

**The Edinburgh Tram Inquiry
Witness Statement of Gary Easton**

Statement taken by Farrukh Iqbal on 7 September 2016.

My full name is Gary Easton. I am aged 55 years. My contact details are known to the Inquiry.

Introduction

I am currently employed as the Regional Leader in Scotland & Ireland for Turner & Townsend (T&T) Infrastructure. I had two periods of involvement with the Edinburgh Tram Project, the first from August 2005 to April 2007 and the second from August 2011 to April 2014. During the first period I was tasked with various roles as required by TIE. During the second period I held the role of Commercial Lead with T&T and I was responsible for cost reporting, change and contract management.

Statement:

Introduction and my involvement in the project

1. I have a Bachelor's degree in Quantity Surveying and a Master's degree in Project Management and Property Development. I am currently a member of the Royal Institution of Chartered Surveyors. I began my career as a Quantity Surveyor in 1984 and have 33 years' experience in the Infrastructure and Construction Industry. My experience includes working on Infrastructure projects involving heavy and light rail, water, airports and aviation, and also mixed use developments.
2. Before my involvement with the tram project, I had previously undertaken many roles with Turner & Townsend relevant to the tram project within Infrastructure, civil engineering and building projects. These roles included working with clients such as BAA at Heathrow and Gatwick and on their rail-related projects, including Heathrow Express. I had also worked for a number of utility companies such as Anglian Water, manufacturing clients such as Toyota and government agencies such as the PSA, MoD, the Department of the Environment and Forth Ports. Having worked with these clients on different projects, I

gained a lot of experience in the development and delivery phase of complex building and infrastructure projects with interfaces between construction activities, client operations and the public. I was familiar working with clients and project teams in a structured environment with clear organisational accountability for performance.

3. Following the end of the first period of my involvement in the tram project in April 2007, I worked on a number of other projects for T&T that included a distribution centre for Forth Ports at Grangemouth; biomass plants for a joint venture between SSE and Forth Ports called Forth Energy; a new operation centre for Scottish Water; and on the set up phase for the Nexus Tyne and Wear Metro, asset management replacement project in 2010. I was involved with the Dublin Metro North, which was a light rail metro project from Dublin airport to Dublin city centre. I also worked for Scottish Water on a change programme called Frontier, which was to design and deliver business improvements and efficiency in the SR15 Investment Programme (2015-2020).
4. I will be referring in my statement to the two principal phases of my involvement with the Edinburgh Tram Project as **pre-mediation** and **post-mediation**, with reference to the Mar Hall mediation that took place in 2011. Pre-mediation, I worked intermittently in TIE's team on a number of different tasks, between late August 2005 and April 2007 when I left the project. Post-mediation, T&T were engaged by City of Edinburgh Council (CEC) to provide project and commercial management services. T&T started to mobilise in August 2011 and commenced services provision at the end of September 2011. I was the commercial lead of T&T's commercial team.
5. Since leaving the tram project in April 2014 I have undertaken a business management role in T&T. I now lead T&T's Infrastructure business in Scotland and Ireland. I also work in client assignments on major projects which include providing commercial support to the Battersea Power Station redevelopment, commercial roles for Network Rail on the Edinburgh Glasgow Improvement Programme, and also commercial reviews for Scottish Water of their Alliance contract arrangements in 2014.

PRE-MEDIATION – August 2005 until April 2007

Team / Structure

6. Turner & Townsend (T&T) were engaged from August 2005 as a sub-consultant to Scott Wilson Railways (SWR) in the contract that SWR had with TIE, referred to as the TSS contract. When SWR was appointed under that contract TIE confirmed that they wished to deliver the management of the project themselves. Therefore, only where there were gaps in their structure, would they invite TSS to propose individuals to work on tasks within the TIE structure, or if there were intermittent or specific tasks that they needed TSS to do, then they would request support from TSS. T&T provided staff to work within TIE's team, within TIE's offices and to TIE's direction until such time as TIE filled those positions. The roles and responsibilities for T&T were not related to the TSS defined scope of service, nor defined at the outset in 2005 and generally I worked on some of the commercial tasks. I did not have a set continuous role during the pre-mediation phase, and I was asked to undertake a number of differing tasks on an intermittent basis.
7. Schedule 2 of the TSS Contract (page 86, TIE00899946) lists key personnel. Scott Wilson Railways were the lead consultant and managed the TSS Contract. The TSS contract lists individuals from SWR, Aedas, Interfleet and T&T. I was not aware or involved in what either TIE or SWR instructed Aedas or Interfleet to do. I am not aware what Aedas or Interfleet's subcontract arrangements were with SWR. I did not have any direct dealings with Aedas and Interfleet on the tram project.
8. I mainly worked in TIE's offices and reported to Gerry Henderson, TIE Commercial Director, until he left the project in May 2006. I then worked with Susan Clark, TIE's Head of Delivery, from September 2006 until April 2007. I also worked with Geoff Gilbert, who was TIE's Project and Commercial Director during that period of time. Reporting was generally done verbally given that I was working in the TIE office.
9. TIE utilised T&T staff from time to time in a number of tasks including, for example T&T colleagues Alan Renfree who was asked by TIE to initiate some project management processes, which were discontinued after just a couple of months. I was not involved in these tasks so I don't know why TIE did not continue these but I am aware that Alan returned to his main project at Nottingham LRT immediately thereafter. Graeme Walker worked with TIE on the proposed safety management processes. Jim Bruce assisted with the MUDFA tender evaluation until he stopped working on the project in January 2007.

John Pantony and John Lyall worked within the TIE estimating and commercial team until they left T&T In summer 2007. Nina Cuckow worked with the TIE Risk Management team, John Low and Richard Hookham were involved in liaising and facilitating discussions with the utility companies until they left, which was in the second quarter of 2007. Tom Hickman maintained progress updates to TIE's programme until he was recruited by TIE in May 2007. Syviu Rosu helped TIE to set up some reporting methodologies until he left in December 2006. Toby Kliskey assisted TIE with administration of the documentation for the Infracore ITN and the contractors' consolidated proposals until he left the project, which was in November or December 2007.

10. I was not aware of what prior experience SWR's TSS team had in relation to similar projects to the Edinburgh Tram Network. For T&T, people that had similar comparable experience included Alan Renfree, Richard Hookham, Neil French and Bill Woolgar who was our UK Project Management Managing Director all of whom had successfully delivered a number of other tram projects around the UK. These projects included Tram projects in Sheffield, Croydon and Nottingham where utilities diversions and on street tram routes were required. The other members of our team had experience of utilities, highways and rail projects. Bill Woolgar provided support and advice to the T&T team and also had meetings from time to time with senior people from TIE and SWR.

11. I do not believe that TIE made good use of TSS's expertise. TIE wanted to deliver the management of the project themselves and used TSS staff to augment their team when there were gaps in TIE's structure. An example of where T&T discussed this issue with TIE was in meetings my managing director, Bill Woolgar, held with SWR and TIE to discuss matters on the project such as organisational accountability and current project issues that had to be addressed to help ensure a successful outcome. These meetings took place in June 2006 and Bill explained to me after one meeting that he had handed over a letter (WED00000085), to TIE on 15 June 2006. This was followed up by a letter from SWR to TIE dated 22 June 2006 (WED00000086), which addressed some of the topics facing the tram project at that time. I have provided a copy of these letters to the inquiry.

I have been asked to comment on the main matters raised in the letter as follows:-

Mr Woolgar's comment that there was an urgent requirement for Halcrow to complete the utilities design:

Halcrow were the Systems Design Services contractor (SDS)'s sub-consultant and Mr Woolgar is pointing out that Halcrow need to complete the utilities diversion design to meet

the swept path alignment of the track infrastructure, the cost parameters in the budget, the traffic management and temporary works plans. I was not involved in the TIE/SDS design work stream, therefore cannot comment on specific items, however I am aware from roles on other projects and in the post mediation phase that it is important to progressively demonstrate how the proposed utilities diversions design removes any conflicts with existing and new infrastructure. The two stage MUDFA tendering process was intended to support this approach.

Mr Woolgar's comment on the TSS role

Mr Woolgar is stating that in his experience TIE's approach to engaging resources from TSS on a task basis under TIE's supervision does not secure commitment to get the best talent from TSS owing to lack of clarity on services and duration to be provided. In my experience on major projects it is important for clients to provide a clear scope of service, responsibilities and commitment to the project duration to secure a capable team. I believe this was demonstrated in the post mediation phase where CEC provided T&T with a contract to deliver a defined scope of service for the duration of the project. T&T responded by mobilising a capable team from our local team in Scotland and also across the UK and Ireland.

Mr Woolgar's comments on organisational accountability

Mr Woolgar is stating that he believes there is lack of clarity between TIE, SDS and TSS regarding roles and responsibilities. In my experience it is important to clearly define client, project management, design and delivery roles to ensure that accountability for decision making and performance is established. I believe these matters were successfully addressed in the post mediation phase.

SWR's comments on inappropriate risk allocation

SWR would be in a better position to clarify their comments regarding risk allocation. I was not involved in the TIE/SDS design work stream, so it is difficult to confirm what SDS's approach was to meeting TIE's requirements, the Infraco's contractual requirements post novation and the project's best overall interests. One issue that occurred post mediation was the requirement for our team to work with CEC and Infraco to confirm the scope of highways replacement given the spatial constraints of existing pavements, diverted utilities and new tram infrastructure. The approach took into account, practicalities of site conditions and value for money considerations.

SWR's comments on the organisational structure not being as effective as it needed to be:

SWR would be able to comment on the issues that they raised. Their letter states that TSS is being used as a "body shop" which I understand to mean that TSS is providing individuals to perform roles within TIEs structure to their direction rather than providing defined services. The letter also states that TSS is discussing the entire TSS scope with TIE which would help TSS concentrate on "defined" services. I did not see a change in TIE's approach and they continued to request support from individuals within TSS to work on tasks or roles within TIEs structure. As I have mentioned, in the post mediation phase, CEC provided T&T with a contract commitment to deliver a defined scope of service for the duration of the project to completion and T&T was clear on what all of their obligations and responsibilities were.

12. In my view the weaknesses in the TIE structure in the pre-mediation phase were a lack of accountability and a lack of clear decision making regarding the project scope, for example the extent of repairs and replacement to streets and pavements. Another example, was accountability for the delivery of the Employer's Requirements for the Infracore ITN tender. TIE staff and SDS had been involved in the development of the Employer's Requirements and then TIE requested SWR to manage the process in September 2006 TIE did not operate cross team control group and progress meetings for each of the key work streams, for example Utilities, Design, Programme, Commercial, Stakeholders, etc. The result was a lack of visibility across the project team and clarity regarding the approach, refer emails 27 November 2006 *CEC01785957, CEC01785958*) and 8 Feb 2007 - *CEC01790406*

13. I am aware that SWR believed that TSS were not being used effectively, however I did not attend the TSS contract management meetings they had with TIE and therefore I can't comment on the specific items SWR may have raised. An example when SWR sought my views on how TIE was using TSS followed a meeting that SWR had with TIE in December 2006. I responded to SWR by email dated 22 December 2006, attaching draft contents for a letter (*WED00000087*, and its attachment *WED00000089*). These confirmed my concerns regarding TIE's ineffective use of TSS resources. For example, I believe SWR had discussed with TIE that there was a need to form integrated and accountable teams to provide the right quality of resources. In my experience, greater organisational accountability for performance, effective delivery of service and company expertise could be provided where there was a defined scope of service. Certainly this was similar to the role that T&T performed during the post-mediation phase where T&T were directly contracted to CEC and similar to other Light Rail Transport projects that T&T have completed. I am not sure if SWR sent this letter to TIE since generally SWR did not copy

me into the correspondence that they sent to TIE as they were the lead consultant. I did not see TIE make any changes in the period December 2006 to April 2007 when I left the project. From what I saw, TIE continued to recruit contract or permanent staff to fulfil roles and in an effort to address staff churn. It is difficult to specifically confirm what the long term impact of TIE's resourcing strategy was since I left the project in April 2007.

