain your understanding of what that slide showed?

What it said was that we had a total of 868 notices from BSC of alleged TIE changes. Some turned out to be erroneous, or double counting or were withdrawn by BSC and we therefore get the net number of 696.

It then says that out of that 696 come May 2011 there have been only 465 estimates received from BSC. There were still 233 to go. Out of the 465 received estimates 228 had an agreed TIE Change Order.

We were still waiting on information from the Infraco and that could be the price; it could be the time impact; it could be a further breakdown of information. In the summary at the bottom of the page it confirms that, of the 228 that we have agreed, the agreed value is £24m. That was originally alleged to be £46.5m on the

original estimate which is the 52% valuation I have spoken of before.

144. An email dated 8 July 2011 from Dennis Murray sought to explain why Siemens sought to add £14m to the target On Street price agreed at Mar Hall (TIE00688781).

(1) It would be helpful if you could set out your understanding of why Siemens sought to add that sum?

I think Vic Emery's concern was that Siemens were trying to get around the agreement that we had reached. We had done an original analysis of the on-street works and we had a view that matters needed to be resolved. When Dennis discussed the detail with the Commercial Manager from Siemens, the Siemens perspective was that the actual price was circa £4m for doing the work. Dennis' estimate was £4.5m so we were pretty much in agreement.

The Siemens Phoenix price was £140m and the Mar Hall agreement was for £126m. Siemens just moved the £14m difference into this pot for the On Street target price. This was absolutely not acceptable as far as Dennis and I were concerned and I do not think Vic or the other principals at Mar Hall thought that was the answer they had agreed.

I did not think it was my job to acquiesce to that. At this point the final choices around what should be agreed sat with Colin Smith. Colin and I probably had a different view on a number of these matters. I believe that he wanted to reach an agreement and wanted to move forward even if it appeared "expensive".

(2) How was that resolved?

I cannot remember where Colin got to on that but we made the point with Colin that we could not agree that number the way it was. I think Siemens took a bit off it but I am pretty sure they got more than £4m and we should be able to know that because I am sure it will be in a build-up that Colin must have finalised.

Can we expand at all on on-street and off-street targets and agreed prices? How are they arrived at? Who produces the figure(s)? Is there any breakdown? Who were the main players and decision-makers in the process within TIE and CEC who agreed to the figures?

In simple terms, the mediation sought to agree a fixed off-street price of £362.5m. Strictly speaking this should have included Princes Street because there was an ongoing obligation to fix the mess they made of Princes Street. However, you have then got a

target price for the on-street section. Infraco's proposals for that target cost under the Mar Hall agreement was initially £39m. I cannot remember what was finally agreed but there was a fair amount of movement as part of that with Colin Smith. He asked questions of Dennis Murray and I think we gave our comments and observations but the decision maker in agreeing that number was Colin Smith and Infraco, not TIE.

145. On 2 September 2011 parties entered into a Second Memorandum of Understanding to extend the timescale for entering into a settlement agreement until 14 September 2011 (TIE00899947).

(1) What were your views on that agreement (see eg your email dated 3 September 2011 to Vic Emery referring to a "blank cheque" re extra time and costs, TIE00691592)?

In my email I am making two points. One is I have used that phrase "blank cheque" re extra time and costs and the second is a governance question. For it to be a competent document executed on behalf of TIE, Dave Anderson needs to have the delegated authority to do that. I do not think, at that point in time, he was a Director of TIE therefore he needed to be given the delegated authority to do it on behalf of the company.

On the "blank cheque" point, in Section J of the Second Memorandum of Understanding (TIE00899947) it says "*the parties and CEC now wish to enter into this Second Memorandum of Understanding in order to; record that Infraco has an entitlement to additional costs and time as a result of the Full Council Meeting decision*". So there is commitment to an entitlement. Infraco has entitlement to additional costs and time to complete the works.

My concern was there were no boundaries about what this might be. Is it a week, a month, a year in time terms, is it £1 or £100m in money. It does say, "*acting reasonably*" but my concern around that would be, as evidence suggests, Infraco did not always act reasonably when it came to submitting estimates so that is why I used the "blank cheque" phraseology.

146. A full and final Settlement Agreement was entered into on 15 September 2011 (BFB00005464).

(1) What were your views on the settlement agreement?

For ones that have not moved at all from the Mar Hall Heads of Terms, that is okay but there were other things that did materially move.

My perception is that between the Mar Hall Heads of Terms and what I believed CEC agreed, there was some shift in obligations, usually to Infraco's benefit. I cannot recall an example where there was a shift that was to TIE/CEC's benefit.

The other point I would make is that I was pleased that Infraco and the Council could come to a conclusion so that Edinburgh could have a tram system constructed and knowing the hundreds of millions of pounds that had been spent, could actually have some end product. I think the quality of the tram vehicles themselves and eventually getting the system up and running, is a good thing and I believe a lot of people who worked on the project think that. Whether it was a fair value agreement, I cannot really comment on because I do not know what those final terms looked like. My perception is that it further enhanced benefits to Infraco, but I would need to see the final numbers.

- (2) For completeness, when and why did you leave the tram project?

During the summer in 2011, CEC made a decision that they wanted to transition the management arrangements on the tram project and they brought in a project management private company, Turner and Townsend to take over a number of the contract management responsibilities on behalf of CEC.

In effect, the undertaking that was TIE's was transferred to Turner and Townsend. That meant a number of individuals who were working for TIE had their role transferred to Turner and Townsend through a TUPE (Transfer of Undertakings Protection of Employment) obligation. However, some people chose to leave at that point and I reflected on that in July 2011. I spoke with Vic Emery and Dave Anderson and I looked at what impact or difference I could make in terms of going forward. I did not think it was the right to follow through on the TUPE obligation.

I was content to undertake a very professional handover with both CEC and the Turner and Townsend project leads between July and the end of October 2011 when I finished working with the project.

Project Management, Governance and Contractors

147. In relation to TIE:

- (1) To what extent do you consider that TIE were responsible for managing and co-ordinating the different contracts and works (including, in particular, the design, utilities and Infraco works) and the interfaces between these contracts and works?

TIE was responsible for managing the MUDFA contracts, the associated statutory utility works and the Infraco works. Prior to the execution of the Infraco contract they would also be responsible for managing the design works through SDS. Once the Infraco contract was executed, Infraco were responsible for managing the SDS designer through the novation agreement and also carrying out their own design works.

There was an obligation on TIE for elements of coordination of the works in liaison with CEC, particularly when we were dealing with traffic management-related issues. Therefore, an example would be that we had to make diversions, under an agreement with Scottish Rugby Union, at the training pitches at Murrayfield, so we made separate room to do that, got that done in advance of the Infraco works in the Murrayfield area. Similarly, we had obligations to sort items out with BAA or Network Rail in advance of what needed to be set up for the Infraco contract.

- (2) Which body or organisation do you consider was ultimately responsible for ensuring that the contracts and works were properly managed, including the interface between the different contracts and works?

There was a fairly extensive governance structure. TIE was a subsidiary of TEL which in turn was a subsidiary of CEC so there was a hierarchy of governance and operating agreements set and in place between TIE and CEC and TEL and CEC. There was also a clear structure of how we were going to deal with the supervision and governance of the tram project, which is why the TPB itself was formed in order to allow the key Directors and staff to undertake those duties in a transparent way. That included that there were independent non-Executive Directors on TIE's Board who were industry experts and provided advice. They would also undertake the appropriate fiduciary duties that a Director would have as part of that. The same applied with TEL's Board.

The TPB as well as the Boards of the independent or individual organisations had a number of Directors representing the Council or members on that Board and that included key Councillors with transportation responsibilities and representations of the majority of the political parties. That did not include the SNP as they chose not to be represented.

So in answer to the point, was there one particular body or organisation that had ultimate responsibility?

