DENNIS MURRAY: ADDITIONAL QUESTIONS 16 NOVEMBER 2017

Background

- When you arrived on the project (Jan 2008) you said in your Q&A that you understood the procurement phase to be in its final stages with contract close imminent.
 - How did you know the procurement phase was in final stage?

I recall that this was advised to me at interview stage in November 2007 and further advised when I joined tie in January 2008. My role was explained to be a post contract commercial management role.

- When did you think the contract would be concluded?
 When I joined tie in early January 2008 I recall that I was advised that the plan was to conclude procurement and have contract close by end January 2008.
- If your role was to take on post contract signature you must have known when that was expected?

At interview I was advised contract close was imminent and when I joined I was advised contract close was anticipated by end January 2008.

• Were you recruited to replace someone who was leaving? If so, who was that and what had his or her role been?

I was not recruited to replace someone who was leaving I was recruited for a new role of post contract Commercial Management under the title of Commercial Director.

2. You said in your Q&A that you understood that a fixed price had been agreed for the INFRACO works: explain how you knew that?

I expect I was advised of that when I joined in January

3. Who recruited you to the project?

I was interviewed by Steven Bell and the then HR Director Colin McLaughlin in November 2007. It was made clear that I would be the post contract commercial lead reporting to Steven Bell who would become the post contract Project Director.

- What was your job description? (Please provide a copy if you still have this) My job title was Commercial Director. (I cannot find my terms but I recall they were very brief and generic)
- You were not brought in as a procurement manager and therefore did this aspect become part of your remit? If so explain the handover?
 Procurement did not become part of my remit. There was a procurement team in place led by the Procurement Director and Procurement Manager.
- 4. Were you told what was expected of you when you took the position? I was advised that I would be responsible to support Steven Bell the Project Director in all post contract commercial management matters in relation to upcoming Infraco contract. That would involve amongst other things, management of post contract change, agreement of monthly valuations and milestone payments and commercial reports for monthly progress meetings.
 - Did that change?

That role did not change.

• Were you expected to take on the procurement when Geoff Gilbert left or was that given to Jim McEwan?

I was not expected to take on the procurement role. The procurement team demobilised and Geoff Gilbert left around late April I assume when the procurement was considered to be complete. As I recall he returned on an ad hoc basis to deal with any outstanding procurement matters after he left.

- Bob Dawson was the Procurement Manager (Aug 2006 March 2008). What did you understand was his role in the project?
 Bob Dawson worked hand in hand with and under the direction of Geoff Gilbert supporting Geoff in all procurement matters. In terms of the project I understood Geoff to be Bob's line manager. Geoff and Bob had a team of commercial people working directly with them, some of whom were retained for post contract duties.
 - Do you know why he left before contract closed?
 I do not know why he left when he did but I assume it was with the agreement of his line manager Geoff Gilbert.
 - Did you take on his work?

I did not take on his work.

- 6. Were you and Geoff Gilbert working together?
 - I did not spend much time with Geoff during the procurement close out. I had difficulty getting face to face with Geoff as he always seemed to be really busy at his desk or at meetings. Geoff worked alongside DLA Piper and the executive team to close out the procurement and finalise contract close. When I joined tie in early January'2008 Steven Bell asked me to sit in at certain meetings which would enable me to gain some early knowledge of the project. There were numerous meetings ongoing on a daily basis and I did attend some meetings with Geoff and some with Steven or others when I was invited to do so.
 - If so who was doing what?

Initially I was in listening mode at meetings however during the period to Contract close. I did become involved in collecting pricing data and populating certain commercial schedules for inclusion in the Appendices to Schedule Part 4 and Schedule Part 5. The Appendices in SP4 contained the Contract Sum Breakdown, the Schedule of Rates and other pricing data. The work I was involved in related to agreement and conclusion of the Milestone Payment Schedule (eventually included in SP5), the insertion and inclusion of a Contract sum analysis, detailed schedule of rates and preliminaries breakdown for Bilfinger Berger Civils works, and a Contract Sum Analysis for Siemens works. Whilst this information was not essential in relation to procurement of the Infraco contract I did this to ensure that I would have sufficient tender pricing information included in the contract documents for use when my post contract commercial management role would commence.