14. I am not aware of why TIE was set up in the way that it was in the pre-mediation phase. I was not made aware of its staffing and procedural objectives. In my view, there seemed to be a lack of governance and decision making within TIE regarding the project scope and how the various teams within TIE were instructed.

Scope and Execution

15. T&T was a sub-consultant to SWR under a contract (**WED00000090**), which I have supplied a copy of to the inquiry. SWR were appointed by TIE in August 2005. I have seen a copy of the TSS Contract between SWR and TIE, dated 25 July 2005 (**TIE00899946**). SWR managed our involvement from 2005 by providing instructions on tasks that TIE had discussed with them. Where TIE approached us directly to request tasks we would inform SWR. SWR and T&T staff were seconded into TIE, worked alongside TIE in their offices and took direction from TIE. SWR had periodic Contract Management meetings with TIE, however as sub-consultants to SWR, we were not invited to these meetings. I was aware that T&T had a sub-consultant's agreement with SWR who were the lead, but at the time I never saw SWR's TSS Contract, as it was presumably kept confidential between TIE and SWR. I had seen some of the TSS bid documentation so understood that there were services described in that document. I was not aware of what SWR were actually instructed to do by TIE other than where I was informed, generally verbally, by SWR. In practice SWR or TIE would instruct T&T to undertake tasks under TIE direction rather than T&T being commissioned to deliver scopes of services as described in our contract documents.
16. As I was not involved in the design work stream, I do not know what steps were taken by TIE, such as surveys, to improve their knowledge of the location of existing utilities and scope of diversion works. TIE was responsible for instructing site investigations and TIE and SDS were responsible for reviewing these matters.
17. I refer to an exchange of emails between George Tedbury, TSS, and me dated 6 and 7 December 2005 (**CEC01863822**), in which, in accordance with normal practice, I issued a query to the client and legal advisors about sectional completion in relation to Liquidated

and Ascertained Damages (L&ADs) and completion incentives. In reply George Tedbury advised that sectional completion should be kept to the absolute minimum but noted an exception for Constitution Street and Granton. Mr Tedbury's response addressed the issues and TIE as client would need to confirm what should be included in the contract. I do not know if these matters were handled correctly in the MUDFA contract (CAR00000300), since TIE would have concluded all the contract matters with the legal teams.

18. I note that in an email exchange dated 23 December 2005 between Sharon Fitzgerald of DLA and Allan Hill of TSS (and sent also to me), Sharon Fitzgerald raised concerns about TIE's ability to access utilities and carry out the necessary diversions as part of the MUDFA works (pages 1-2, CEC01859200). I was not involved in this as TIE, TSS and DLA were reviewing the application of the Tram Act and also the New Roads and Street Works Act. I do not know if it caused a delay or additional cost to the project overall. I was not involved in the design work stream and the application of the Tram Act, the 3rd Party Agreements with the Utility Companies or the New Roads and Street Works Act during the design and construction stages.
19. I am aware of an email sent by John Low, TSS, to Sharon Fitzgerald, and copied to me dated 12 January 2006 (pages 2-3, CEC01872282). John Low stated that the utilities companies were largely neutral-to-positive about the MUDFA concept. I was not involved in the development of the concept but my understanding of it was to have a single contractor engaged through a multi-utility diversion framework agreement who would be responsible for all utility diversion works through the various TIE third party agreements with each of the utility companies. I was not involved in the meetings with the utility companies but my understanding from the project team was that utility companies progressively became more involved. I did not liaise with the utility companies before or during the construction work and could not comment on whether the involvement of utility companies was a factor leading to delay or increased cost in the tram project.
20. I am aware of Schedule 1 of the TSS contract (page 60, TIE00899946) and the TSS Monthly Progress Report for July 2006 (CEC00421623). Paragraph 1.2 of the July 2006 Monthly Progress Report (page 3, CEC00421623) identified services to be provided by T&T, SWR and Interfleet. I did not receive the July 2006 Monthly Progress Report and I cannot comment on the veracity of its content. I do not know if those lists accurately reflected the services supplied by each company. I did not lead a team who were responsible for delivering the services since TIE/SWR engaged me to work on tasks under their direction. T&T colleagues assisted TIE to undertake a variety of tasks under TIEs

direction. I did not have access to the whole SWR team or the T&T or Interfleet teams so I cannot comment on all the tasks that they were involved in. It is difficult to reconcile what was in the SWR progress reports from the actual tasks that I was personally involved in within TIE's team. I cannot expand on what SWR did in the services they provided to TIE. I did not manage the whole of the T&T team because they worked within the TIE structure and TIE managed them individually. I was only aware of the tasks that I was personally involved in. Lead persons from SWR would occasionally update me on matters that they discussed with TIE at their contract meetings. T&T were never permitted during the pre-mediation period to deliver a scope of service because of the way that TIE wanted to use T&T to provide support with individual tasks. Whilst T&T occasionally provided input to SWR for monthly progress reports, I only infrequently received the completed report that SWR had given to TIE.

21. I have now seen a copy of The OGC (Office of Government Commerce) Gateway Review TSS Brief – draft, issued by SWR and dated 17 August 2006 (CEC01789452). I note from this that TIE asked TSS to support it in preparing for the OGC 2 Review. My understanding generally from projects I had been involved in was that the aim of an OGC 2 review is to provide a gateway review which looks at the management arrangements on the project, procurement strategy, stakeholder engagement, governance terms and reporting. I did not have a role in the preparation for the review as TIE asked me in late August 2006 to assist with the assembly of the ITN tender documentation rather than become involved in the preparation for the OGC review. I was not involved in the OGC review itself or any of the interviews and I did not receive a copy of the report, but I recall that TIE verbally confirmed that there were no fundamental issues in the outcome of the report. I do not know what questions were raised during the review.
22. I am aware of an email from Susan Clark to Jane Gibson and Andy Steel dated 24 September 2007 (CEC01652668). A brief was attached to the email, which proposed the appointment of T&T by CEC (CEC01652669). The proposed scope included T&T's appointment *"to assess and quantify the level of public sector risk"* in the proposed Infracore and Tramco contractual arrangements. The proposed remit included providing *"a reasoned explanation of the adequacy or otherwise of the available financial headroom, in view of the identified risks retained by the public sector, their probability of occurrence, impact on cost and time to the extent that these are not already provided for within the Project Risk allowances, the circumstances which would bring about the realisation of these risks and the mitigations that should be applied to reduce or avoid the risk impact"*. I was aware of this proposal at the time. SWR contacted T&T and one of my colleagues, Fraser McAlister,

wrote to SWR raising a number of queries on the letter that they had sent T&T. Fraser issued that letter to SWR, however neither SWR, TIE nor CEC made any contact back to T&T. I do not know why T&T were never asked to perform the role. I attach the letter sent by my colleague Fraser McAlister to SWR, (Ref attachment: "TT to SWR response on due diligence").

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23. I am now aware of correspondence that indicates that OGC added a separate assignment to review risk that remained with the public sector. I have seen emails between Willie Gallagher, Mathew Crosse, Duncan Fraser, Susan Clark and Malcolm Hutchison, dated 24-28 September 2007 (pages 2-4, CEC01603561), (TIE00036015) and a further email response from Rebecca Andrew dated 2 October 2007 (CEC01561673). I do not know if OGC were ever instructed to perform this role. T&T did not produce advice for CEC or to advise them on the risk they would carry.
24. I have seen a draft paper by TIE headed 'Requirements for Services from TSS' dated 18 December 2006 (CEC01787712). I have also seen a proposal by SWR to TIE on TSS contract change dated 17 August 2007 (CEC01660985, CEC01660986) and a draft letter from SWR to TIE dated 18 October 2007 (CEC01444044). I note that these contained references to proposed reductions in the TSS services and charges based on TIE's budgetary constraints. There was no real change made in the TSS services and charges as far as I was aware. In 2007 towards the end of T&T's involvement in the pre-mediation phase, there were fewer TSS people working on tasks and TIE's strategy was to dispense with TSS personnel. TIE people, such as Susan Clark, explained that they were looking to fill those posts themselves. One example might be my colleague, Jim Bruce, who had helped on MUDFA. Jim's work was discontinued when Martin Hutchinson was recruited by TIE to be the commercial manager.

Procurement / Contract Close

25. In December 2005 I was asked by Gerry Henderson to assist TIE in the assembly of the stage one MUDFA tender documents for the utilities diversions. Those comprised SDS's bills of approximate quantities, designs and specifications and DLA Piper's contract documents. At the time TIE advised that a two-stage tendering approach would be implemented to meet TIE's programme dates. Two stage tendering is commonly used within the industry to secure the contractors input into how the works are planned and also to optimise the overall timescales of the contract. The two stages involved; Stage 1 Initial

tender and then Stage 2, pre-construction, where the Contractor would work with TIE and SDS, to develop the MUDFA designs, and obtain approval from TIE to the price and programme prior to commencing the Construction works. In December 2005 and January 2006 I was involved in developing the requirements for Stage 2 pre-construction services for inclusion in the Stage 1 initial tender price. The pre-construction services confirmed the Contractor's responsibilities for developing their Stage 2 price and programme proposals. In March 2006, TIE then asked me to move from assisting in the Stage 1 Initial tender evaluation stage prior to Gerry Henderson leaving the project in early May 2006. Ian Kendall, TIE's project director, also left the project in early May 2006. Other than assisting TIE respond to queries on some of the MUDFA tender evaluation during the period May to July 2006, I had no other involvement in MUDFA utilities diversions from this time onwards.

26. TIE determined the structure and programme for the MUDFA tender. SDS were responsible for assembling and reviewing the utility company information and SDS were responsible for designing the diversions. Utilities information was used by SDS to develop the bills of approximate quantities for the MUDFA tender documents. Telecoms information was not available in December 2005 and would have come later as part of the tender process. TIE was responsible for managing the engagement of the utility companies and agreeing requirements in accordance with statutory legislation such as the New Roads and Street Works Acts and the Third Party Agreements that were put in place by TIE and the Utility Companies.
27. I have seen a presentation relating to a report to the MUDFA Group on the evaluation of the ITN Tender Submissions for the procurement of the MUDFA Contractor for the Edinburgh Tram Network, dated 6 July 2006 (CEC01877967). I was not involved in the assessment of the initial stage one tender programmes and do not know how these queries were resolved. I was not involved in predicting the time required at this stage or the later stages. TIE, SDS and MUDFA would have been responsible for establishing the time required.
28. I refer to my email to Martin Hutchinson and copied to Geoff Gilbert, dated 16 February 2007 (CEC01792350). In my email I discuss a document listing what should have been in the MUDFA contract and what was actually included. This related to my colleague Jim Bruce's tasks who had been assisting Alasdair Slessor, TIE's MUDFA Project Manager, and the legal teams to assemble the final contract documents and schedules. These documents were then provided to TIE in their offices at Citypoint in early October 2006. It appeared that following Alasdair Slessor's departure from TIE in October 2006 that all of these contract documents had not been passed on by Alasdair Slessor to Martin

Hutchinson, the new TIE commercial manager who I believe commenced work in late October or early November.