TIE and its Board had key responsibilities. TIE reported to TEL which had its Board and responsibilities. Both of those Boards agreed that the way in which it was best to deal with the tram project was to have a Tram Project Board with representations from both the TIE and TEL Boards.

The TPB then invited key representatives from the ultimate parent, which was CEC. That does not take away the individual organisations' responsibilities to discharge their duties, but CEC had an oversight role and ultimate responsibility. The Council also had a Tram Monitoring Officer who was an individual officer in the

Council who was responsible for monitoring the actions and management arrangements of TIE.

- (3) Did you have any concerns at any stage (ie whether before or after you became Tram Project Director) in relation to TIE's project management of the tram project or the performance of any of TIE's senior personnel or Board members?

I think from a TIE perspective, the Directors and senior officers in the company were all experienced professionals whether in utilities or transportation and who all consistently sought to effectively deliver their obligations as both Directors and officers of the company. I did not have concerns about the performance of those senior personnel and Board members.

If there were differences of view, which you often get in organisations, they were dealt with properly and professionally, just as I would have expected. I think TIE's project management adjusted its approach a number of times when changing the personnel and skillsets to match the lifecycle of the project.

Where relevant we brought on external service providers, if it did not make sense to employ people directly, so we brought in an expert service and regularly opened ourselves up to peer review or challenge from industry experts.

My personal view is that everybody I worked with on that team was really disappointed by the outcome of the project up to and including 2011 because it was not what we aspired to deliver. I do not believe that was through a lack of effort or professionalism and expertise on behalf of TIE individuals either within the teams or on the respective Boards.

148. In relation to CEC:

- (1) How were important matters relating to the tram project reported by TIE to CEC (including by whom and to whom)?

There are a number of formal layers to this. It was via agreed project reports, Project Board meetings, individual liaison with CEC officers and Councillors, topic specific meetings or correspondence and through individual briefings from key executives, both in the Council and from TIE.

I certainly provided amplification or follow-up on a number of examples when requested. That included interface with the Chief Executive, Head of Finance, Legal and City Development within CEC. I am also aware that TIE's Chairmen and the Chief Executives had regular Councillor and political party briefings to make sure those individuals and organisations were well-informed about the regular issues that were being tackled.

There would be occasional circumstances where I went along to support those types of conversations but it was generally undertaken by either the Chief Executive or the Chairman. I was more involved in dealing with some of the stakeholder groups in the community, small business groups etc. Senior council officials also often attended those but that was a combined group that was dealt with. In addition, as I said a moment ago, there was the Tram Monitoring Officer, latterly Marshall Poulton, Head of Transport for CEC.

- (2) How were the views and requirements of CEC fed back to TIE?

Through all of the above channels and also formally through the TEL and Tram Project Boards, particularly where they had representatives on those forums throughout the duration of the project.

- (3) Did you have any concerns at any stage in relation to the performance of senior CEC officials or Councillors?

For me it was clear there were a number of CEC officials and Councillors who had come from a range of backgrounds and that does not automatically mean they were experienced in construction of transport projects. So there was a different mix of knowledge, skills and capabilities. My perception of the individuals when they were acting in those roles as Board members or officials was generally very appropriate in relation to the roles they were being asked to do.

They were enquiring about areas they needed more information on and they asked appropriate questions. If they did not have the background knowledge they sought additional information to help them understand it, they were not shy in asking questions. The other observation I would make is that it was, in some cases, helpful to the project to understand some of the perspectives the Councillors could bring. It let the project understand some of the areas those individuals represented better and enabled us to become more connected with some of the stakeholder issues or the concerns that were being raised with these Councillors.

I think they had a difficult job to do and I think they made a decent effort at delivering that, accepting that they were not there to be infrastructure professionals; they were there to represent their organisation on these various Boards.

149. In relation to the Tram Project Board (TPB):

- (1) How were important matters relating to the tram project reported by TIE to the TPB (including by whom and to whom)?

Firstly, TIE would be present at meetings and, secondly, it is the TPB report that CEC got as well. It was a working Board so we discussed key issues and strategic points and direction of travel and tested their opinions. Sometimes it might require some other expertise from different parts of the Council to be brought in or from outwith that. My view of the TPB, which in my time, was chaired by first David Mackay and later Vic Emery, was that it was very professionally chaired and effectively run. It does not mean issues are any easier to deal with but it was not the forum or the Project Board that was deficient. The Board was testing, challenging, surfacing a number of issues and in my experience there was a good debate of the issues. I think it was constructive from that point of view.

- (2) How were the views and requirements of the TPB fed back to TIE?

Directly given that the actions and minutes were fired straight back to me or my team and there was a subsequent follow-up because the Chairman of the TPB was also the Chairman of TIE from October 2008 onwards.

- (3) Did you have any concerns at any stage in relation to the performance of the TPB or any members of the TPB?

I think we have talked about the CEC/TIE elements of that already. The same point applies, particularly what I have just commented around in terms of those officials and representations.

150. In relation to TEL:

- (1) How were important matters relating to the tram project reported by TIE to TEL (including by whom and to whom)?

The TPB was the formal sub-committee of the TEL Board that addressed Edinburgh tram matters on behalf of the TEL Board. It was through the TPB that TIE formally interfaced with TEL as an organisation. So by dealing with it at TPB level, that was me dealing with TEL, and that was what was agreed as the governance structure. We did have a common Chairman. Similarly, TEL had representation on a number of the specific sub-committees as well as the TPB during the procurement process so, at that time, TEL had a Chief Executive called Neil Renilson and Neil was the senior responsible officer for the project. Lothian Buses were another subsidiary of TEL, their Operations Director was Bill Campbell, Bill was a member of the TPB for the duration.

- (2) How were the views and requirements of TEL fed back to TIE?

Via the TPB and the common Chairman.

- (3) Did you have any concerns at any stage in relation to the performance of TEL or any members of TEL?

There was a robust challenge from TEL around the integrated transport solution which was the purpose it had been set up for. That was practical and constructive in the sense that those issues needed to be aired.

Neil Renilson as the TEL Chief Executive and at the time the Lothian Buses Chief Executive needed to think quite hard fitting things together with the Lothian Bus system. There was the type of robust debate I would expect in that type of forum. There was a practical challenge and issues to communicate about getting bigger volumes through the same physical space that we have available in the middle of Edinburgh.

I think strategically that was exactly why TEL needed to be in place; CEC's thinking was sound on that, having that approach and, consequently, the TEL specific members rightly and robustly aired those issues and took those elements forward.

151. In relation to Transport Scotland (TS):
(1) How were important matters relating to the tram project reported by TIE to TS (including by whom and to whom)?

Transport Scotland withdrew from the TPB after the May 2007 elections so that was a policy decision. Therefore, the agreed reporting route was via CEC so there was a standard report that we would provide to CEC which was very much based on the TPB report. It was then topped and tailed by CEC and sent to Transport Scotland. Transport Scotland had a Project Manager, John Ramsay, who interfaced with a Council representative. Quite often one of the TIE officers might well support that meeting but it was not between TIE and Transport Scotland. We provided information to CEC, the formal communications were between CEC and Transport Scotland.

- (2) How were the views and requirements of TS fed back to TIE?

The reverse of the above process so via CEC.

It would also be fair to say, as I have said on some of the other briefings, that there were communications between our Chair and Chief Executive and the Chief Executive of Transport Scotland as part of a background briefing but I would have expected it the same way as we briefed a number of the CEC politicians who were not on the TPB or members of the Scottish Parliament or others as part of the general information and communication obligations.

Where I saw the interface re-emerging with Transport Scotland was from around May 2011 onwards, which would be just after Mar Hall. There were a couple of Transport Scotland representatives who started to attend the meetings that Colin Smith and I and others, with Infracore, were trying to finalise. They started to attend, the working meetings on the project, merely in an observation type role. I do not know whether that also included representation at TPB meetings during that summer but it might have .

- (3) Did you have any concerns at any stage in relation to the performance of TS or any senior officials of TS?