When Geoff Gilbert left did you assume the role that he had been performing in all aspects? If not, who did take over Geoff Gilbert's role?
 I did not assume Geoff Gilbert's role in any way. I assume Geoff left when he and the executive team considered that the procurement function was complete. Geoff did return to handle some discrete matters after he left.

Schedule Part 4

7. Bob Dawson indicated that although he prepared the initial template of Part 4 of the Schedule to the INFRACO contract (Pricing) ("SP4") you were the one involved in negotiations. Is this your understanding?

The negotiations referred to by Bob Dawson presumably relate to my involvement in agreeing pricing data with BBS and creating Appendices to include them. Certain data was inserted into the contract documents to provide a contract mechanism for the agreement of (a) monthly interim valuations (via Milestone Payment Schedule in Schedule Part 5) and (b) valuation of changes (Schedules of rates in schedule part 4). I became involved in the finalisation of the necessary data that required to be inserted into Schedule Part 4 to make the post contract processes work such as the Milestone Payment Schedules, the schedule of rates, preliminaries breakdowns and contract sum analyses. I became involved in this since it would be to the post contact to commercial teams advantage to have agreed fully populated pricing information taken from tender information to be included within the contract documents for use if changes occurred post contract. Such changes would be then priced against a fully populated schedule of rates and sum breakdown rather than being subjective.

- Did you take over this role from Bob Dawson?
 I did not take over any of Bob Dawson's procurement manager role.
- 8. On 6 February 2008 Bob Dawson sent you an email with an attachment consisting of the then current draft of SP4 with comments from Andy Steel, TSS (CEC01448355).
 - What did you do with it?
 I do not recall doing anything with it. I assume I was copied in for information only.
 - Other than this, did you have any advice from engineers as to what was proposed?
 Not that I can remember
 - What action did you taken in relation to the comments made by Mr Steele?
 None that I remember
- Geoff Gilbert says that you were involved in some of the negotiations for and drafting of SP4. Please tell us about them.

My involvement was as noted in Q7 above. I was not involved in drafting. I did collect and agree the data for inclusion in the Milestone Payment Schedules and schedules of rates.

- How did you support Geoff Gilbert in respect of the preparation of SP4?
 My involvement was as noted in Q7 above.
- Who briefed you on where matters stood with SP4?
 I do not recall having any briefing other than being copied into certain emails and attending certain meetings.
 - What was your goal or objective in these negotiations?

My objective was as detailed in Q7 above which was to ensure that post contract there was a workable set of information agreed and included in Schedule Part 4 that would enable the administration of the monthly valuations process and the change process with as little subjectivity as possible.

11. What stage had the draft reached when you arrived?

I do not think that I was copied to drafts until February and at that time it required data to be inserted to allow its post contract operation such as schedules of rates and summary of previously agreed prices. I assisted in that process.

 Were you given a copy of the agreement referred to as the Wiesbaden agreement which concluded in December 2007?

I was given a copy of it but I cannot remember when.

• Were the essential terms of SP4 fixed or were they still fluid?

I understood that the essential terms of SP4 were fixed however details such as some of the technical Pricing Assumptions were still being developed. And of course the schedules of rates were not complete at that time. Appendices were added to allow inclusion of relevant data and pricing information for use in change management.

• What role (if any) had legal advisers played and was it intended that they would play in the remainder of the negotiations?

As far as I remember the legal advisers worked hand in hand with Geoff Gilbert during the procurement process. I recall that a DLA Piper representative was usually present at the meetings I attended. What legal advice did you receive throughout the period up to close?

I do not recall receiving any specific legal advice however I would have provided drafts of the agreed Milestone Payment Schedules and schedules of rates that I suggested should be included in the SP4 (eventually included in SP4 Appendices) to legals prior to finalisation with BBS.

12. On 14 February 2008, Bob Dawson sent you a copy of SP4 with comments from Geoff Gilbert. Why? What did you do with it?
I was being copied into things for information at that time. I do not think I did anything with it at that stage.

Contract Terms

13. The Base Date Design Information is defined in para 2.3 of SP4 as being: "the design information drawings issued to Infraco up to and including 25th November 2007 listed in Appendix H"

Andrew Fitchie says that this wording was specifically given to him by you as the only practical way to deal with the complete absence of any agreed physical record of what design drawings the Infraco proposals had been based upon. Is this correct?