29. After Ian Kendall and Gerry Henderson had left in May 2006, TIE appointed Andie Harper in late July 2006 as the new project director. Following this, Geoff Gilbert, Commercial Director and Susan Clark, Head of Delivery were appointed in August 2006. In August 2006 TIE asked me to support them in the assembly of the Infraco Invitation To Negotiate (ITN) documents. Prior to this time, the Infraco ITN documents had been developed by people in TIE and SDS. I was involved in the assembly of the Infraco ITN documents and TIE issued these to the bidders in October 2006. The Infraco ITN tender documents were produced by the various members of the team. These included TIE, SDS, SWR, and DLA who were responsible for Instructions to Tenderers, Employer's Requirements, Design information and the Contract Terms. I was involved in tracking the progress of each of the sections from the team. I then assisted TIE to respond to bidder's queries and attended some of the meetings with bidders during the tender period (Bilfinger Berger Siemens and Bombardier Grant Rail Laing O'Rourke). I helped to evaluate the scope proposals in the bidder's tenders in January 2007 and I assisted TIE in identifying what information would be provided to bidders in the next stage of the ITN process, e.g. drainage and ducting details. After I left the project in April 2007 David Powell assisted TIE to prepare for the next stage of the ITN process and Geoff Gilbert led the commercial functions including Infraco procurement.
30. Prior to my involvement in the tendering process for the Infraco contract, TIE had undertaken evaluation of the prequalification proposals from the contractors and set the dates for issue of the ITN to the bidders in October 2006. I was not involved in these stages so I cannot confirm when they took place. I know that TIE set the dates for the stages in the tendering process.
31. I have seen an email from Stewart McGarrity to me dated 24 August 2006 (CEC01783323), which suggests that I was responsible for writing up the procurement strategy. I was not involved in devising or writing up the procurement strategy. I was involved in the assembly of the Infraco ITN documents. The following documents were attached to the same email: Cost versus Risk Transfer of Infraco Funding Options (CEC01783324); Costs of Funding for Alternative Procurement Routes for Infraco (dated 18 April 2006) (CEC01783325); Minutes of the IDM Meeting on 16 May 2006, discussing the DFBC Contents (CEC01783326); the Draft Outline Business Case (dated March 2006) (CEC01783327); and SWR Meeting Notes from meetings on 18 and 22 August 2006 about the OGC Gateway Review 2

(CEC01790934). TIE developed the procurement strategy, and I understood that the Infraco ITN was the first stage in a negotiated tender process which would lead to a final set of contract terms and a contract price. I do not know what factors drove the price negotiations from TIE or CEC's perspective and how these turned out. I was not involved in the financial evaluation of the Infraco ITN in quarter one of 2007, or financial evaluation in the subsequent proposals or final negotiations. These took place after I left the project in April 2007.

32. The responses from bidders to the Infraco ITN in January 2006 provided TIE with feedback from the bidders on the design, pricing and commercial issues. I was not involved in the financial, commercial or design evaluation of the bidders proposals therefore I do not know how TIE and SDS responded to specific issues. I was not involved in the later stages of the procurement process following the Initial ITN stage and therefore I do not know how these matters were concluded in the final Employer's Requirements, Contractors Proposals and Contract Agreement.
33. I was aware that TIE were reviewing the procurement milestone dates following their discussion with bidders, which involved a staged release of some drawing information to be supplied to the bidders. I am aware of the TPB paper headed 'Outline of the Procurement Strategy', and dated 18 September 2006 **(CEC01794008)** and the note by Geoff Gilbert and Martin Donohoe on Value Engineering (VE) **(CEC01791191)**, attached to an email **(CEC01791190)** from Martin Donohoe to Geoff Gilbert dated 12 March 2007. I did not receive the TPB paper itself, so I cannot comment on it. I was aware that Geoff Gilbert had had discussions with the bidders on how VE may be incorporated into the final stage of the procurement process, but I was not involved in those meetings or how the process would operate. The note stated that my assistance would be needed with the VE strategy. I do not know whether this document accurately described the strategy deployed during the procurement process. I was not involved in the later stages of the procurement after April 2007. I did raise queries with Geoff Gilbert and Susan Clark regarding the alignment of SDS design information with the commitment that TIE and Geoff Gilbert were making to bidders. I refer to my email to Geoff Gilbert dated 27 November 2006 **(CEC01785957)**, and also my email to Allsa McGregor dated 18 January 2007 **(CEC01789447)**. Although I provided my comments to Geoff Gilbert, I do not believe he confirmed to me how he planned to take my comments into account.
34. I do not know what the financial impact was of the design and utility diversions not having been complete by the Infraco date of award. I was not involved in the evaluation of the

prices submitted to the Infraco ITN in January 2007, and I was not involved in the negotiation of the fixed-price risk assessment and novation of design risk in the final stages of the procurement and the Infraco award. The ITN process involved negotiated procurement involving staged design and obtaining final proposals from the contractor and was a process that was typically used in the industry. I was not involved in the financial negotiations but, in general terms, tendering and procuring the contract at the same time as developing the design allows for better feedback from the bidders at the initial ITN stage, which can aid the final procurement stages. When evaluating the advantages and disadvantages of negotiated procurement, involving staged release of design information compared to single stage tendering; good practice would involve consideration of market interest from bidders including the volume of tender opportunities, the level of investment bidders are prepared to make and the client's approach to risk transfer.

35. I have seen an email from Sharon Fitzgerald but not copied to me, dated 23 March 2007 (CEC01621726), about improving the MUDFA contract which included consideration of amending the pricing and incentivisation mechanism. Attached to the email was a TIE note (CEC01621732), on MUDFA Contract Improvements, with DLA comments dated 23 March 2007. I do not recall receiving these emails as I was not involved with MUDFA at this stage, as TIE had asked me to assist in the Infraco ITN. Having now read the email it is not clear to me why the Contractor, Alfred McAlpine, was seeking amendment to the pricing and incentivisation in the contract at this point. I do not know what was done about these issues.
36. I attended one or two meetings and responded to some minor follow-on emails in May 2007. At that point I stopped working on the project completely as I had fulfilled the role agreed between my Director Bill Woolgar with Andie Harper to assist TIE to assemble the ITN tender documents. Following my departure from the project TIE continued to request my colleagues' assistance on ad hoc tasks in the Infraco tender document assembly process until late 2007. TIE also asked T&T to provide junior Quantity Surveyors to assist TIE with works measurement tasks in 2008/2009.

Design Management

37. I had limited direct access to SDS. This was because TIE managed the Design and the SDS contract during the pre-mediation phase themselves. When I was working on various tasks within the TIE team, some of the TIE staff commented on SDS's progress and I had a general awareness that SDS had raised some issues to TIE regarding design changes and scope. I was not involved in the detailed resolution of any of those SDS issues.

38. Neither I nor T&T were responsible for the management of the design for, or the supervision of the construction of, the MUDFA advanced utilities diversion programme. I was involved in the assembly of the first stage tender documents and some of my colleagues may have had meetings with the utility companies, but this was prior to mobilisation of the MUDFA contractor who commenced work in the pre-construction phase around the fourth quarter of 2006.
39. Neither I nor T&T were responsible for monitoring and reporting on progress in obtaining consents during the pre-mediation phase.
40. I note that in an email from Phil Douglas, TIE, to me dated 7 March 2006 (TIE00710391), he referred to a lack of detail about utilities in drawings concerning the airport. He also referred to BAA cancelling a meeting which had been intended to establish the completeness of the information. I assisted TIE in compiling the sections of the MUDFA tender documents produced by TIE, SDS, TSS and DLA. SDS were responsible for examining the accuracy of the details for utility diversions. SDS were responsible for design and obtaining information from the utility companies and 3rd parties regarding the details of the existing utilities information. TIE were to manage the pre-planning phase with MUDFA to work with SDS and the utility companies to resolve final details and to put in place the necessary approvals. The approach recognised the need for TIE and SDS to work with the utility companies to develop the details should these be lacking.
41. I am aware of an email from Duncan Fraser, CEC, to Trudi Craggs, TIE, dated 14 July 2006, and subsequently forwarded to me by Trudi Craggs (CEC01782048). This makes reference to the difficulty of employing the limited powers with the Utilities Act 1991. Duncan Fraser recommended that TIE ensure that there was a proof positive performance based design and construction mechanism in the MUDFA contract. I cannot comment further on this note as I was not involved in the drafting of the technical specifications. SDS would have been involved in drafting the technical specifications.
42. I have seen the minutes of an external stakeholders meeting dated 31 August 2006 (TRS00002724). The minutes show that Duncan Fraser of CEC asked about consultation with CEC planners, and that I was to discuss the matter with Trudi Craggs. I do not recall the details of conversation with Trudi Craggs. The TIE development team and the design and management team, were responsible for managing the SDS contract and how consultations with the relevant CEC departments were carried out.

43. I was not involved in the discussions that TIE had with SDS regarding the design and utility diversions at the time of the Infraco ITN tender or award and cannot comment on the intended state of completion of the design or utility diversion works. SDS agreed the designs that would be produced for the Infraco ITN Issue and delivery was confirmed in an email dated 29 September 2006 (WED00000105), by Ailsa McGregor, TIE's SDS design contract manager. I have supplied a copy of this email to the Inquiry.
44. It has been said that the Employer's Requirements, the Infraco proposals and SDS design became misaligned. As I was not involved in the design work stream, the review and agreement of the Contractor's commercial qualifications and technical proposals it is difficult to comment on specifically what became misaligned. Whilst I was involved in the Infraco ITN stage I advised Geoff Gilbert of divergences in SDS design programme dates and the date for design information provision that TIE were committing to the bidders in my emails of 18 January and 8 February 2007 (CEC01789447 and CEC01790405). My understanding is that TIE's intention was to align the Infraco proposals and SDS's design information through discussion and negotiation of Infraco's consolidated proposals and SDS's detailed design during 2007. TIE were responsible for managing the SDS contract, including any changes and TIE also received feedback from the bidders regarding their queries on the design and assumptions in their proposals. My understanding now is that TIE would have been in a position to assess any misalignment, how it was addressed at the time and what issues arose following the Infraco Contract award in 2008.
45. Because I was not involved in the design work stream or the commercial negotiations with Infraco it is difficult to confirm what caused any misalignment of the Infraco ERs, Infraco proposals and the SDS design. The reasons may have been: incomplete design and a lack of alignment between SDS's design and the assumptions in Infraco's proposals. Alignment in major projects can be a challenge but in my experience, it need not be problematic if it is properly managed.
46. It may have been possible to avoid misalignment through better analysis of the issues and consideration of what was required. For example, a better understanding of Infraco bidder feedback leading to an assessment of what was needed from SDS design, and supporting the integration of design and the contractor proposals, might have helped.
47. It has been said that the misalignment of the Infraco ERs, Infraco proposals and the SDS design should have been addressed at the stage of novating the SDS contract to Infraco.

As I was not involved at this stage in the project I cannot comment on this. I was not involved in the commercial or the design evaluation of the ITN submission in January 2007 and I was not aware of any significant misalignment at that stage other than the resolution of TIE's requirement for the subsequent release of SDS design information and contractor proposals. I cannot comment on what occurred after this stage as I left the project in April 2007.

Project Management / Governance

48. In the early stages of the project, I was surprised at TIE's lack of structure and management procedures compared with the roles I had undertaken in the other client project structures. TIE was a new organisation and did not have established procedures, therefore, the tasks and work required were discussed between Scott Wilson Railways Ltd (SWR) as the TSS lead consultant and TIE on an ongoing basis. I do not recall there being a clear Project Execution Plan or project structure to explain roles, responsibilities and governance at the outset and generally how the project was intended to be implemented. SWR managed the TSS contract as the lead consultant, and I was not invited to their contract management meetings with TIE. They would occasionally provide verbal briefings, however it meant that I did not have a clear understanding of how service delivery and procedures were to be structured throughout the tram project. Similarly, TIE had meetings with CEC and this meant that I received limited information and little explanation of key project decisions.
49. Schedule 1, paragraphs 2.7 and 8.2 of the TSS Contract (pages 63 and 68, TIE00899946) contained an obligation to maintain the change control register. T&T was not responsible for this during our pre-mediation involvement.
50. My working relationship with TIE during the pre-mediation phase was based on the delivery of tasks and it was not always clear to me what influence I had and what further action TIE took in relation to decisions made after completion of those tasks. TIE reported internally to their management team, their board through and I reported initially to Gerry Henderson and then to Susan Clark.