I did not particularly deal with Transport Scotland in my role. I did before I moved to the tram project because I worked with Bill Reeve on the Stirling/Alloa/Kincardine project but in relation to the tram project there were no direct dealings other than at Mar Hall, where Ainslie McLaughlin attended.

My personal view was I thought Ainslie was an experienced and constructive contributor to those discussions. He is a very senior roads professional for Transport Scotland and I thought he made good interjections on that. That was as much an observation as anything else and it was a short window of three to four days but he was certainly there over that duration and the contribution I saw was good and it was helpful.

152. In relation to the Scottish Government (SG) (including, in particular, the Minister for Finance and the Minister for Transport):
- (1) How were important matters relating to the tram project reported by TIE to the SG (including by whom and to whom)?

This is the next link in the chain beyond Transport Scotland. It was Transport Scotland's job to update Scottish Ministers and the Scottish Government so that reporting was via TIE, the TPB, CEC, Transport Scotland and, hence, I am presuming to the Scottish Ministers. There was a four-weekly cycle of this reporting as I understand it. There were informal briefings to Ministers and advisors and I am sure Richard Jeffrey, David McKay and Vic Emery would all have been having some of those conversations as would Tom Aitchison and Sue Bruce. That was part of their core job.

- (2) How were the views and requirements of the SG fed back to TIE?

Via Transport Scotland, via CEC, via the Board and the individuals I have mentioned.

- (3) Did you have any concerns at any stage in relation to the performance of the SG or individual Ministers of the SG?

I did not have any direct dealings with them so I cannot comment.

153. In relation to the inter-action between the different bodies and organisations involved in the project management and governance of the tram project:

- (1) How were important matters relating to the tram project reported between these different bodies and how, and by whom, were decisions taken in relation to these matters?

The TPB was the key working effective Project Board that had dealt with those matters so it allowed a focal point for conversations, issues to be aired, debates of options to be tested and then for agreement to be made with the various parties. Recommendations were all made through the TPB where there was TIE, TEL and CEC representation.

- (2) What were your views in relation to the governance arrangements for the tram project including, in particular, the effectiveness of the governance arrangements?

There was a long chain that needed to be dealt with from the delivery contractor, through the client agent, which was TIE and was governed through another subsidiary of CEC (TEL) but in parallel as we had an Operating Agreement obligation to CEC, then we have got CEC, Transport Scotland and eventually one of the key funders, the Scottish Government. Given that was an extended chain the focus of issues at the TPB was remarkably effective because we had the right people in the room, at least up to CEC level.

I think if you were asking what might have been usefully added to that, it may have been for key funder representation via Transport Scotland.

CEC did not wish to directly undertake the project, it wanted an arms-length organisation or maybe even two arms-length organisations, in that they wanted TEL focusing on the whole Transport Edinburgh picture. One line of that was TIE getting the tram project up and running and the other was the successful integration of Lothian Buses with the trams.

- (3) Did you have any concerns at any stage in relation to the governance arrangements?

They were complex but given the way that we tried to streamline them at a practical level, I think that was a sensible approach. I do think there was always a very strong focus on governance obligations and I would probably highlight Graeme Bisset who was

particularly effective at scrutinising and suggesting ways of making that more effective whilst discharging the relevant organisations capabilities.

Graeme was particularly tuned in to effective governance and awareness of obligations or authorities that need to be tested. He was good at proposing ways in which we could improve and he was the author or proposer of some of the structures that were eventually adopted with the TPB and how that interfaced with CEC and TEL and TIE.

- (4) Which body or organisation do you consider was ultimately responsible for ensuring that the tram project was delivered on time and within budget?

This is effectively a repeat of earlier questions. There were clear obligations on TIE as an organisation. There were clear obligations on TEL and on CEC. Additionally, the contracting parties had obligations so the MUDFA contractor, the SDS provider and the Infraco all had obligations to perform.

In those contracts they also had obligations to cooperate and collaborate, to demonstrate best value and to mitigate the impact when things did go awry.

We contracted with Infraco to build us an effective tram system and that is what they promised to do: not to come and “play contractual games” with us. All parties got into a space where Infraco and TIE were spending more time on contractual nuances and less time on actually getting the project completed, which was not good.

154. In relation to the main contractors involved in the tram project:
(1) Did you have any concerns at any stage in relation to the performance of any of the main contractors, or the senior personnel employed by these contractors?

I think we have covered a lot of the areas of difference and many of the previous topic questions whether it was about utilities, Infraco or the procurement process. I am not minded to single out individuals because you can say that some people worked particularly well and other people were particularly challenging. I am not interested in a name calling exercise on this.

I think overall CAF's performance was pretty commendable. If I had one area I would have liked a bit more from them it would be to try and influence their Infraco partners to progress their obligations.

If I then look at the original Infraco parties, Bilfinger and Siemens, again, there were very professional individuals in both of those organisations but there did not seem to me to be an attitude towards resolving differences, particularly from Bilfinger. I was

disappointed with the failure to try and progress and resolve matters and the excessive estimates they provided were very difficult for me. They were not giving fair value to the public purse and that was challenging.

Martin Foerder was the third Project Director at Infraco with whom I had dealings, after Scott McFadzen and Colin Brady. Martin was a very professional Project Director. There were some very difficult issues to resolve and the organisations' positions were quite different by the time Martin arrived. From what I saw he sought to represent his business professionally. I do not have a problem running a contractual entitlement argument but I did have a problem with inflated pricing because that is not about interpretation, that is just trying to extract money which is not due.

From a Carillion/AMIS perspective, they had a really difficult job to do and I think they, and to a degree TIE and the SUCs could all have done that better. There were a lot of unknown services; I do not think anybody understood just how much was unknown. There was willingness by Carillion to try and get their obligations delivered and that was really positive. They, rightly, identified items that they thought was not within their scope and they did try and come up with some constructive solutions. We had some practical commercial differences but we found a way through to an acceptable mediation. Yes, there were certain bits that I think we could have done better or they could have done better but, generally, they were trying to get a difficult job done in challenging circumstances, so I think that was pretty reasonable.

Parsons Brinkerhoff was the lead SDS provider. They were quite well established when I joined TIE. I am not sure we or Infraco ever really cleared up the underperformance by them, whether it was utilities design or in the main works. I was really disappointed to find there was a side agreement between SDS and the Infraco. That side agreement was accidentally discovered and we and DLA wrote to both PB and Infraco but I do not think we ever received a response. My perception is that it disadvantaged TIE, CEC and the public purse. That is deeply disappointing. I do think that in targeted areas Parsons Brinkerhoff did make efforts to resolve difficulties or differences as did TIE and CEC. We probably just did not get it quite as joined up as we could have early enough.

We could have done more with the statutory utilities and holding their feet to the fire because their lack of information and records was one of the root causes of the problems with delay and cost escalation.

That made SDS's job difficult, it made Carillion's job difficult and TIE's respectively and that meant everything else had some pretty challenging impacts. If other things had not been in dispute it could

have been dealt with much better than it was but it definitely had an impact overall.

- (2) If so, what were your concerns and what did TIE do to address them?

I have just covered that.

Final Thoughts

155. By way of final thoughts:

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

This was probably the most complex project that I had undertaken working from a client side. I think I found the misalignment of stakeholder objectives disappointing and damaging. There did not always appear to be consistent or coherent support for the tram and we needed to get the debate out the way, get a consensus, get on with it, and go deliver it. I found that quite disappointing particularly as people used any example of underperformance to justify opposition.

That made it a frustrating process to deal with. In all organisations there were a lot of hardworking genuine individuals who just wanted to do a good job and they were asked to go and deliver a tram system for Edinburgh, they just wanted to do that, whether in SDS, CEC, TIE or parts of the Infraco. This project involved the most extensive use of dispute resolution procedure I have ever run in my career, whether as a contractor or as a client. A lot of time and money was spent following extensive formal legal and contractual processes, which is not necessarily the best use of the public purse.