I do not specifically recall this but I expect Andrew would have discussed this with me as it may affect post contract change. The issue was that a set of drawings required to be inserted into the contract. The concern was that there was no definitive drawings list included in the contract documentation. It was suggested and agreed that we include a set of drawings in SP4 and that list would be included in Appendix H. It was intended that the full list (and copies of all drawings) would be provided by BBS however they never did and my recollection was that this was changed to be described as those drawings in the electronic database at the date noted.

Close Report

14. An email from Graeme Bissett of 12 May 2008 (CEC01338846) has attachments which make up a suite of documents reporting on contract close. The process of

preparing these started with another email from Graeme Bissett of 15 January 2008 (TIE00020436). That email was copied to you as one of the people to be involved in preparing the documents.

• What was your involvement in drafting these documents?

I was not involved in drafting close documents. The email from Graeme Bissett was dated 15 January'08. The note reflected the imminent close (targeted for 25th January) and need to have documents drafted by 18th January. I expect I was copied into this for information only since I only arrived on the project one week earlier than Graeme's email.

• Were you content with the statements made in this suite of documents?

I expect that I had a very general read through but I had fairly limited project knowledge and the reports would have been produced too soon after my start date for me to make meaningful comment.

Lessons Learned

15. Graeme Bissett asked the individuals involved in procurement for their views to assist him in putting together a lessons learned paper as they were all absorbed in the process. Your response is in CEC01288688. Please explain / comment on this? In terms of the best things my view at that time was that in the time I had been there I had witnessed a lot of effort being spent on the Novation of SDS to Infraco and this process had been difficult but it was ultimately concluded. Secondly BBS had requested some price increases which had set the deadlines and team spirit back a little however that was overcome by negotiation and agreement.

In terms of the weaknesses I noted at that time that the procurement process had got into a single source preferred bidder stage too early which resulted in difficulties in the later stages of price negotiation. I also noted that the Novation was a complex matter and the two parties had been difficult to manage during the process. I had also noted an observation that there were many lawyers involved in the process and that had prolonged matters.

Activities under the contract

16. Andrew Fitchie of DLA states that you had said to him that your BBS counterpart at Edinburgh Park, Colin Brady, had told you off the record that Bilfinger Berger Germany was monitoring all contractual exchanges and were under instructions not to mobilise but to invest in building claims based upon the state of SDS design and the chronic MUDFA delay. Can you comment on this?

I do not recall the specific conversation but if Andrew remembers that then I would not disagree. I do recall the slow start to construction and the position that BBS were taking to change management. Tie were very concerned at the slow mobilisation and conversations were occurring at that time over this matter.

- 17. The Princes Street Supplemental Agreement (PSSA) concluded in 2009 made provision for payment to be made on the basis of "demonstrable cost".
 - What work was done by you to assess this before the agreement was concluded?

A lot of work was carried out on this in a short period of time prior to implementation. Numerous meetings were held to assess the scope of the works and in particular the price of the works for the relevant Princes Street section. I recall an exercise to work out the price of the Princes Street section using the Contract Price and an estimation of change value to incorporate the unknown underground obstructions. This was played against an anticipated cost on a "demonstrable cost" basis. In theory the price for both should have been similar but we had difficulty in agreeing the original Contract Price element with BBS. Regarding demonstrable cost I had spent some time with BBS commercial team in reaching agreement of a schedule of labour and plant resource costs which were ultimately included in the PSSA. This agreed schedule would be the basis of the demonstrable cost for the resources spent computed against allocated time on site. We therefore had a controlled commercial basis for calculating the demonstrable cost. The agreement was to omit the measured works included in the Contract Sum for the relevant section of Princes Street and replace that with the demonstrable cost calculated by applying recorded resources at site to the agreed demonstrable costs scheduled in the PSSA. Tie would have a site presence to allow checking of daily resources.

What work did you do in relation to claims for payment under the PSSA?

BBS applied for a monthly valuation for PSSA works as it was required to do. The tie commercial team had considerable difficulty in analysing and reaching agreement of amounts due partly to the way the daily site resources were being presented and partly that the amounts to be deducted for relevant contract works were still subject to disagreement. Regarding site resource cost claims my recollection was that tie had disallowed costs where they were not properly signed off at site and this was disputed. The valuation of this work claimed by Infraco was therefore not being accepted by tie at the amounts claimed by Infraco and the differences increased month on month. A dispute occurred on the valuation of this work which was heading for adjudication. As far as I can recall the disputed valuation (which from memory was over £2m) remained unresolved until Mar Hall mediation.