Programme

51. T&T were not responsible for establishing key stage dates in the project programmes (e.g. Tender Issue dates, Contract approval dates, etc). T&T provided staff, including Tom

Hickman, under the direction of TIE to maintain progress updates to TIEs programme until TIE recruited their own Individuals for those tasks,

52. The TSS Contract included a summary of the Master Project Programme at schedule 4 (page 108, TIE00899946). Key dates had been included in the SDS and TSS tender documentation. TIE confirmed the key programme dates and the critical dependencies such as approval dates for the business case and award of the MUDFA contracts and Infraco. I did not have access to any information regarding dates that were agreed between TIE and CEC and had limited access to any information that was discussed between SWR and TIE in their contract management meetings. From my point of view, all that TIE did was to confirm the dates for each of the individual tasks that I was involved in. In my opinion, the Master Project Programme could have been achievable with the right approach and decision making. I was not involved in reviewing or setting the design dates or procurement milestone dates, or progress assessment or programme development
53. My understanding was that the principal utilities were to be diverted in advance of the award of the Infraco contract to avoid delays and prolongation to the Infraco contract. I was generally aware from TIE that there were some slippage issues with regard to design progress. I was not involved in the design work stream, and so I do not know what the actual reasons for the slippage were. I am not aware of any details of time pressures to complete the project. However, I would have expected that TIE and CEC would have wished to minimise any additional inflation and resource costs that might result from a later completion.
54. I am aware of the MUDFA ITN document dated 23 February 2006 (CEC01856772), which contained an indicative programme. TIE set the programme dates and my understanding was that utility diversions would be completed in advance of the infrastructure works in time phases or work stages relating to sections of the tram route. TIE were responsible for co-ordinating utility diversion access dates and also programme float to prevent delays between the contracts. The MUDFA utility tender documents contained provision for a preconstruction stage to enable TIE, SDS and the contractor to plan how the utilities diversion works would be undertaken. The purpose of a pre-construction planning stage was to enable the contractor to work with TIE and SDS, to review the designs, resolve queries, plan how the works would be constructed, develop detailed programmes and confirm the price for each work section. I was not involved in the pre-construction stage, therefore I don't know how TIE, SDS and the contractor undertook this work.

55. I am aware of an email from Stewart McGarrity, TIE, copied to me and dated 14 July 2006 (CEC01621728). The email attached a "Note on Key Commercial Issues" dated 12 July 2006 which stated that there was consideration given to the potential impact of delayed utility diversions on the infrastructure works when procuring the MUDFA contract (page 1, CEC01621729). TIE understood the potential impact and wanted to advance the utility diversions to avoid delay to the infrastructure works. TIE also considered whether a pre-construction phase for the second stage with MUDFA, on each work section, would better enable the works to be planned, designed and approved prior to proceeding. TIE would then be able to co-ordinate the MUDFA works and the Infraco programmes to prevent delay to the Infraco. I was not involved in setting the various contract dates for commencement of the pre-construction stages for each of the work sections, but I had expected TIE to consider the various contract dates and instruct the works to avoid delays. I was not involved in the conclusion of the MUDFA contract which would have been around September 2006, however I believe that works did not start on site until 2Q 2007 and therefore I would have expected TIE to co-ordinate the programme and instruct the MUDFA works to solve or mitigate the risks that were examined pre-construction planning stage. As I was not involved in the Infraco procurement after April 2007, I would not be able to comment on whether consideration was given to delaying the Infraco procurement to allow the utility diversions to be further advanced.

Cost

56. My understanding was that cost estimates for the tram project had been prepared by Scott Wilson Railways and Faber Maunsell during the feasibility design stages in 2001 and 2002. TIE managed the commercial function and would be in a position to confirm exactly what estimates of the capital costs of the project had been prepared prior to TSS and SDS being engaged in August 2005 onwards. TIE requested an approximate estimate to be produced in September 2005 prior to the Tram Acts being completed and development of SDS's designs and estimates. I was involved in this estimate with T&T colleagues and the limited information in the 2001 and 2002 feasibility designs were used since they were the only designs available. Cost data from recently completed projects and advice from SWR on structures cost data was used. I pointed out to TIE that four weeks was insufficient time to produce an estimate and queried when SDS's design and estimates were going to be produced. TIE informed me that they did not want much time spent on the estimate since SDS's designs and estimate would be available early 2006.

57. I have provided a copy of this draft Estimate Report, dated September 2005 to the inquiry (WED00000104) which summarised the construction cost at £360M at 2Q2003 price levels and a further version dated 27 October 2005 which summarised the construction costs at £382M and noted a number of specific exclusions. The changes were requested by TIE and included: uplifting the price level from 2003 to 2005 and adjustments to the Tram Depot and Tram Stops. (I attach the October 2005 Report, Ref "TSS Estimate Report_v2-27-Oct-05"). The estimates were not required to include assessments for risk or contingency and project on costs such as site investigations and design fees as TIE were assessing these elements.
58. TIE asked me to attend some meetings with TIE and SDS, when TIE were reviewing the SDS estimate in April 2006. My understanding was that the TIE commercial team would have liaised with SDS regarding the evolving designs and the development of the estimate. TIE managed these estimates from the beginning of 2006. SDS developed the estimates based upon their emerging designs to meet the requirements of the approved Tram Act. SDS developed these estimates during 2006 and my understanding is that TIE then developed these further for forecasting. The SDS estimates or the combination of the SDS estimates and the amendments that TIE made were eventually used in the Draft Final Business Case (DFBC), which TIE produced in late 2006.
59. I am aware of an email from Gavin Murray, TIE, to me dated 9 June 2006 within an email chain (page 1, TIE00028328), in which Gavin Murray says that he understood that I had been undertaking considerable work to get the construction cost developed and reconciled. I was not copied in to the previous emails in the chain, so I cannot confirm exactly what Gavin Murray was referring to. I was aware that SDS were responsible for developing the design at this time and also for producing estimates. Gerry Henderson and the TIE commercial team had been reviewing these. Other than the estimate that I was involved in during September 2005 and some discussions with TIE in April 2006 regarding the approach to assessing risk (which incidentally were never concluded due to Gerry Henderson and Ian Kendall leaving the project), I did not have any ongoing involvement in the development of construction cost estimates because that was managed by TIE, their commercial team, TSS secondees and SDS. I don't recall how much estimate development was done until Andie Harper became Project Director in late July 2006 and Geoff Glibert became the TIE Commercial Director in August 2006.
60. I have been provided with Tram Project Board Papers for the Preliminary Design Stage Project Estimate Update in November 2006. These include: an email from Norrie Kitson of

T&T (CEC01797196), the Preliminary Design Stage Project Estimate Update Paper (CEC01788433), Appendix A1 - Project Estimate Update (CEC01797204), Appendix A - Level 1 cost summary (CEC01797203), Appendix A Level 3 Project Cost Summary (CEC01797202), Appendix B2 Benchmarking Mersey Tram' (CEC01797200), Appendix C - Assumptions Register (CEC01797199), and Appendix D - Estimate Coding (CEC01797197 and CEC01797198). The papers provided also include: my email dated 10 November 2006 to Geoff Gilbert of TIE (CEC01797262) and my mark-up of TIE's the TPB paper (CEC01797269).

A. Development of the Preliminary Design Stage Estimate

61. The development of the Preliminary Design Stage Project Estimate was managed by Geoff Gilbert, TIE's Commercial Director. He used Norrie Kitson from T&T to help assemble the various documents from the members of TIEs commercial team. (CEC01797196). His email is to Val Clementson and Geoff Gilbert, requesting that Val Clementson prints the documents and provides them to Geoff Gilbert.

B The TPB paper and the Estimate

62. I note that in the paper for the TPB dated November 2006 (CEC01788433), the project estimate of £592.4 million was used for phases 1a - Newhaven to Edinburgh Airport, and 1b - Haymarket to Granton Square. I was aware that TIE were developing their Draft Final Business Case which would be finalised when the ITN tender prices were returned by Infraco bidders in January 2007. My understanding is that the TIE TPB project estimate was based upon SDSs developing design which would be required to meet the Tram Acts, CEC highways requirements, SDS cost estimates, TIE cost studies, Cyril Sweet's review of Utilities and TIEs programme. I was not involved in the development of this estimate and based upon my experience I would anticipate that estimate would include construction, design fees, client resource costs, land purchase, 3rd party costs, risk (scope, estimating uncertainty, programme delays) and inflation. The basis of this estimate is different to the approximate estimate for construction works that TIE requested us to provide in September. I was not involved in any cost reconciliations between the November 2006 estimate update and previous estimates of the Infraco ITN tenders.
63. I don't know whether TIE used tender prices, their own estimates or project benchmark rates. Generally in the industry, tender prices or preferably as built prices from completed projects are normally used to develop base cost estimates, and risk allowances taking into account factors affecting the outturn costs, such as design development, changes or potential programme delays.

C Cost Benchmarking

64. I note that in the TPB paper dated November 2006 (CEC01788433), it states that the tram project cost estimate had been further reinforced. I understand that TIE had obtained some tender prices from the Mersey Tram project Appendix B2 (CEC 01797200). Pricing information can be used from a project in one city to another, provided the work is similar and any differences are properly taken into account. I do not know what approach was used to take account for factors which were different between the two projects, for example, design specifications, ground conditions, structures and highways. I cannot therefore comment on the conclusion.

D Utilities Estimate

65. I note that in the TPB paper dated November 2006, there are observations about the cost estimate for utility diversions (paragraph 5.2.2, CEC01788433). I was not involved in the estimates, I cannot comment on the basis of the utility estimates. I do not know how complete the drawings from the utility companies were. SDS were responsible for developing the designs based upon the utility company information. SDS would also have done the site investigations. SDS would be able to comment on whether the designs accurately recorded the position of all utilities. I do not know if any adjustment was made when producing the estimate for the possibility that the utilities might be in different positions, or that unknown utilities might be uncovered. TIE and SDS would have made those assessments. I do not know if any adjustment or risk allowance was made for the status of the design, and that design changes might have an impact on utility diversions. The TIE estimating and commercial teams would have made those assessments.
66. The Assumptions Register - Appendix C (paragraph 6.2, CEC01797199) to the TPB paper dated 9 November 2006 (CEC01797205), refers to quantified estimates for the infrastructure and utility works having been prepared by SDS through their quantity surveyor, Corderoys. The Assumptions Register also refers to independent estimates having been supplied by Cyril Sweett. I note that in paragraph 6.3, those estimates were said to have been reviewed and reconciled by T&T. I was not involved in the reconciliations or revision of these estimates. TIE led the estimating work stream with input from TIE resources, SDS and one of my colleagues who was seconded into TIE's team. He used TIE's IT and email systems and, owing to confidentiality, information on estimates was not distributed and therefore I don't have TIE's reconciliations.
67. I am now aware of the content of the Cyril Sweett's covering letter, dated 16 October 2006 (TIE00206781), accompanying their draft Cost Plan for MUDFA Works (TIE00206780). As

I was not involved in developing the estimates, I cannot provide further comment. SDS would have the information on the likely scope of the utility diversion works.

E My comments on the TPB paper

68. I am aware of my mark-up of draft of the TPB paper (CEC01797269), which was attached in an email dated 10 November 2006 to Geoff Gilbert of TIE (CEC01797262). Geoff Gilbert asked me to comment on his draft TPB paper, although I had not had any involvement in the estimate work. I made a number of comments and suggestions to the summary of his paper from the general awareness I had from my role at the time with the Infracore ITN tasks. In my email, I commented on issues relating to highways scope, the impact of charettes, the robustness of preliminary design and items arising from recent discussions with the TIE team and bidders. TIE commercial, the TIE design management team and SDS would all have better information on what actual impact these items had on the estimates. I am not aware how my comments in this report were taken forward in the final version or in the estimating work stream that Geoff Gilbert managed. However, I requested that TIE take these comments into account in the design and procurement process. I did this, for example, in my email to Geoff Gilbert dated 27 November 2006 (CEC01785957), and also in my email dated 18 January 2007 to Ailsa McGregor and copied to Geoff Gilbert (CEC01789447). It was not clear to me what TIE did in response to these comments.