Developing wide ranging and extensive dispute resolution experience is not what I expected to do coming to Edinburgh to try and deliver a world class tram system. Fundamentally, it was always going to be a difficult project, but I really do not think the citizens of Edinburgh or the people of Scotland have had fair value for money as a result of this.

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

I believe that has been addressed in the preceding questions and answers.

- (3) Do you have any comments, with the benefit of hindsight, on how these failures might have been avoided?

The choice was made, before my time, to use a bespoke contract that had not been tested in other places. The differences of interpretation over contract terms, obligations and conditions for the Infraco contract and to a greater or lesser degree the MUDFA contract, contributed to the failure to deliver on time and budget. From about five or six months after Infraco contract signature it felt like the parties were diverging in their interpretations despite the fact that those interpretations appeared to have been aligned at the time of contract close. With inconsistent stakeholder and political support for the project, there are undoubtedly going to be challenges when a £500m plus project is required to be undertaken in a world heritage city with an impact over a number of years to local businesses, residents and visitors.

However, because of the lack of consistent support, it meant that when any cracks started to open up, people took the opportunity to widen them rather than address them and move forward. The media approach and desire to keep the project in a spotlight contributed to this problem.

I think as a result of those various differences it made it easier for the contractor to 'divide and conquer'. I anticipate that the contractor did well financially from this job. There are certain things, I believe, that they should have taken on the chin, just as I have done as a contractor in the past.

They sought to optimise their position for their shareholders, but in doing so it seemed to me, to cut across their own promises, their obligations under the Infraco contract and in terms of fair value to the public purse.

In hindsight there are questions over whether the announcement of the preferred bidder was made at the right time and whether the design was sufficiently developed at the point of contract close. This may have contributed to the dispute which later emerged over design development, which I had thought we had been clear about in our contractual discussions.

It does seem to me that we could have avoided some of the delay and frustration if, for example, Infraco had provided much more appropriate estimates first time round. It might not have taken away some of the other disputes but it was entirely unacceptable in terms of where we ended up.

I do not know whether £776m is a fair price, it feels excessive to me from what I know about the project. I agree that the final price should have been higher than the contracted price for a number of legitimate reasons, but I do not know what the final terms are and their reasons and obligations for that. TIE's focus and my own was on fair value for the public purse, whilst being accountable for our

obligations but I do not feel that we saw that respected or reciprocated by the Infraco.

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

As a general comment, in answering the questions above I have only been able to refer to the selected documents which were provided to me by the Inquiry team. The first draft of this statement was prepared by the Inquiry team and provided to me in July 2017 following several days of interview which I had attended in March. In the short time in which I was allowed to review this draft, I have endeavoured to the best of my ability to correct any errors and clarify any ambiguities which may be present. It is difficult to accurately recall exact details from up to ten years ago.

In relation to the utilities issues, I do think the strategy that was set before I joined TIE - which was that we should aim to do multi-utility diversions in the advance of any major schemes - was a strategically sensible thing to do and the right thing to do. The project should have thought harder around how to incentivise, lock-in, or get better support from the statutory utilities and get them aligned with the common objective, whether that is about helping us get to a very effective design solution or looking at the best ways in which we could have uncovered some of the unknowns or around quickly and fairly agreeing credits for betterment .

It would be worthwhile debating this with statutory utilities how we could better do that. That might involve a conversation with the regulators because the rules and the framework are different in other countries.

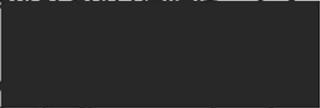
I thought there was a big effort to try and deal with our line side neighbours (frontagers) and local businesses and residents, sometimes in very difficult circumstances and we tried some innovative schemes like rates relief and other things that were not available on previous projects. That almost got lost in the background noise of disruption about traffic diversions etc. However, there was a genuine attempt to try and make a difference on that and be sensitive to keeping Edinburgh open for business and visitors.

Another comment is that on a number of occasions, we asked external experts to come in and look at what we were doing and why, including Audit Scotland. Therefore, we were open about taking constructive suggestions or criticism and addressing it.

I think there was a significant effort to ensure transparency in our reporting and in our willingness to respond to issues and items raised by our stakeholders like CEC or Transport Scotland.

We received a whole range of Freedom of Information (FOISA) requests and we devoted a significant amount of time and effort in making sure that we tried to clearly and fairly respond to those from the general public or anybody else, quite apart from our efforts to provide information to those involved in the project. We were communicating and explaining what we were doing and why, subject to some commercial constraints and sensitivities.

I confirm that the facts to which I attest in this witness statement, consisting of this and the preceding 182 pages, where they are within my direct knowledge and recollection, 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, recollection, information and belief.

Witness signature.. 

Date of signing... *07 August 2017*

Supplementary Questions for Steven Bell

1. By email dated 5 May 2008 (**CEC01294478**) Mr Hickman circulated a schedule (**CEC01294479**) of potential Notified Departures arising from the mismatch at Infraco contract close between the BBS construction programme and the SDS design programme. What consideration was given within Tie, and by whom, before contract close of the potential Notified Departures identified in that schedule? Was there any discussion within Tie (and, if so, between whom) of these potential Notified Departures? Who within Tie was responsible for quantifying these potential Notified Departures?

2. Of the approximately 78 potential Notified Departures identified in the schedule, eight are stated to have an impact on the programme, seven are stated to have a potential impact on the programme and the rest are stated not to have an impact on the programme. In relation to the potential Notified Departures that are stated not to have an impact on the programme, was that largely as a result of BBS reprogramming their works in order to avoid such an impact?

3. Prior to contract close, was it anticipated that the mismatch between the BBS construction programme and the SDS programme would result in one Notified Departure (e.g. as referred to in the Report on the Infraco Contract Suite, **CEC01338851**, page 4) or multiple Notified Departures (e.g. as listed in Mr Hickman's schedule noted above)?

4. In the event, did the mismatch between the BBS construction programme and the SDS programme result in one INTC (Infraco Notice of Tie Change) or multiple INTCs? We understand, for example, that one INTC was intimated as a result of the mismatch at contract close between the construction and design programmes (see INTC1 – **CEC01288310**) and that further INTCs were issued following each revision of the design programme i.e. revisions 32 to 56 (see e.g. the Infraco Change Register, **BFB00003297**, pages 73, 79, 80, 83, 84, 87 and 89). Is our understanding of matters in that regard correct?

Steven Bell – Answers to supplementary questions

Q1: tie considered that there would be a notified departure generated by the SDS programme dates not aligning with the v26 version of the SDS programme, which was the basis of Schedule Part 4. Whilst it would give rise to an entitlement of a mandatory Tie Change under the Notified Departure mechanism, it would only result in time or money entitlement if it was demonstrated that such relief/Extension of Time and costs were due.

Each of the sub elements on Mr Hickman's schedule were potential items which may have had an impact, but each required individual consideration as **part** of (what was to become) INTC number 1.

My recollection is that they would have been discussed with Susan Clark, Tom Hickman, Dennis Murray, Frank McFadden, Damian Sharp (as SDS Project Manager) and probably Geoff Gilbert (in principle) before he left. I am also sure Andrew Fitchie and Jim McEwan were also fully involved in discussion of principle, although perhaps not in the detailed assessment.

Dennis and the commercial team would have worked with Tom and Susan on time and potential prelims costs.

Q2: Of the items identified as not having an impact on Programme (the green items on the sheet) that was primarily as a result of them not being on a critical path and having float of many days or even months and years before the IFC was required for lead in to build. They did not depend on further mitigation by Infracore or by Tie/SDS.

Q3: It was anticipated that there would be one Notified Departure for v26 to v31 and that would have sub elements to be evaluated as per Q1 and Q2.

If there were further changes, they may give rise to further departures which would need to be substantiated and evaluated. However, at contract close, SDS and CEC were focused, along with Tie, on achieving the v31 dates. Even if there were further delays to design delivery, only some would be likely to cause impact pre mitigation from BSC and potentially even fewer post mitigation.