Did it result in an increase in costs to TIE? If so, to what extent?
 My recollection is that if agreement was reached on the contract works to be deducted and that the disallowed costs were ultimately agreed as tie's assessments then any increased cost would have been not that significant. However the costs were disagreed. The value of this work c £2m was in dispute at the time of Mar Hall.

- 18. Can you explain the 15 points referred to in your email to Richard Walker on 28 November 2009 (DLA00002487) and the discussion that preceded it? Discussions on this commenced around September/October '08 when it was becoming clear that the position being adopted by BBS in relation to change was proving to be difficult to achieve the progress of the works. General discussions had taken place on the change mechanism implementation and in particular the time taken to (a) get Estimates from BBS and (b) allow tie sufficient time to assess. As I recall it BBS and in particular Richard Walker was concerned that BBS would be progressing works at risk therefore we met to consider a workable solution to progress what were called priority works. Several meetings were held with Richard Walker to arrive at a workable solution and I believe he and I achieved that in draft terms and that my email of 28 November'08 reflects where we got to subject to a legal check. My recollection is that Richard undertook to discuss this with Infraco and revert. I do not believe that happened and the impetus gained on this was lost.
- 19. Did you have discussions with Richard Walker as to an amendment to the change mechanism in the contract?

Yes See Q18 above

When and what was agreed?

I recall that Richard Walker and I had come to a general agreement to a workable process (subject to legal drafting) more or less as outlined in my email of 28 November'08 but that was never formalised...

Why did this not come to anything?
 I do not recall specifically why but I do not believe that tie were in disagreement to this at least in principle.

My recollection is that Infraco did not wish to progress it any further but I have no evidence of this.

Seeking further agreement

20. What was your involvement in assessing the offers made by the BSC consortium as part of the Carlisle process or making offers as part of that process?

I was not directly involved in the strategy or concept of Project Carlisle. I believe this was an initiative discussed between Tony Rush and Infraco. Tony had worked with Infraco to develop a GMP. I was not engaged with the process however I recall I was asked to carry out some detailed QS exercises to allow assessment of the offers from a tie viewpoint. It was difficult to carry out any QS assessment on offers since the proposals were not based on known and agreed project data or original contract pricing plus additional works as claimed through change process rather it was based upon the additional cost of their supply chain. Tie had calculated the valuation of works to date and works to complete and assessing the value of changes. Basically any offer made by Infraco was based on its estimate of final cost plus risk (= GMP) and the tie QS team was provided with no evidence of cost. In any event the tie QS team had always carried out exercises on a bottom up basis that was to use the contract price and apply a measure and value to all notified changes using agreed contract rates. This would result in a true reflection of entitlement rather than a reprice based on cost.

 If you were not involved in the assessment or making of offers, what was your role in providing information to permit such assessment / making of offers?
 See note in bullet point above

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- What was your role in relation to the 'Deckchair' analysis?

My role was to provide figures to finance in relation to estimated construction costs for options that were being considered for inclusion in the overall summary (the so called "Deckchair"). This included costs to date and costs to go.

21. What was it, why was it prepared and how was it prepared? Were the Project Carlisle discussions seen, in essence, as a re-pricing exercise by Siemens (see CEC00032056)?

Project Carlisle was an initiative to attempt to reach a settlement to end the then current differences. Whilst the tie QS team was not directly involved in any discussions or negotiations with Infraco leading up to without prejudice offers, the offers from Infraco were based upon a repricing of the works to arrive at a GMP. That is to say the offers were cost to complete based (using GMP amounts from their supply chain plus prelims plus risk) rather than contract sum based. Siemens had included estimated final costs in Project Carlisle offers without reference to contract price. This was not able to be reconciled with the approach taken by the tie QS team which was entitlement based on contract sum plus change. The change value used by tie incorporated all notified changes by Infraco at the date of assessments.

- 22. Stewart McGarrity says he sent you an email on 22 February 2010, "really as an aide memoir to myself and a dump in one email and attachments of everything I know or have about BB and S pricing make-up" (CEC00555847).
 - Why was he emailing you about pricing at this stage of the works?
 I do not recall why Stuart was inquiring about pricing at that time.