F Risk and Optimism Bias

69. I have now been asked my views on risk allowances based upon the papers submitted to the TPB in November 2006. My view now is that the risk allowance may have been reasonable for construction risks (i.e. risks encountered on site as opposed to design changes and contractual disputes) and that it was unlikely to cover all the commercial eventualities and delays on the tram project. I do not know the estimating methodology and data used for the tram project cost estimates since I was not involved in their development. I would not be able to provide any comment on the state of the design, or the awareness of the extent of the utility diversion works required at that stage.
70. I have been asked to comment on Optimism Bias. My understanding is that it is used to assess risk and uncertainty in project estimates and economic appraisals. I do not know the actual approach that was used in relation to cost estimates for the tram project.

Fees

71. I understand that the fees paid to T&T for services in relation to the TSS contract were approximately £3.5 million excluding VAT. A monthly profile breakdown has been provided (Refer document "Fees TSS and CEC Contracts")

POST MEDIATION – September 2011 until June 2014

Introduction

72. I was not involved in the Mar Hall mediation which occurred early 2011, and nor were any of my colleagues from T&T.
73. After the Mar Hall mediation CEC invited proposals from T&T and T&T were engaged by CEC in August 2011. My colleagues dealt with discussions relating to the contract and T&T's team commenced mobilisation in August 2011. T&T took over as contract administrator at the beginning of October 2011. The role for T&T was project and commercial management for the delivery of the project on a defined scope of service, entirely different to what we were asked to do in the pre-mediation phase.
74. Following T&T's appointment, my understanding was that CEC and Infracore had agreed the principles at the mediation which then led to CEC and Infracore concluding the supplementary agreement by September 2011. During our mobilisation phase, CEC provided copies of the Settlement Agreement and a workshop was held where Ashurst, CEC's lawyer, provided an overview of the Agreement and the main operative clauses.
75. T&T had a defined scope of service and a clear role to provide project management and commercial management within an established structure with CEC as client and the contractors. I reported to Julian Weatherley and then Rob Leach as the T&T Project Directors. I also reported to Colin Smith who was the CEC Senior Responsible Officer and Independent Certifier on change control and certifier of the Contractor's Interim payment applications, and Alan Coyle on cost reports which summarised the construction budgets, contract sums and changes.
76. T&T's post-mediation reports were formal and included detailed period reports on a four weekly basis and progress presentations to the CEC executive team, initially on a fortnightly basis between October 2011 to late 2012 and then every four weeks thereafter. T&T produced change control registers, secured sign off to change orders from CEC and provided advice notes where appropriate. Weekly client progress and change control meetings were held by T&T to ensure CEC had a full understanding of all the key issues and that changes were reviewed and actioned promptly. I also attended the commercial control group chaired by Colin Smith, and the four weekly interim valuation payment

application meetings that Colin Smith chaired where Bilfinger Berger Siemens (BBS) were in attendance as the Infraco consortium.

77. Colin Smith of HG Consulting had a clearly defined role as the Independent Certifier. My understanding was that the Independent Certifier role was to: (1) review Turner & Townsend's cost assessment of changes where there was a difference of opinion with Infraco's assessment, (2) review Infraco's application for payment with Turner & Townsend's assessment, make a determination and issue valuation certificates to CEC. The Independent Certifier chaired the valuation meetings between T&T and Infraco and facilitated discussions around any issues that arose. The appointment of the Independent Certifier helped to resolve differences in opinion and avoided formal disputes.
78. In early 2012, Colin Smith also became the CEC Senior Responsible Officer. My understanding was that the SRO represented the client, CEC, on the day to day activities for the client such as chairing the Control Group Meetings and assisting with any actions that fell to CEC. I was not given a copy of the SRO's actual responsibilities.
79. I led the T&T commercial team, managing the cost reporting, change management, review of payment applications and the services that we were asked to provide. The people that reported to me during the post-mediation phase in the commercial team were: Mike Mackenzie for cost reporting and the review of payment applications from Infraco and the utilities contractor McNicholas; Richie Hales, who reported to me on the review of legacy utility costs; and Ian Walker regarding change management. The reports involved inputs and review of the various deliverables that were part of our scope of service prior to issuing them to CEC.
80. T&T were required to resolve matters in accordance with the settlement agreement and contract terms. Where matters could not be agreed with Infraco, the Settlement Agreement provided for issues to be referred to the Independent Certifier for direction and certification or to CEC for consideration and decision making. CEC and Infraco both wanted to avoid disputes if reasonably possible. Infraco's approach was to resolve matters in accordance with the Settlement agreement and where there were differences in views with T&T, matters were referred to the Independent Certifier or to CEC for consideration.
81. T&T created an internal structure to assure the quality of our services. This involved review and reporting to our Transport Sector Lead and our Chief Operating Officer. This allowed T&T to provide constructive challenge to our project team, assure the delivery of our

services, utilise our wider corporate experience in this sector and provide support where we needed opinion or help from our other light rail or service experts. This approach and structure was similar to other successful Tram and major projects that T&T had been involved in.

Project Management

82. Initially, T&T mobilised a senior team in August 2011 to review the status of the project, establish a clear structure of our team and their responsibilities and how we would engage with CEC to deliver the project. For example, CEC put in place effective annual delivery plans, governance and delegated authorities, and executive and control group meeting structures. The control groups comprised design, utilities, progress, construction, commercial and change and Health and Safety Quality and Environment (HSQE).
83. T&T developed processes to integrate with this structure and we also initiated additional task meetings to manage the project effectively for each of these control functions on the project. T&T engaged directly with the utility companies and contractors to resolve issues. Specific examples of T&T developing and integrating processes include the change order task meetings with Infracore which enabled T&T to review change with Infracore, to feed into weekly CEC progress and change approval meetings. The weekly meetings were properly structured and minuted by either CEC or T&T. T&T also developed comprehensive four weekly period and fortnightly reports to CEC, the senior stakeholder group and the executive group including Transport Scotland representatives to cover programme, commercial risk, cost, technical assurance and HSQE matters
84. T&T had a very effective relationship with CEC. It was clear what T&T's scope of service was and how we were to deliver these services. There was a clear structure, clear governance and decision making processes, and this helped T&T deliver services and provide advice to CEC in order that they could make effective decisions as T&T's client.
85. T&T developed a master programme using Infracore's contract programme, CAFs tram vehicle contract programme and our programme for the utilities diversions. The T&T team developed the master programme to show and manage the critical path, enable 4 weekly progress assessments for the monthly reports, analyse issues, analyse variances between planned and actual progress and propose corrective actions. Meetings were held with each of the Contractors and CEC to review progress and confirm actions. The main focus was to plan and complete utilities diversions and maintain progress to Infracore's works. This meant

prompt agreement of technical issues, agreement of changes, management of interfaces and productivity.

- 86. I am not in a position to comment in any detail on the utility works that were carried out before the Mar Hall mediation as I was not involved in the design or construction stages of MUDFA. It can be a realistic goal to divert the majority of the utilities in advance of infrastructure works. However, subject to the extent of site investigations and the pre-planning and supervision, it was likely despite all of this that some residual utilities would be discovered during the construction of infrastructure works. Discovery was likely owing to the condition of the assets and the accuracy of the utility company records.**
- 87. It became apparent that there were conflicts between the infrastructure design and the utilities. Further conflicts emerged as the works were being progressed during the course of the post-mediation project and these were resolved. I cannot comment on what happened in the MUDFA contract with regards to cost and delay in connection with utilities in the pre-mediation phase. Post-mediation, T&T were not requested by CEC to pursue any remedies in relation to MUDFA defects.**
- 88. The T&T team's approach was to resolve utility conflicts, develop collaborative ways of working and relationships with the utility companies and the contractors, all aimed at minimising the impact on time and cost to the project. When differences and disagreements arose between CEC/ourselves and Infracore, wherever possible we resolved matters and where necessary they were escalated for decisions in accordance with the contract provisions.**
- 89. T&T were involved in assessing what further site investigations were required to confirm utility locations with the project team. This involved T&T, CEC, survey companies and the utilities diversion contractor (McNicholas) working together to identify the location of utilities and how issues could be resolved. T&T were the Contract Administrator, CEC approved the approach and provided specific instructions where required.**
- 90. The teams worked collaboratively with the utility companies and the contractors to promote practical resolution of issues arising on site and mitigate the impact of the utility conflicts. The issues were either a result of constraints encountered during track excavations when the utilities were opened up or legacy issues. Following commencement in the post mediation phase, T&T established utility working groups with the utility diversion contractor,**

Infraco and utility providers to proactively resolve the issues and escalate where appropriate to maintain progress.

91. The progress reports between November 2011 and November 2013 refer to *"legacy issues"*, which were unresolved items from the MUDFA works carried out on Scottish Water apparatus prior to the Mar Hall mediation. As far as I am aware the Scottish Water legacy issues have not been analysed in isolation, and so I cannot comment on how they individually impacted on the overall cost and duration of the project. It may have been possible to avoid the Scottish Water legacy issues, but I am not sure how, as I was not involved in the MUDFA construction stage or any of the discussions with Scottish Water prior to the Mar Hall mediation.
92. The senior Scottish Water representatives on the tram project were John Flett, Stephen Downie and Mark McEwen. The project team representatives were Colin Smith, CEC, Andy Scott, T&T, and Simon Nesbitt for Infraco. During the project Scottish Water attended the Utilities control group meetings to ensure all members of the project had a common understanding of the issues and plan for resolution. Where required, further meetings were held on specific technical matters, however, in my role as commercial lead, I was not required to attend these meetings.
93. Scottish Water had a number of issues on the project. These related to their views on the work that had been undertaken by MUDFA on Scottish Water's apparatus. In addition, there were issues with Scottish Water's view that Infraco's proposals on drainage connections had not been approved. These issues with Scottish Water were reported throughout the T&T monthly progress reports from November 2011 to November 2013. With regards to these issues, I am aware of the following T&T monthly progress reports: Progress Report number 3 dated 9 November to 8 December 2011 (CEC01891191); Progress Report number 4 dated 9 December 2011 to 27 January 2012 (CEC01889907); Progress Report number 5 dated 28 January to 24 February 2012 (CEC01889974); Progress Report number 6 dated 25 February to 27 March 2012 (CEC01942255); Progress Report number 7 dated 24 March to 28 April 2012 (CEC01890161); Progress Report number 8 dated 29 April to 26 May 2012 (CEC01890199); Progress Report number 10 dated 24 June to 21 July 2012 Progress (CEC01890244) Report number 9 dated 27 May to 23 June 2012, (CEC01932286); Progress Report number 11 dated 22 July to 18 August 2012 (CEC01951549); Progress Report number 12 dated 19 August to 15 September 2012 (CEC02017359); Progress Report number 13 dated 16 September to 13 October 2012 (CEC01891277); Progress Report number 14 dated 14 October to 10 November 2012

CEC01890244 is
Report 9 and
CEC01932286 is
Report 10

**(CEC01932700); Progress Report number 18 dated 3 February to 2 March 2013
(CEC02024340); Progress Report number 20 dated 31 March to 27 April 2013
(CEC02027146); Progress Report number 21 dated 28 April to 25 May 2013
(CEC02042690) and Progress Report number 27 dated 13 October to 9 November 2013
(CEC01983687).**

94. Further conflicts emerged as the works were being progressed during the course of the post-mediation project and these were resolved. I cannot comment on what happened in the MUDFA contract with regards to cost and delay in connection with utilities in the pre-mediation phase. Post-mediation, T&T were not requested by CEC to pursue any remedies in relation to MUDFA defects.
95. There are many advantages and disadvantages with utility diversion and infrastructure work being carried out by different contractors under different contracts. However, in my view, matters such as the extent of site investigations undertaken in the design phase to confirm the position of utilities assets under roads and pavements, the integration of design with the planned construction works, design assurance, interface co-ordination, supervision of the works, management of programme constraints, risk allocation, utility company engagement, all had to be considered in developing the right approach.
96. In the post-mediation phase Infraco as Design & Build Contractor had responsibility for managing and delivering SDS's design. The CEC technical team were responsible for reviewing any design submissions that the Employer was required to review, the T&T team monitored the programme, identified any slippages and corrective actions that were required.
97. I am aware of the T&T Progress Report number 18 dated 3 February to 2 March 2013 **(CEC02024340)**, and I have now been asked to comment on an email from Colin Smith dated 6 January 2012 which was copied to me **(CEC01934317)**. The email from Colin Smith concerned Infraco design management and design work beyond York Place. My reading of Colin Smith's email is that Infraco are explaining what design work had been completed and what was subject to ongoing change. I don't recall being included in the conclusion of this issue, Colin Smith would be in a position to answer the question.
98. In the post-mediation phase, CEC or Infraco were responsible for obtaining consents, depending on the type of consent that was required, and we monitored and reported general progress in our period reports.