Q4: To be clear, the entitlement to consider a Notified Departure related to IFC provision arises from SDS deliverables being provided at a different time from v26. If it is early or late, an ND entitlement arises which must then be notified and supporting justification provided regarding time and or cost impact (+ or -).

I believe there were a number of notifications from BSC during the duration of the contract, although, as previously discussed in written questions etc., BSC then either failed to partially or fully justify their claims and significantly over valued their claims.

Steven Bell – Supplementary Questions

General

- 1) It is apparent that there is a very large degree of repetition from one month to the next in the Project Directors Report and the Reports to TS. Do you agree? Do you agree that this often makes it difficult to determine precisely what is happening at any time and what are the key elements?
- 2) Almost all the reports to TS noted that reasons for design slippage are being reviewed and recorded each week (see for example, **CEC00983221**, page 27). What was the point in stating this every time. What was done with the information? Was there discussion at the TPB of these reviews, what might be learned from them and what should be done to remedy the situation? Do you agree that it did not appear to be making any difference? Why was nothing else tried? To what extent did design issues continue to have an effect on the progress of works throughout the project?
- 3) The reports to the TPB and the Powerpoint presentations do not appear to provide a complete picture of the outcome of the various adjudications. Do you agree or do you have any comment on this? Do you have any further records of the information that was supplied to the TPB in relation to the adjudications?

TPB Papers for May 09 -- CEC00633071

- 4) In relation to the Infracore works, the Report states,

The project continues to experience problems with slow progress and, in particular, appointment of direct BSC resource and final appointment of the main package contractors. All BSC sub-contractors continue to operate with Limited Letters of Intent whilst awaiting conclusion of the full sub-contracts.

Haymarket viaduct and Carrick Knowe bridge constructions have been on hold due to BSC's sub contractor issues with the A8 underpass delayed through requirement of temporary works redesign. However, work has continued on a number of worksites including Princess Street, Edinburgh Park Bridge, Gogarburn Bridge and the new access road at Verity House with spoil removal from the depot commencing and progressing well during the period (20% of total spoil removed in three weeks). (page 36)

There is no clear statement that this was attributable to the fundamental disagreement in relation to the contract and Notified Departures. Why was this not stated? Were you not aware of it by this time? The Carrick Knowe issues were later to lead to adjudication and seems to be more than 'sub contractor' issues. Would you agree? Did you know this at the time?

- 5) Your report notes that work was continuing on "Princess (*sic*) Street, Edinburgh Park Bridge, Gogarburn Bridge and the new access road at Verity House" (page 36). The first of these were under the PSSA and the others appear to be off-street structures. Is this correct? Was there any concern against the background of the problems on Princes Street that BSC were not undertaking *any* on-street works and that they were so far behind in achieving milestones (table on page 37)? They were supposed to have almost 50% of the work completed and instead had done only 3%. Why is there no statement that the consortium were refusing to undertake on-street works under the contract? If this was not apparent to you at this time, when did it first become clear?
- 6) In relation to some sections it is noted that the problem is that MUDFA works were not finished (page 37). To what extent was that the real problem as opposed to the disinclination of BSC to do on-street works because of the underlying contractual dispute? In relation to works to the west of the city centre, there are several references to re-design of temporary and permanent works. What was the issue here? Do you consider that the contents of this table give an accurate and complete picture of the reasons for lack of progress on the Infracore works?

- 7) Your report refers to an unapproved increase in the AFC to £527.1m to reflect risk. The approved cost estimate remained at £512m (page 14). Why was there an 'approved' and an 'unapproved' figure? What was the purpose or function of each? Why have both? What had to be done before the figure would become approved?

TPB Papers for June 2009 – CEC001021587

- 8) In relation to INFRACO, your report states, "Haymarket viaduct and Carrick Knowe bridge constructions have been on hold due to *BSC's sub contractor issues*". Was this really thought to be the issue at the time? What were the sub-contractor issues and why had they resulted in works being put on hold?

TPB Papers for Early July 09 - CEC00983221

- 9) In your report, the time Schedule Report indicates that many matters have slipped but that recovery can be achieved (page 41). This same table and statement appear month after month although the degree of slippage increases. In this position, and in light of the history, what basis did you have for your statement that there could be recovery? How likely did you consider recovery would be? Do you consider that your report presented a realistic picture?

TPB Papers for Late July 09 - CEC00843272

- 10) In relation to INFRACO, your report states,

The project continues to experience problems with slow progress for INFRACO works and, in particular, the appointment of direct BSC resource and the final appointment of the main package contractors. The BSC subcontractors continue to operate with Limited Letters of Intent whilst awaiting conclusion of the full subcontracts. Finalisation of the agreement of

change- Base Date Design Information (BDDI) and IFC is delaying the commencement of work at Haymarket viaduct, Russell road bridge, Carricknowe bridge, Depot building and Tower place bridge. (page 12)

In your view, does this accurately present the position? Was the issue one of finalising agreement of change or was it more fundamental?

11) Month by month the slippage on the INFRACO works increased. For example, in May, the works were 42.4% behind (CEC00633071), at the start of July they are 47.1% behind (CEC00983221, page 30) whereas by late July, they are 49.3% behind (CEC00843272, page 56)? Does this not indicate that the cause of the delay was not merely something at the start of the INFRACO works but was something still operating?

August 09 - CEC00739552

12) The reasons for INFRACO being behind schedule are stated in your report on page 13. Were all of these actually impeding work or was the issue one of Notified Departures?

13) The figures for MUDFA works note that they are 96.6% complete (page 14). Is this consistent with these works being a reason for delay to INFRACO works? Is this figure accurate? Is it consistent with the volume of works that had to be carried out after this date and both before and after the mediation at Mar Hall? If they are not accurate, how did the error come about?

14) The comment on INFRACO at page 15 states,

The project continues to experience problems with slow progress for INFRACO works and, in particular, the appointment of direct BSC resource and the final appointment of the main package contractors.

The use of the term 'in particular' suggests that this is the main problem. Is that correct?

- 15) The figure on page 14 for MUDFA works completed shows a big jump for the figure given to TS in the previous month (CEC00843272, page55). Why was there such an increase?

November 2009 – CEC00681328

- 16) The Minutes for October included in the papers for this meeting are the first to set out bluntly that BSC refuse to carry out on-street works without a supplementary agreement entitling them to payment on a cost plus basis (page 9). Why had this not been stated in earlier reports?

- 17) In the Minutes for October, you were charged with preparing a quarterly report on betterment contributions for MUDFA. Was this done? Where were the reports sent?

- 18) In the table on page 40 of the November report all the figures showing the cumulative fall behind schedule (the right-hand column) are inaccurate. The same is true of the table in the December Report (CEC00416111, page 52), the January report (CEC00473005, page 53), the February Report (CEC00474418, page 33) and the March report (TIE00894384, page 34). This appears not to have been noticed, commented on or corrected. Is that the position?

December 2009 – CEC00416111

- 19) In this report and the ones for 2010, there are summaries of the outcomes of the DRP process. Do you consider that these provide an accurate and full picture of the outcomes? What further information did you supply in the form of Powerpoint presentations or oral briefing at the TPB meetings? Why did you consider after the Gogarburn and Carrick Knowe decisions that it was too early to establish precedence? Did this change after the Russell Road decision? If not then, when did

you consider that the position has become clear? What did you do to bring it to the attention of the TPB or company board?

February 2010 – CEC00474418

20) In the report to TS, the same reasons are given for overall progress being behind schedule (page 27). Had matters not moved on by this time? For example, was lack of formal subcontracts or re-design of temporary works an issue holding up progress? To what extent was the failure to submit paperwork an issue? Was “Finalisation” of agreement of change really the issue? In your report to the TPB you record that the lack of progress is “symptomatic of the ongoing dispute with BSC regarding agreement on the terms of a supplementary agreement for on-street works and commercial issues off street” (page 11). Was it really a dispute about a supplemental agreement rather than a fundamental disagreement as to the extent of the obligations undertaken in the original contract?

21) Were the Carrick Knowe and Gogarburn decisions still under review as indicated on page 28? What did the review consist of and who was conducting it?

22) In the report to TS on page 27, you state, “There has been no further Infracore works on-street due to a lack of agreement on programme going forward.” Was lack of agreement on programme really the reason that there were no on-street works?

May 2010 - CEC00245907

23) The April Minutes notes that MUDFA works were 94% complete (page 6). Six months earlier in the October minutes they were reported to be 98% complete. Why was it that the percentage complete had gone down over this period?

24) Your May report to TS notes that although 82.6% of INFRACO works should have been done, only 16.1% had been completed (page 35). Despite this the report against milestones still says that recovery is possible (page 51). Why was this said?

Steven Bell – Answers to supplementary questions

- (1) It is apparent that there is a very large degree of repetition from one month to the next in the Project Directors Report and the Reports to TS. Do you agree? Do you agree that this often makes it difficult to determine precisely what is happening at any time and what are the key elements?

A number of issues remained live from one month to the next, and the reports were intended to be readable without having to refer back to all previous reports for context. Whilst certain live issues were repeated in successive reports, they were also supplemented with updated information. Whilst John Ramsay complained about these reports in his evidence to the Inquiry, I do not recall him raising such complaints at the time. When Marshall Poulton became Tram Monitoring Officer he made a point about the timing of the reports, which was addressed, but there were no complaints from CEC about the content, so there was never any suggestion that those for whom the reports were intended had any difficulty in understanding what was happening or what the key elements were, supplemented as they were by the presentations and other information.

The periodic reports were supplemented by presentations to the Tram Project Board, which initially (pre-summer 2007) included Bill Reeve as the Transport Scotland representative. Following Transport Scotland's withdrawal, the arrangement was for CEC to provide monthly information to Transport Scotland, which I understand was normally via Duncan Fraser and latterly Alan Coyle to John Ramsay. There was additionally a Quarterly Review at a senior level between CEC and Transport Scotland.

- (2) Almost all the reports to TS noted that reasons for design slippage are being reviewed and recorded each week (see for example, **CEC00983221**, page 27). What was the point in stating this every time. What was done with the information? Was there discussion at the TPB of these reviews, what might be learned from them and what should be done to remedy the situation? Do you agree that it did not appear to be making any difference? Why was nothing else tried? To what extent did design issues continue to have an effect on the progress of works throughout the project?

TIE was required to monitor and record slippage on the programme, and was similarly required to review what could be done in order to address it. Design slippage was an issue which was frequently discussed at the Board. I do not agree that the reviews "made no difference" or that "nothing else was tried": David Crawley/Tony Glazebrook and Damian Sharp in their respective roles successfully cleared a number of outstanding design issues and blockers in 2007/2008. In addition, matters were escalated in 2007 by Willie Gallagher with Tom O'Neill, Vice President of Parsons Brinkerhoff in the US.

After May 2008, responsibility for progressing the design passed to the contractor and so the reasons for continued slippage in that period were opaque to TIE.

However I do not believe that SDS/Infraco expedited all the issues which they could have done, as is demonstrated by the fact that a large number of outstanding design issues were very suddenly cleared immediately post mediation in 2011. I understand that Damian Sharp has already made this point to the Inquiry.

- (3) The reports to the TPB and the PowerPoint presentations do not appear to provide a complete picture of the outcome of the various adjudications. Do you agree or do you have any comment on this? Do you have any further records of the information that was supplied to the TPB in relation to the adjudications?

I was briefly asked about this issue by Lord Hardie in my oral evidence, and as stated then (Wednesday 27 October, page 48), I accept that some reports could have been amplified to provide further detail. The Lord Dervaird adjudication on Murrayfield underpass would be a good example. However I do recall that there had been issues with information leaking from the TPB papers, and there was a concern about setting out in the papers how painful a decision it was when those papers might fall into the hands of the contractor, thus compromising our commercial and strategic position.

I have also become aware through the Inquiry hearings that amplification was promised on the Russell Road adjudication in one report which was not followed up the following month, and clearly this was an omission which should have been rectified. In all cases however, further detail and discussion was provided at the meetings themselves. At the Board meetings there was no doubt about which adjudications were particularly disappointing for TIE, in the face of the advice we had received (e.g. Dervaird), albeit that had not been explicitly set out in the papers circulated to members in advance.

Any records relating to the adjudications were kept by TIE and other than those provided to me by the Inquiry, I no longer have access to them.

TPB Papers for May 09 —CEC00633071

- (4) In relation to the Infraco works, the Report states,
“The project continues to experience problems with slow progress and, in particular, appointment of direct BSC resource and final appointment of the main package contractors. All BSC sub-contractors continue to operate with Limited Letters of Intent whilst awaiting conclusion of the full sub-contracts. Haymarket viaduct and Carrick Knowe bridge constructions have been on hold due to BSC’s sub contractor issues with the A8 underpass delayed through requirement of temporary works redesign. However, work has continued on a number of worksites including Princess Street, Edinburgh Park Bridge, Gogarburn Bridge and the new access road at Verity House with spoil removal from the depot commencing and progressing well during the period (20% of total spoil removed in three weeks)(page 36).”
There is no clear statement that this was attributable to the fundamental disagreement in relation to the contract and Notified Departures. Why was this not stated? Were you not aware of it by this time? The Carrick Knowe issues were later to lead to adjudication and seems to be more than ‘sub contractor’ issues. Would you agree? Did you know this at the time?

The issues are related. Where a subcontractor had not been properly contracted and issued with instructions by Infracore, they would not be in a position to price any changes to IFC. This would then mean that even though Infracore may have issued an INTC, the estimate which was required to follow from that would not be forthcoming, thus preventing agreement of the change and progression of the work.

In any event, the contractual disagreement was already well established and known to the Board by this time: see for instance page 6 of these papers, the minutes for the previous Board meeting at item 2.8. Further, the PD report in these papers at page 9 sets out that the Project Management Panel (PMP) was discussing the BDDI-IFC issue amongst other things. (The PMP had been set up following the PSSA and included myself, Martin Foerder of Bilfinger and Alfred Brandenburger of Siemens). Moreover, delay caused by the need to agree change is the top issue in this Transport Scotland report (page 33).

Whilst it is correct to say that the issues around Carrick Knowe Bridge later went to adjudication, the same is true for Gogarburn Bridge, and at this time, as the report highlights, work was progressing at that site.

- (5) Your report notes that work was continuing on “Princess (*sic*) Street, Edinburgh Park Bridge, Gogarburn Bridge and the new access road at Verity House” (page 36). The first of these were under the PSSA and the others appear to be off-street structures. Is this correct? Was there any concern against the background of the problems on Princes Street that BSC were not undertaking *any* on-street works and that they were so far behind in achieving milestones (table on page 37)? They were supposed to have almost 50% of the work completed and instead had done only 3%. Why is there no statement that the consortium were refusing to undertake on-street works under the contract? If this was not apparent to you at this time, when did it first become clear?

It is correct that the work on Princes Street was proceeding under the PSSA and that the other areas highlighted are off-street. The other work on-street which was scheduled to be taking place at that time was on Leith Walk, which straddled sections 1B and 1C. The reasons for the delays in those sections are set out in the narrative below the table: In Section 1A, design was awaited to allow utility diversions to be completed, and traffic management was under design and discussion with Forth Ports. In Section 1B and 1C, work had been delayed pending MUDFA completion. In Section 1D, work on Princes Street had commenced but work at Haymarket was delayed due to MUDFA works. As had been noted on page 13, the subcontractor for Leith Walk had been re-deployed to Verity House and Princes Street. Accordingly work was progressing on Princes Street and there was an ongoing attempt to resolve the other issues at the PMP. It is therefore not accurate to suggest that it was a simple issue of the contractor refusing to work on-street at this point in time. The discussions around these issues evolved into negotiations around a potential On Street Supplementary Agreement (OSSA), which is covered further below (and in my original statement).