Cost Management

- 99 T&T were responsible for managing the construction costs only, not the total cost of the project. CEC budget holders were responsible for managing the other budgets. I do not recall who all the CEC budget holders were for the various budgets. The final construction costs were included in T&T's final Infraco Cost Report dated 21 June 2014 (WED00000092). I have also provided a copy to the Inquiry of the Infraco final account dated 16 September 2014 (WED00000101). I led T&T's commercial team which prepared the cost reports and participated in valuation meetings with the Independent Certifier and Infraco where interim valuations and the final account were discussed and valuations were subsequently certified by the Independent Certifier.
- 100 A report by Faithful & Gould, entitled CEC Post Settlement Agreement Budget Report and dated 19 August 2011 (CEC01727000) recommended a budget of £742.92 million for the tram project. I was not involved in the development of this report and I am not aware of the terms of reference. T&T's monthly Progress Report number 3 dated 9 November to 8 December 2011, refers to the project budget provided by CEC of £776 million (para 4.1, CEC01891191). This was the post-settlement agreement project budget of £776 million confirmed by CEC which included the final contract price that CEC agreed with Infraco for the Settlement Agreement and contingency. T&T's team was responsible for forecasting construction works and Tramco costs only at the budget of £500.1 million. CEC were responsible for legacy costs and non-construction costs equating to £276 million. I do not have the detailed information relating to the £276 million. These budgets were fixed by CEC prior to T&T commencing our role in September 2011.
- 101 I note that the Faithful & Gould report dated 19 August 2011 describes various issues and concerns in relation to costs (paras 2.6, 2.7 and 2.8, CEC01727000). I do not know the basis of these issues. I cannot comment on Faithful & Gould's assessment as these were Faithful & Gould's comments in their report. When T&T became involved in the tram project, we were not asked to revisit the detailed exercise that had been carried out by Faithful & Gould. I do not know how the matters were addressed or what the cost implications were for the tram project. T&T was not involved in the final agreement of the contract price that was used for the settlement agreement.
- 102 Alan Coyle, CEC Finance Manager, provided me with a spreadsheet dated August 2011, which showed a summary total budget of £776.99 million for the tram project

(CEC01726999), following an email request by me to him on 28 September 2011 (CEC01726998). This breakdown was requested to enable us to confirm the budgets for the construction cost elements A spreadsheet entitled "Edinburgh Tram - Base Budget as at 2 September 2011" was sent to me by Alan Coyle by email dated 26 October 2011 (TIE00661086 and TIE00661085) This spreadsheet was described by Alan Coyle in his email as the base budget that had been approved by CEC in September 2011. It showed a total budget of £742.92 million. This document provided a further breakdown of the budget, but it excluded the contingency sum of £34.5 million. Once this contingency sum was added to the total budget, it generally reconciled with the overall project budget of £776 million. We were not involved in the development of the overall project budget therefore cannot comment on any differences that may exist between versions of the CEC budget development in the period July to October 2011.

- 103 I am aware of an email from Dennis Murray, TIE, to me dated 13 September 2011 about subcontractor rates (page 3, TIE00689900). In the email he expressed concern about very high rates being proposed by Infraco. In T&T's mobilisation phase in August 2011, CEC asked T&T to comment on some of the subcontractor rates that Infraco had received. Our comments stated that some rates for labour, plant and materials were in line with expectations but other rates such as percentage additions for prelims (site management staff, site accommodation, etc) and weekly prelims costs were above expectation. The subcontractors were Lagan Construction and Crummock Construction. T&T were not involved in the final negotiations which led to the conclusion of the contract price and the supplemental agreement.
- 104 I am aware of CEC's Delegated Authority Rules dated 24 October 2011 (TIE00661087), which incorporated the change process and were circulated by email on 26 October 2011 (TIE00661085). Paragraph 1.1, stated that their purpose was to maintain an auditable trail of changes. I believe that they achieved their purpose of securing approval from CEC and provided an audit trail for contract changes. I do not know how they compared to the change control procedures which had been previously used on the project, as I was not involved in pre-mediation change control. Here, we used the cost reports and change register to keep and control an auditable trail of changes.
- 105 I recall that I circulated an email to colleagues at T&T, Alastair Richards and Dennis Murray, on 8 December 2011 in which I suggested there were queries about the scope of Infraco's obligations under the agreement reached at Mar Hall (TIE00359229). I attached a list of queries relating to the scope of the deal agreed at mediation and in the contract

negotiations (TIE00359230). When the T&T team commenced work in autumn 2011 on the tram project, we had to gain an understanding of the scope and basis of the contract price that was included in the settlement agreement. This meant that the T&T team had some queries regarding the details in the settlement agreement and the practical applications of what we did on site. With T&T not having been present at the mediation and the settlement agreement negotiations, CEC offered T&T the opportunity to meet with some of the people who had been involved in those agreements. My role was to co-ordinate and act as the interface with CEC in relation to T&T team queries. I do not believe that any of the topics in our queries resulted in a significant impact on time and cost. T&T's queries were mainly directed at obtaining clarity on the scope of work that had been agreed at mediation and incorporated into the Settlement Agreement. The queries could not be categorised as either favouring CEC or Infraco.

- 106 Dennis Murray, TIE, emailed me on 19 October 2011 (TIE00692048), with an attached note on Infraco (TIE00692049). This claimed that the Infraco preliminaries % was applied to SDS design changes owing to the new definition of Civil Engineering Works in the Settlement Agreement. The attachment to the email suggests that the Infraco consortium had not applied the Infraco preliminaries % to SDS design changes before the Mar Hall mediation. The application of Infraco preliminaries % to the cost of SDS design changes as provided in the Settlement Agreement had a very small cost impact on the tram project at £0.2M or approximately 0.04% of the total construction costs.
- 107 I have seen an email from Colin Smith, the Independent Certifier, sent to various parties on 26 June 2012 (CEC01933207). I note that he requested a meeting *"to reset behaviours... in order to take us back in line, by common agreement, to that which was envisaged when we came out of mediation"*. I was not at the Mar Hall mediation in March 2011, and so I cannot comment on what was agreed at that time in relation to what was said about resetting behaviours. When T&T were involved, any differences of opinion in interim payments between T&T and Infraco were resolved through the agreement of information to be supplied in advance of the regular payment application valuation meetings. We agreed actions at the meetings, and, where relevant, decisions were made by the Independent Certifier and costs were certified in due course.
- 108 I note that in my email to Alan Coyle, CEC, dated 24 October 2012 (CEC01933582), I discussed the valuation of de-scoped work. This concerned how de-scoped work from the on-street works could be valued. Agreement was reached between T&T and Infraco based on a re-measurement approach and final savings were assessed. T&T had no visibility of

the actual contract price build-up that was developed for the final contract price in the Settlement agreement but we subsequently agreed the re-measurement of the quantities and costs with Infraco. The Issue did not have a significant Impact on the overall cost of the project. The email of 24 October referred to the potential £4 million on which there was no visibility of a detailed build up in the contract price. The final net impact of changes did not compare directly with the comment in the email regarding the rounded £4M element which was not clearly identified in the contract price build up. The precise total cost of the change in the On Street Section was not the £4 million rounded amount in the email, it was £4.295M refer Final Account Statement (WED00000101). The query in the email related to our assessment of how Infraco's contract sum was built up for the settlement agreement.

- 109 I note that in an email from Alan Coyle, CEC, to me dated 15 August 2013 (page 2, CEC01944047), he refers to me stating in 2012 that there could be a potential saving on prelims of about £11 million, if Infraco co-operated. I replied to him in an email dated 15 August 2013 (page 1, CEC01944047), with an attachment on the analysis of prelims-related costs (CEC01944048). This summarised the milestone payments post-February 2014 for prelims and also programme related changes. I do not recall exactly the basis of the £11 million referred to in Alan Coyle's email. I expect it related to a query regarding the potential savings on prelims if Infraco finished early and they did not claim all of the contract prelim and programme change costs. My recollection was that Infraco did not agree to providing savings by finishing early. Our understanding was that the contract did not contemplate value engineering savings caused by a reduction in programme.
- 110 In the same Progress Report (number 26, CEC02034570), there are a number of tables between pages 63 and 79. These link to the Cost Report Commercial Summary on page 62, which in turn links to the Project Summary on page 61. The tables at pages 63 to 72 show all of the off-street approved changes. The total forecast was carried forward to the Cost Report Commercial Summary in column E (off-street total). All totals in the Cost Report Commercial Summary have back-up to them on pages 63 to 85. Pages 82 and 83 show a register of potential opportunities which, if secured, would provide savings for the contract. The "To be secured" column was carried forward to the Cost Report Commercial Summary. As this was a cost report from late in the project, all potential opportunities had been secured and the "To be secured" total was nil. The total secured amount was not carried forward to the front sheet as these amounts already appear in the change sections. A table at page 84 is headed "Credits and Contributions". This relates to a feasibility report carried out by Infraco that was funded by Transport Scotland. The "Change summary" on

page 86 Identified change to show the categories of the total value of change. For example, this included scope change, unidentified utilities and the various categories.

- 111 The same Progress Report (number 26, **CEC02034570**), contained Tramco tables at page 91 onwards. This was the cost report which related to the tram vehicle costs. All costs were totalled in column K. This was predominantly CAF costs, although there were some minor works carried out by others which related to tram vehicles which were also reported here. The subsequent pages 92 to 95 of the Progress Report provided a backup to the summary sheet.
- 112 The T&T Progress Report number 21 dated 28 April to 25 May 2013 described how clarity was needed to agree the cost of changes for the final account figures due to the absence of an agreed contract price baseline (para 5.1.3, **CEC02042690**). Through discussion with Infraco, T&T agreed a basis upon which to re-measure the cost of change.
- 113 I am aware that certain matters were excluded from the T&T cost reports. For example Progress Report number 21 dated 28 April to 25 May 2013 contained a list of exclusions (para 5.4, **CEC02042690**). CEC confirmed the matters which were to be excluded from our cost report, such as, for example, the Scottish Water supervision costs beyond June 2013 noted at para 5.3 of the Progress Report as these matters would be discussed between CEC and Scottish Water. Other matters were listed by us to explain what the basis of the cost report was at that point in time.
- 114 I recall my email about the Infraco final account to Colin Smith, CEC, dated 15 August 2013 (**CEC01944050**), and its attachments: the final account summary sheet (**CEC01944051**), Infraco post-mediation change register (**CEC01944052**), cost analysis listed by subcontractor (**CEC01944053**), list of items determined by Independent Certifier (**CEC01944054**) and list of disputed items (**CEC01944055**). I also recall my email about the final account to Alan Coyle, CEC Finance Manager, dated 16 August 2013 (**CEC02031767**), and attached summary of the final account including T&T forecast allowances (**CEC02031768**). The process for preparing the final account was based upon agreeing the final financial implications of all changes in accordance with the contract. In accordance with good practice we were trying to complete the final account as far as possible in advance of the contract being completed.