- (6) In relation to some sections it is noted that the problem is that MUDFA works were not finished (page 37). To what extent was that the real problem as opposed to the disinclination of BSC to do on-street works because of the underlying contractual dispute? In relation to works to the west of the city centre, there are several references to re-design of temporary and permanent works. What was the issue here? Do you consider that the contents of this table give an accurate and complete picture of the reasons for lack of progress on the Infraco works?

The incomplete MUDFA works were certainly an issue (as noted in question 5 above), as there were sections where Infraco was unable to obtain unrestricted access in order to commence work. Re-design of temporary works was between SDS and Infraco and was not an issue for TIE. Re-design of permanent works is highlighted in Section 5 of the route and this would include for instance Russell Road retaining wall, which ultimately went to adjudication.

The table gives an accurate picture; but for a complete picture it must be read in conjunction with the rest of the report, which was also supplemented by oral presentations at the Board meeting. No single paragraph or table in the reports was intended to be read in isolation.

- (7) Your report refers to an unapproved increase in the AFC to £527.1m to reflect risk. The approved cost estimate remained at £512m (page 14). Why was there an 'approved' and an 'unapproved' figure? What was the purpose or function of each? Why have both? What had to be done before the figure would become approved?

The approved figure related to the Project Control Budget (PCB) which had been set at financial close, together with any increases from that budget which had already been approved under the various delegated authorities up to and including the TPB. See also my answer to question 128 in my original statement.

The unapproved figure was effectively a forecast of the additional risk allowance which was thought to be required to cover changes which had been intimated or were anticipated at that time, and was produced in an effort to provide transparent information for the funder of expected potential cost increases.

For a figure to become approved, a change paper needed to be presented and approved in line with the delegated authorities. Dependent on the value those authorities would be up to, and including, the TPB and ultimately CEC.

TPB Papers for June 2009 – CEC001021587

- (8) In relation to INFRACO, your report states, "Haymarket viaduct and Carrick Knowe bridge constructions have been on hold due to *BSC's sub contractor issues*". Was this really thought to be the issue at the time? What were the sub-contractor issues and why had they resulted in works being put on hold?

Haymarket Viaduct from memory was being carried out by the same subcontractor (Graham Construction) as was carrying out the work at Verity House. That subcontractor was working at this time on letters of intent and had not by this stage

been properly subcontracted, leading to issues highlighted above in question 4. I do not recall what the subcontractor issues at Carrick Knowe were at that time, though I expect they were similar.

TPB Papers for Early July 09 -CEC00983221

- (9) In your report, the time Schedule Report indicates that many matters have slipped but that recovery can be achieved (page 41). This same table and statement appear month after month although the degree of slippage increases. In this position, and in light of the history, what basis did you have for your statement that there could be recovery? How likely did you consider recovery would be? Do you consider that your report presented a realistic picture?

The colour coding is absent from this document so I cannot answer the question in specific terms: as can be seen from the key below the table, any statement that recovery can be achieved would apply only to items highlighted in yellow or pink. However, see my answer to question 24 below on the same issue.

In general terms, I would go through the programme with Susan Clark and Tom Hickman each month to identify which items were delayed, and whether the delayed items were on the critical path or not. Where they were not on the critical path, recovery would generally be possible as they would not impact on other parts of the programme. Where items were on the critical path, we would consider whether we could instruct Infraco to accelerate in that area, which would carry an additional cost. Infraco would be asked to produce an estimate for the acceleration, and that cost would be assessed against the potential impact of the delay in question. If we considered that Infraco were culpable for the delay, we would expect them to recover the lost time at their expense. In such cases, Infraco generally disputed their liability as their starting position.

TPB Papers for Late July 09 -CEC00843272

- (10) In relation to INFRACO, your report states, “The project continues to experience problems with slow progress for INFRACO works and, in particular, the appointment of direct BSC resource and the final appointment of the main package contractors. The BSC subcontractors continue to operate with Limited Letters of Intent whilst awaiting conclusion of the full subcontracts. Finalisation of the agreement of change- Base Date Design Information (BDDI) and IFC is delaying the commencement of work at Haymarket viaduct, Russell road bridge, Carricknowe bridge, Depot building and Tower place bridge”. (page 12)
In your view, does this accurately present the position? Was the issue one of finalising agreement of change or was it more fundamental?

I refer to my previous answers, but I should emphasise that finalising agreement of change *was* a fundamental issue, because it was emerging by this time that Infraco and TIE had fundamentally different views on the interpretation of both the entitlement to change and the operation of the change clauses in the contract. It will be seen that the issues around Russell Road bridge and Tower Place bridge (both of

which ultimately ended up at adjudication) are now highlighted as being problems in terms of this issue, in addition to Carrick Knowe as already discussed.

- (11) Month by month the slippage on the INFRACO works increased. For example, in May, the works were 42.4% behind (CEC00633071), at the start of July they are 47.1% behind (CEC00983221, page 30) whereas by late July, they are 49.3% behind (CEC00843272, page 56)? Does this not indicate that the cause of the delay was not merely something at the start of the INFRACO works but was something still operating?

It was never suggested that the cause of the delay was “merely something at the start of the Infraco works”. The dispute over changes was clearly a continuing issue.

August 09 - CEC00739552

- (12) The reasons for INFRACO being behind schedule are stated in your report on page 13. Were all of these actually impeding work or was the issue one of Notified Departures?

Notified Departures arose as the result of differences in facts compared to Schedule Part 4 and gave rise to tie Changes, and the issue around failure to agree changes is the top factor listed on page 13. The other factors listed below all had an impact to some degree, especially the incomplete utility diversions and the design slippage.

- (13) The figures for MUDFA works note that they are 96.6% complete (page 14). Is this consistent with these works being a reason for delay to INFRACO works? Is this figure accurate? Is it consistent with the volume of works that had to be carried out after this date and both before and after the mediation at Mar Hall? If they are not accurate, how did the error come about?

It is explicitly stated in line above the table on page 14 that the completion percentage relates only to the MUDFA works carried out by Carillion, and accordingly excludes the works removed from Carillion (due to their poor performance) and awarded to other contractors in Section 1A and Section 7B. See also question 15 below and question 102 in my original statement.

Additionally, where for instance in Section 1D the works were 96.5% complete (by metreage), the remaining section of the road may not have been dug up, and unforeseen issues could – and often did – arise which extended the scope of the works required. The final metreage for the MUDFA works was 49km, up from an original scope of 27km, which was obviously a very significant increase.

I am unable to comment on the volume of works completed after October 2011 as this took place after my departure from TIE. However I am surprised by the suggestions that there were such a large number of extant utilities issues on sections where MUDFA work had been completed by Carillion, as I was aware of only a small number of issues outstanding. There were sections which were outstanding

awaiting agreed access (Broughton Street) and the final details of the curtailed route to York Place were finalised via Council decision in the Autumn of 2011. I briefly addressed this issue in my oral evidence (Tuesday 24 October page 193-194).

- (14) The comment on INFRACO at page 15 states,
“The project continues to experience problems with slow progress for INFRACO works and, in particular, the appointment of direct BSC resource and the final appointment of the main package contractors.”
The use of the term ‘in particular’ suggests that this is the main problem. Is that correct?

The words “in particular” were supposed to cover the issues highlighted in the remainder of this paragraph i.e. to include not only the subcontractor issues but also the slow provision of estimates hindering the agreement of changes in the various locations outlined. Reviewing this now, I would accept that this paragraph could have been clearer.

- (15) The figure on page 14 for MUDFA works completed shows a big jump for the figure given to TS in the previous month (CEC00843272, page55). Why was there such an increase?

With reference to question 13 above, the table in this month’s report makes explicit that the completion percentage does not include the work removed from Carillion under the MUDFA contract. So in Section 1A, the completion is recorded as 100% (up from 43%) because the balance of those works had been removed from MUDFA and awarded to Clancy Dowcra. Similarly, the works in Section 7B (previously 0%) do not appear in the latter table because those works were removed from Carillion and awarded to Farrans. See also my answer to questions 102 and 104 in my original statement.

November 2009 – CEC00681328

- (16) The Minutes for October included in the papers for this meeting are the first to set out bluntly that BSC refuse to carry out on-street works without a supplementary agreement entitling them to payment on a cost plus basis (page 9). Why had this not been stated in earlier reports?

The position had evolved and negotiations were ongoing. For instance, in the minutes for the TPB meeting in August, the overview which I presented had included details that BSC were *resisting* a supplementary agreement at that time pending resolution of the wider contractual matters (CEC00848246, page 6). Works on Princes Street had progressed under the PSSA. Negotiations over an OSSA ultimately broke down because Infraco sought more relaxed terms than had been agreed in the PSSA. This was not acceptable to TIE, particularly in relation to TIE vetting actual demonstrable costs submitted for payment by BSC. By way of example, TIE had discovered a situation where a sub contractor’s staff billed for time at Princes Street

under the PSSA whilst their timesheet actually showed them working at their Managing Director's house. See also my answer to question 100 in my original statement.

- (17) In the Minutes for October, you were charged with preparing a quarterly report on betterment contributions for MUDFA. Was this done? Where there (sic) the reports sent?

I believe that betterment was addressed in the financial reports each period, but I note from these minutes that the quarterly reports were to be sent to Donald McGougan. In question 118 of my original statement, there is reference to an email I sent to Donald McGougan and Alan Coyle (TIE00682917) which attached a table (TIE00682918) setting out the then current position on betterment. As this email post dates these minutes by six months, I assume that is the second such quarterly report.

- (18) In the table on page 40 of the November report all the figures showing the cumulative fall behind schedule (the right-hand column) are inaccurate. The same is true of the table in the December Report (CEC00416111, page 52), the January report (CEC00473005, page 53), the February Report (CEC00474418, page 33) and the March report (TIE00894384, page 34). This appears not to have been noticed, commented on or corrected. Is that the position?

I agree that the error in the cumulative delta column appears not to have been picked up. Generally discussion at the meetings tended to focus on the progress in the period (the left hand side of the table) and more importantly, the narrative. However the error should still have been picked up.

December 2009 – CEC00416111

- (19) In this report and the ones for 2010, there are summaries of the outcomes of the DRP process. Do you consider that these provide an accurate and full picture of the outcomes? What further information did you supply in the form of PowerPoint presentations or oral briefing at the TPB meetings? Why did you consider after the Gogarburn and Carrick Knowe decisions that it was too early to establish precedence? Did this change after the Russell Road decision? If not then, when did you consider that the position has become clear? What did you do to bring it to the attention of the TPB or company board?

I refer firstly to my answer to question 3 above and my previous oral evidence. Gogarburn and Carrick Knowe were too early to establish precedence because not only were they from a single adjudicator (Hunter), they related to specific features of those particular structures. When a different adjudicator (Wilson) came to a different view in relation to Russell Road, that clearly demonstrated alternative views between different experienced adjudicators and hence impacted on TIE's strategy, which was informed by advice from the legal teams (DLA and McGrigors).

The issue was discussed at the TPB in detail. Please see also my answer to question 105 in my original statement.

February 2010 – CEC00474418

- (20) In the report to TS, the same reasons are given for overall progress being behind schedule (page 27). Had matters not moved on by this time? For example, was lack of formal subcontracts or re-design of temporary works an issue holding up progress? To what extent was the failure to submit paperwork an issue? Was “Finalisation” of agreement of change really the issue? In your report to the TPB you record that the lack of progress is “symptomatic of the ongoing dispute with BSC regarding agreement on the terms of a supplementary agreement for on-street works and commercial issues off street” (page 11). Was it really a dispute about a supplemental agreement rather than a fundamental disagreement as to the extent of the obligations undertaken in the original contract?

I do not recall to what extent lack of subcontracts or re-design of temporary works were still significant factors causing delay by this time. Information and analysis from Susan Clark and Tom Hickman would have helped form my view in relation to programming issues, so they may have a more detailed recollection.

The failure to submit paperwork was significant because, where it related to estimates, it prevented changes from being agreed. Where it related to method statements, it may have prevented work from commencing. For instance where work came in contact with the rail corridor, high risk method statements required to be approved by Network Rail as well as TIE before work could commence.

Agreement of change was a fundamental issue; the first question was whether any change gave rise to an entitlement to additional time and costs, and agreement could not be finalised until a reasonable estimate had been provided, which in many cases was lacking; Infraco frequently provided significantly excessive estimates or none at all.

The Infraco’s position ultimately was that it could not work on street under the original contract and therefore required an OSSA; TIE did not agree with that position but nevertheless was prepared to discuss the possibility of an OSSA if that proved to be a reasonable method to progress the works having regard to time and costs. As indicated above, the reason discussions broke down was that Infraco sought to agree an OSSA on more favourable terms to Infraco than had been in place under the PSSA.

- (21) Were the Carrick Knowe and Gogarburn decisions still under review as indicated on page 28? What did the review consist of and who was conducting it?

As noted in question 19, Carrick Knowe and Gogarburn were under review in the sense that the contrary decision in Russell Road had caused TIE to consider whether

those earlier decisions should be challenged, a process which included TIE's legal advisers as well as external experts and consultants.

- (22) In the report to TS on page 27, your state, "There has been no further Infraco works on-street due to a lack of agreement on programme going forward." Was lack of agreement on programme really the reason that there were no on-street works?

Where there were issues for instance with incomplete MUDFA works, there required to be agreement as to when Infraco would be given access to the sites in order to commence work (and hence a programme issue), quite apart from the question of how that work was then going to be paid, whether under an OSSA or under the original contract.

May 2010 -CEC00245907

- (23) The April Minutes notes that MUDFA works were 94% complete (page 6). Six months earlier in the October minutes they were reported to be 98% complete. Why was it that the percentage complete had gone down over this period?

The reason is clearly stated in the minutes: the scope had increased by this time to 46km, which was 170% of the original scope. The 94% completion figure is explicitly stated to relate to the revised (i.e. increased) scope.

- (24) Your May report to TS notes that although 82.6% of INFRACO works should have been done, only 16.1% had been completed (page 35). Despite this the report against milestones still says that recovery is possible (page 51). Why was this said?

I accept that the colour coding system adopted here may not be immediately obvious. The left hand column gives the original programme date. The right hand column gives the date as currently forecast. The tram was originally programmed to be Open for Revenue Service in July 2011, as can be seen at the bottom of the table. The current forecast date at the time of this report was February 2013. The fact that this item is highlighted in pink (significant slippage but expect recovery can be achieved) is not a statement that the original programme date of July 2011 can be achieved, but rather that it is believed that, with appropriate mitigation, improvement on the forecast date of February 2013 could be achieved.

Some of the confusion may stem from the fact that this table includes both commencement dates and completion dates. So for instance there are two entries for Edinburgh Park viaduct. The originally programmed commencement date for that structure was 6 August 08. From the right hand column, work actually commenced 3 weeks later, 1 September 08. The latter entry is coded in pink because it was thought that some recovery was possible on that work (being completed). This is further reflected lower down the table which shows the programmed completion date for Edinburgh Park viaduct was May 2009 but the forecast date for completion was June 2010. This was significant slippage but by the time of this report the work was

almost complete. Where an item was not on the critical path, then delay to that item may not necessarily impact on the sectional completion dates or the overall programme.

It can be seen that not all items were considered to be recoverable at this time, for instance the delivery of all IFC drawings and the granting of all consents and approvals. Accordingly it was not thought that the forecast date given in the right hand column could be improved upon, and they are therefore marked in red.