- 115 I have seen a draft financial summary relating to Scottish Water, dated 21 June 2013 (CEC02029263). In this, there was discussion about contributions that were to be made by Scottish Water towards the cost of MUDFA works. My understanding is that the contributions were governed by the third party agreement with Scottish Water, and in the New Roads and Street Works Act 1991. The third party agreement and legislation detailed the cost share payable by a utility company when their asset was being replaced or renewed. Scottish Water had views on the work undertaken by MUDFA, the value of the contribution to be made for the assets which were renewed as part of the tram project and their costs. CEC requested that we review the information from TIE regarding the assessment of work done by MUDFA on Scottish Water assets and Scottish Water's own assessment. We attended meetings with CEC and Scottish Water, however CEC confirmed that they would manage the conclusion of the legacy works and commercial arrangements when the project was coming to a close in 2Q 2014.
- 116 I have been asked to explain the layout of the T&T cost reports which appeared in the T&T monthly progress reports. I do that by reference to the particular report put to me (T&T Progress Report number 26 dated 15 September to 12 October 2013 (CEC02034570), in which the cost report appears from page 60. The Project Summary and Infraco Cost Report Commercial Summary in that report show budget and cost forecasts for utility diversions, Infraco and Tramco costs following the settlement agreement. With regards to the 'original budget' listed in column A, these were the budget totals that were provided to T&T by CEC at the commencement of T&T's role as the project and commercial manager in September 2011. In broad terms, the increases between the budget in column A (original budget) and the figures in column K (anticipated final cost) were a result of the impact of contract changes and any differences between the contract sums and the original budgets.
- 117 Third party contributions were shown as deductions in column L of the Cost Report Commercial Summary in the Progress Report number 26 (page 62, CEC02034570). These were funding provided by third parties. For example, these contributions included funding provided by Transport Scotland or other CEC departments for work carried out that was not part of the tram project. Transport Scotland made contributions to the Edinburgh Gateway station and CEC departments made contributions to matters such as public realm improvements. There were logistical reasons for carrying out these works in the tram project and the funding contribution column recognised recovery of the cost for this work.
- 118 The same Progress Report (number 26, CEC02034570) had a change control register from page 97 onwards. This was a live document that was held on the CEC document

management system, SharePoint, to which T&T no longer has access. I have provided a more recent version of the change register to the inquiry dated 16 September 2014 (WED00000100). There may be some minor amendments made to this version of the change register compared to the change register appearing in Progress Report number 26. The change tables in that Progress Report at pages 63 to 79, were linked to the register and they essentially captured the same information. There were two mechanisms in the settlement agreement to govern change: schedule 45 for changes to the on-street section, and clause 80 for the off-street section. The column headed "*Reason for change*" in the table on page 86 of the Progress Report described the main categories of change.

- 119 I was aware that the outturn costs for the project had exceeded TIE's estimates in the pre - mediation stage, and the scope of the project had been reduced to end the tram line at York Place. I note the settled costs outlined in Appendix 1 of the report to CEC dated 25 September 2014 (CEC02084099). At the end of the project in June 2014, CEC did not ask T&T to undertake a cost analysis for the difference in the costs in this report to CEC dated September 2014 versus some of TIE's estimates announced in November 2006. Having worked in the post-mediation phase, I would have expected that the delays to the project prior to mediation and their impact on the negotiated settlement may have been significant contributory factors to the increases in cost. I was not involved in TIE's estimates but I do not expect that the estimates would have allowed for the costs of the time delays in the pre-mediation phase and the recommencement of the project in October 2011.
- 120 I am aware that the cost summaries in the T&T monthly progress reports included a summary of the utilities cost reports. I note that the T&T monthly progress report number 26 dated 15 September to 12 October 2013 includes a utilities cost report (page 90, CEC02034570). The post mediation budgets for construction were established prior to T&T's involvement in September 2011 and CEC advised T&T of these budgets at the commencement of our commission in September 2011. I do not know what the basis of the utilities budget was. However, the actual scope of work that was required included a significant number of utility diversions and also some tram infrastructure excavation works in order that the interfaces could be properly managed and co-ordinated. This may have been a factor in why the resultant costs were in excess of the budget. I have provided a copy to the inquiry of T&T's cost report for the post-mediation phase dated 21 June 2014, which identifies the final costs for the utilities at £21.13M (WED00000091). The additional utilities diversion cost was funded partly from contingency and from value engineering reductions, such as the omission of the roads and pavement works to the west side of St Andrews Sq.

- 121 The notional final account was developed to provide a format for the final account that we agreed with Infraco and the Independent Certifier, and also to identify any outstanding issues or work in progress issues. T&T thought that this helped both parties and the Independent Certifier understand the progress required towards the actual final account. The notional final account was a summary of the contract price, agreed cost for changes and estimated costs where changes were in the process of being completed.
- 122 The T&T monthly progress reports which I referred to earlier, noted a number of commercial issues between CEC and Infraco which had to be resolved in the run up to the conclusion of the project. I have provided a copy of T&T's final cost report dated 21 June 2014 (WED00000092), which sets out the details of the commercial issues. The major items were as follows:

A – Preliminaries, overheads and profit on change

- 123 This did not have a significant impact on the cost of the tram project. The impact was £0.48M for the various items which equates to approximately 0.1% of the total construction costs. It related to the application of prelims and overheads on profit on work that had been omitted from the Infraco contract. The matter was referred to the Independent Certifier who provided direction, and the matters were certified by him in due course. I note my email on application mark-up items and prelims to Martin Foerder dated 19 November 2012 (CEC01933633), and its attachments (CEC01933634) and (CEC01933635).

B – Off-street utility diversions

- 124 This related to our queries in relation to what was discussed at mediation and whether TIE or Infraco should have engaged Scottish Gas Networks (SGN) to undertake diversion works in the off-street section. The matter was referred to the Independent Certifier, and Infraco stated that no allowances were included in the off-street contract price for utility works. In the event, CEC paid SGN for the costs of the work that SGN undertook and Infraco did not provide any saving since they stated to the Independent Certifier that they had made no allowance in their contract price for the work that SGN did. . The Independent Certifier provided direction and no saving was obtained on this particular item. Item B, off-street utilities, and the cost was £0.34M and equated to approximately 0.07% of the total construction costs.

C – Delayed signing of settlement agreement

125 This item resulted in a cost of £4.5M which equated to approximately 0.9% of the total construction costs. It was shown against change reference TNC539 (page 3, WED00000092). The revised approval of CEC to proceed with the project was obtained at a Council committee meeting, either in late July or early August 2011 revising an earlier Council decision. This delayed the signing of the settlement agreement, delayed re-commencement of the works and impacted the completion date that was being established by CEC and Infracore. There was a difference of views on what the cost impacts were and the Independent Certifier reviewed the information provided and in due course certified the costs that Infracore applied for. I have provided a copy of the Independent Certifier's Opinion dated December 2011 to the inquiry (WED00000093). I note my email to Alan Coyle, CEC, dated 1 February 2012 (CEC01960500). I note the T&T Progress Report number 25 dated 18 August to 14 September 2013 (CEC02033347), the T&T Progress Report number 28 dated 10 November to 7 December 2013 (CEC02036992), and the T&T Progress Report number 29 dated 8 December 2013 to 4 January 2014 (CEC02072604).

D – Time-saving from Value Engineering

126 This related to the implications of the programme re-sequencing resulting from cost engineering and the creation of larger work sections to enable co-ordination of the utilities diversion works and the infrastructure works. The total for this item £6.45 million which equated to 1.29% of the total construction costs. This was included in the final report against reference TNC717 (page 9, CEC02072604). CEC requested T&T produce an advice note on this matter. T&T concluded that from the information available, the contract does not contemplate shared programme savings therefore T&T could not recommend the issue of a standard contract change order. Then CEC requested that our advice note considered the consequences of Infracore not receiving a contract change order. T&T advised that CEC should consider legal advice and the wider project objectives in their decision making. CEC then confirmed that they would authorise a change and the costs would be certified. I have provided to the inquiry a draft of the T&T advice note on programme saving which CEC requested dated 5 October 2012 (WED00000095), and the T&T letter on Certification addressed to Colin Smith dated 30 October 2012 (WED00000099). I have also provided to the inquiry the CEC Change of Authorisation email from Colin Smith to me dated 4 October 2012 (WED00000096), and the Minutes of Meeting with CEC dated 29 October 2012 (WED00000097).

E – On-street works: additions (schedule part 45)

127 This governed changes to the on-street works in Infraco in accordance with the Settlement Agreement and contract schedules. Changes resulted from value engineering and additional works which affected the OLE foundations, drainage, higher level works, footpaths and public realm works in general. The net cost of the on-street works changes amounted to a net impact of £4.29 million which equates to 0.86%. This comprised around 100 changes overall. The main categories included: the impact of utilities on the infrastructure contract, drainage, overhead line column bases, road reconstruction, road surfacing and sets, road signage, traffic signals and lighting, amendments to footways, final requirements for floating track slab to minimise noise, and amendments to traffic management.

F – Quality Issues

128 I am aware of the T&T Progress Report number 22 dated 26 May to 22 June 2013 which refers to quality issues noted with the concrete works in the on-street section (para 2.6.1, CEC02030256). There was no disagreement on this item. It was not a notified defect and Infraco elected to rectify the works and complete them.

129 In summary, items C, D and E above contributed to an impact on the overall cost of the project, but there was no impact on the contract completion date. There were no other commercial issues which had a significant impact. The cost of items C, D and E were part funded from contingency and value engineering savings made elsewhere, e.g. scope reductions such as the omission of roads re-instatement to the West Side of St Andrews Square. Generally all negatives in the cost report, refer (WED00000091), were savings which in part compensated the additional costs associated with change

Fees

130 T&T was paid approximately £8.9 million, excluding VAT, for the services in relation to the construction contracts we managed in our contract with CEC. We were also commissioned by CEC to provide support on the Operator and Maintenance Contract, Edinburgh Gateway which was funded by Transport Scotland and confirming the status and scope of the Leith Walk Utilities works which CEC intended to complete at a later date. I attach a schedule

showing a breakdown of the monthly amounts. (Refer attached document **"Fees TSS and CEC Contracts"**)

Doc ID
WED00000165

Conclusions

131 For the pre-mediation phase, I have not been able to answer many of the questions because of my intermittent involvement in various tasks between the period of September 2005 and April 2007, the way the project was structured by means of mainly TIE in house contract staff and lack of continuity in TIE's management team.

132 I did, however, see differences in the project management processes employed when comparing the pre-mediation phase and the post mediation phase, where I had a clear role in providing a defined scope of service for Turner & Townsend, within a clearly developed and logical project organisational structure where problems were identified and remedial action was generally successfully implemented.

133 Whilst I was not involved in all work streams, during pre-mediation and post-mediation, I have noted below my observations on both phases together with generic objectives for each work stream based on my experience of projects of a similar scale and complexity.

134 Team / Structure

Objective: - To create an integrated team with defined corporate and individual responsibilities and outputs within a structure to enable the project to be managed effectively. Overall control should be exerted at the higher levels of the structure to identify and manage remedial action where required.

Pre-Mediation: - The TSS contract provided for the delivery of services, however TIE intended from the outset to recruit and deliver the project with in house contract staff, supplemented by TSS staff when roles couldn't be filled. Up to April 2007, there was significant churn within both the management and staff of TIE and a lack of clear structure and process to integrate the various work streams. TIE placed people on an individual basis and organisations such as TSS were not used in the manner originally intended. It was not clear to me how the senior team made and implemented decisions and how they intended to create a cohesive team across all work streams. These matters were raised by my Managing Director, Bill Woolgar in his letter, (ref WED0000085).

- Post Mediation:**
- The senior CEC team provided leadership, created a clear structure, effective Control Group meetings, Executive progress meetings and a clear reporting regime which meant that the organisations understood that they were accountable for their team's performance and a cohesive project environment was created.

135 Scope and Execution Plan

- Objective:**
- It is crucial to develop a clear brief and scope for a project at the earliest possible stage alongside a plan to execute the various elements of the project. An effective control mechanism should be implemented to ensure change is properly managed and recorded.

- Pre-Mediation:**
- Whilst I was not involved in many work streams, there appeared to me a lack of a clear execution plan for the project as a whole which defined the structure, controls and processes to integrate the various work streams.

- Post Mediation:**
- During the re-mobilisation phase, a detailed review of project scope, execution and control mechanisms was undertaken by CEC/T&T in a series of meetings to agree the approach and understand the plans and procedures that were required for the implementation of the remainder of the project. Change did occur but it was managed effectively in an environment of mature and proven project execution processes.

136 Procurement / Contract Close

- Objective:**
- Following the determination of a procurement methodology, the execution plan should incorporate a step by step process for the production of tender documentation, bidding processes, timescales and guidance leading to award and contract close.

- Pre-Mediation:**
- Whilst it was clear that reference or preliminary design was required to provide market feedback through the initial ITN process, it was not clear to me what further detailed design information had been confirmed by the bidders and how agreement on delivery dates would be developed with TIE and SDS.

I was not involved in the contract close and therefore cannot confirm the extent to which the bidders qualified their contract price, programme and what

mechanisms were intended to resolve any differences.

- Post Mediation:**
- It was the mediation itself between CEC and Infracore which largely determined the scope, design and contract price for the remainder of the project, although the effects of change were effectively managed during this period and up to completion. At the beginning of re-mobilisation, T&T worked with the teams – CEC, Infracore and the utilities contractor to make sure responsibilities were clearly established. Successful working practices were created which enhanced understanding and clarity of purpose. Effective change control and reporting enabled accurate information to be conveyed to identify cost forecasts, status of payment applications, quality assurance and measures to achieve programme.

137 Design Management

- Objective:**
- To provide appropriate processes to enable a detailed and coordinated design to be developed in defined stages in accordance with the project brief. Each stage would be defined in the project programme enabling progress towards each milestone to be effectively monitored and remedial action taken, as required.

- Pre-Mediation:**
- My perception was that the SDS design did not develop in line with the stipulated programme.
- Given my limited role, the reasons were not clear but could have been a combination of project scope definition, scope change, utilities change and variable progress by SDS. Remedial processes to rectify progress and change control were not clear to me

- Post Mediation:**
- Whilst by this time, design had progressed significantly, SDS' outputs were controlled by the contractor in line with their construction programme requirements. However, the client team maintained an effective change control process involving the Contractor for design issues which incorporated a change order approval procedure to be implemented.

138 Project Management/ Governance

- Objective:** - To create a series of processes, checks and balances to assure efficient and effective implementation of the project. I have seen this done through the creation of a project execution plan which incorporates a series of best practice procedures but which specifically addresses the project's requirements and which is visible to all project participants.
- Pre-Mediation:** - There was a distinct lack of defined project procedures and a lack of clarity on organisational accountability. There appeared to be a lack of an aligned strategic route map agreed between TIE, SDS and the key stakeholders. Time constraints appeared to affect agreement on the outcomes required. There was little organisational accountability which led, in conjunction with TIE's chum in staff, to a lack of continuity and an agreed plan. For example, I am aware that during the pre-mediation phase, my colleagues contributed to a review of the Utilities implementation based upon lessons learned from other major LRT projects that Turner & Townsend had undertaken. The proposals and recommendations were not accepted by TIE. (Refer document WED00000102, "Review of Utilities Report").
- Post Mediation:** - There was a clear project direction, structure, processes, effective decision making, governance and escalation to resolve changes. A distinct project set up phase at the outset developed these structures, controls, procedures, reporting and assurance regimes. For example, Turner & Townsend prepared a review of the project in our mobilisation phase to fully understand the issues, engage with CEC and develop our team to be accountable for performance. In addition, Turner & Townsend developed an internal oversight group to constructively challenge the project's implementation. An example of our mobilisation phase review is attached, refer Document WED00000103Review Edinburgh Tram Report.

139 Programme

- Objective:** - To create a master programme supported by a series of logic linked sub-programmes to enable the effects of change to be determined, to provide advice to the client and the team generally on project progress and to inform where remedial action is required.
- Pre-Mediation:** - I was not involved in the programme or design work streams and my perception was that programme milestone dates, particularly in regard to Infracore tendering arrangements, were inflexible and there was little account

taken of the achievement of progress milestones relating to the development of design.

It appeared that there was lack of agreement to an integrated programme and methodology to agree the baseline and manage progress to meet agreed dates

- Post Mediation:**
- A logic based master programme was created at the outset and adherence was recorded each month and any remedial activity to maintain the programme was identified, instructed and monitored with a view to ensuring overall completion dates were achieved.

140 Cost / Change

- Objective:**
- Following the creation of a budget or estimate cost for each element of the project, develop coherent and distinctive processes to control the development of project costs against the budget, taking remedial action where necessary.

- Pre-Mediation:**
- I am now aware of the extent the budget was exceeded. During my involvement from Aug 2005 – Apr 2007, I was not aware of the budget having been changed, I had no access to the financial evaluation of the bidder's response to the ITN or subsequent revised proposals leading up to conclusion of the contract price.

There was a lack of clarity regarding controlling scope. In my limited involvement I did not understand how the Tram Acts, the scope and programme required by the Business Case and the Budget were aligned to provide a clear baseline to control change.

- Post Mediation:**
- CEC advised us of the budget for each of the construction contracts which enabled Turner & Townsend to control the development of cost forecasting and change control. Increases in the cost of utility diversions were broadly funded by contingency and offset by savings in other areas. A significant factor was the completion of utility diversions and infrastructure works in parallel. These matters were effectively addressed and the project was completed in advance of the contract completion date, although there was a net impact of +£7M against budget mainly resulting from the extent of utilities diversions and resequencing Infraco's programme.

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Essentially the difference between pre-mediation and post-mediation was that both CEC and T&T were providing roles in the post-mediation phase that we regularly performed and understood: CEC was the client and T&T were the project manager. CEC and T&T were both mature organisations, having been established for many years. We both had established processes and the corporate capability to adapt our approach to suit the needs of the tram project and to resolve issues. TIE was a start-up organisation which utilised task-based staff whom TIE employed on a freelance and contract basis but suffered significantly from so much management and staff churn. The result of that was a lack of integration, cohesion and organisational accountability for performance.

I confirm that the facts to which I attest in this witness statement, consisting of this and the preceding 47 pages are within my direct knowledge and are true. Where they are based on information provided to me by others, I confirm that they are true to the best of my knowledge, information and belief.

Witness signature. 

Date of signing..... 19 APRIL 2017

Supplementary questions; Gary Easton; 8 August 2017

Final costs - breakdown

In the Turner & Townsend Infraco cost report (WED00000092_3), the Infraco costs are split into the Off Street and On Street sections. Costs for the section between Newhaven Road and Haymarket appear in both (£82m in the off street section, and £29m in the on street section).

1) Can you explain why?

The Cost Report is based upon the figures agreed between CEC and Infraco in the Settlement Agreement.

The Off Street section includes the pre mediation costs for Off Street and On Street sections plus post mediation costs for the Off Street section (Haymarket to the Airport).

The On Street section includes post mediation costs only (Haymarket to York Place).

In that cost report (again at page 3), the total for Infraco preliminaries is approximately £182m (£160m for the off street, and £22m for the on street).

The figure for Infraco construction preliminaries in schedule part 5 of the Infraco contract (milestones, USB00000073) appears to be £96.3m, including a £45.2m mobilisation payment (see, e.g., page 3).

2) Is our understanding correct?

No * A revised answer was provided by Mr Easton which is shown at the end of this document. This was provided by email from his solicitors, Simmons & Simmons, on 3 January 2018.

3) What accounts for the difference between the preliminaries figures (i.e., between those originally provided for in the Infraco

contract, and those actually incurred)?

The difference is that the figures in the cost report are based upon the Settlement Agreement and the Infraco contract milestones were based on the original Contract price pre-mediation.

The costs per section appear to have changed as follows:

Section	Infraco schedule part 5 USB00000073 (page references in brackets)	T&T final cost report WED00000092_3
Newhaven Road to Haymarket	£38.3m (_7)	£112m (Off Street element: £82.8m; On Street element: £29.7m)
Haymarket corridor	£5.5m (_48)	£8.8m
Roseburn junction to Gogar	£50.1m (_51)	£84m
Depot	£12.9m (_79)	£20.4m
Gogar to Edinburgh Airport	£11.1m (_83)	£15.4m

4) Do you agree?

No since they cannot be directly compared on a like for like basis.

5) In overview, what accounts for the differences?

The difference is that the figures in the cost report are based upon the Settlement Agreement and the Infraco contract milestones were based on the original Contract price pre-mediation.

6) Is it possible to identify, within the final outturn cost for the Infraco contract, amounts which represent:

a) The cost of delay, compared to the original Infraco programme;

No, I cannot identify the cost of the delay included in the Settlement Agreement compared to the original Infraco programme, as I was not involved in the pre-mediation phase or the agreement of these costs in the Settlement Agreement.

In relation to the post mediation phase, in paragraph 125 of my statement I confirmed that the cost impact of delay to the signing of the Settlement Agreement in July/August 2011 was £4.5M, following confirmation by the Independent Certifier. Paragraph 126 of my statement confirms that the cost of re-sequencing the programme, to create larger work sections to enable coordination of the utilities diversion works and the Infrastructure works, was £6.45M following review and authorisation by CEC.

b) The cost of change, compared to the original Base Date Design Information.

I was not involved in the pre-mediation stage therefore I am not in a position to confirm the cost of change compared to the original Base Date Design Information. Our cost report does, however, identify the cost of change in the post mediation phase, compared to the Settlement Agreement.

Changes during the post mediation phase are summarised in the Cost Report (WED0000092) from page 4 onwards.

7) If so, please provide figures and explain how they have been calculated.

Changes are included in our Cost Report, refer WED0000092, and page 4 onwards.

The cost of changes were calculated in accordance with the contract, either through our assessment and agreement with Infraco, or by the Independent Certifier and CEC, where there was a difference of opinion.

An estimate report circulated by Turner & Townsend dated 17 January 2013 contained a “probable cost” estimate for the extension of the tram line from York Place to the Foot of the Walk, Ocean Terminal and Newhaven (CEC01930374). The cost of the utility diversions was estimated at £25.1m all the way to Newhaven (paragraph 3.1).

8) What is your understanding of the extent of utility diversion work still required in that section?

Turner & Townsend had been provided with some information from the utility companies and SDS. The team did not have a detailed scope of work required for that section. The basis of the estimate and the assumptions we made were included in the report (CEC1930374), pages 1 to 3.

9) Does this report give an indication of the extent to which utility diversion work under the MUDFA contract was not completed?

This report does not describe the extent to which utility diversion work under the MUDFA contract was not completed.

Turner & Townsend were not instructed to review the proposed MUDFA designs, the “as built” work by MUDFA and the comments / queries from the utility companies.



Gary Easton

* Revised answer to Q2) above.

“The total for the Infraco preliminaries, which is approximately £182m (£160m for the off street, and £22m for the on street section) in the Turner & Townsend Cost Report (WED0000092_3), is correct. The total for Infraco construction preliminaries in schedule part 5 of the Infraco contract (milestones, USB0000073) appears to be £96.3m. However, this is the pre-mediation milestone schedule that was developed prior to my involvement.

CEC did not ask Turner & Townsend to analyse the pre-mediation contract milestone payments, the contract price or to compare these to the amounts confirmed in the Settlement Agreement, which CEC concluded with Infraco in September 2011.”