Mar Hall

23. In relation to Project Carlisle and the run up to the Mar Hall mediation, a spreadsheet known as the 'deckchair' spreadsheet was circulated (TIE00355077, TIE00355078). It set out cost estimates for various scenarios for the project. Can

you explain your understanding of the purpose of the spreadsheet, the source of the numbers presented in it and your role and that of your team in preparing it?

Finance compiled the deckchair spreadsheet and my involvement in this would have been to provide estimates for the construction costs of the various options that were being discussed. The purpose of the spreadsheet was as I understand it to set out various possible outcomes prepared by finance project wide and input from me would be would concentrate on construction costs however other project costs including non-construction costs were included in the deckchair. For example, in the deckchair, the figures up to the BSC line representing the BSC Infraco build to Haymarket was most probably informed by the QS views set out in the paper headed Infraco Entitlement. The QS view in that paper ranges from £321m (Report table PP1A) to £356m (Report table PP1B). These figures when averaged = £339m and are similar to the Deckchair figure of £341.3m on the Total BSC line.

• What degree of confidence did you have in those figures, and why?

The Infraco Entitlement paper was the tie QS assessment of the ranges of Infraco entitlement on a "bottom up" basis that is working up from the Contract Sum plus changes. That was done by assessment and inclusion of both the tie version (ref table PP1A) and Infraco version (ref table PP1B) of change values and an allowance for project delay. A degree of confidence in the tie assessments was introduced when tie instructed Quantity Surveyors Cyril Sweett to carry out an independent view of the cost of Off Street works to Haymarket by completing a full measure and value analysis based on the then IFC drawings. (construction issue drawings). The result was that Cyril Sweett arrived at a total value for this section not dissimilar to the tie assessment. In addition extension of time entitlement was informed using a delay analysis report by Acutus.

Siemens price was always difficult to be confident about due to their approach to pricing and the apparent disregard for the original price.

Non calculable amounts such as risk allowances would be subjective and by nature uncertain.

Other options contained contain significant subjective risk allowances which would be by their nature uncertain.

 To the extent that there were significant uncertainties, can you explain what they were?

Uncertainties on the off street works were reduced due to the design drawings (IFC) being well advanced at that time and the QS exercises having been carried out. On Street works remained uncertain however if the route was truncated to the east end of Princes Street and a large proportion of Princes Street was completed then risk lay in the short section from Haymarket to Princes Street and beyond Waverley. Risk allowances are always subjective and uncertain.

 How did these figures relate to those in your "Infraco entitlement" document (TIE00106500_0015)?

All of the tie assessments for construction costs were informed by the entitlement exercises carried out and summarised in that document. See response 23 above

- 24. The version of that spreadsheet circulated on 5 March 2011 (TIE00355078) estimated the cost of separating from the BSC consortium and re-procuring the project from another contractor at £645m to £698m, for a line to St Andrew Square. We understand that immediately before, or at, the Mar Hall mediation, a lengthy discussion took place over that estimate, the outcome of which was that that estimate was increased by £150m. The effect, as we understand it, was to make it a more expensive option than a revised deal with BSC based on Project Phoenix.
 - What is your knowledge of that discussion?

Leading up to Mar Hall there were numerous discussions regarding prices for various options. The tie commercial team had been working on the Infraco settlement figures. Tony Rush had been separately pursuing settlement of commercial issues directly with Infraco using the Infraco Project Phoenix offer as a basis for discussion. The tie team had provided information to Tony Rush and also to Colin Smith, who had newly been introduced as a CEC advisor, based upon its Infraco entitlement exercises. The tie commercial team was not involved directly in discussions with Infraco in relation to Project Carlisle or Project Phoenix or directly with any commercial negotiations and discussions that CEC were having at that time but had been involved in producing valuation estimates and providing other information on an ad hoc basis. The tie commercial team was not involved in high level

discussions/negotiations which by now involved CEC. I do not recall the tie team's figures being analysed by Tony Rush or Colin Smith since they were concentrating on attempting settlement on the basis of Infraco's Project Phoenix offer. Terminate and reprocure was always going to be a difficult and subjective view with many variables and unknowns so difficult to assess. My involvement was to address the tie QS view of construction costs to termination and reprocure which would involve assessment of the Total estimated BSC costs to termination and the new procurement costs. Whist I do not remember any specific discussion there were discussions over the various options being proposed. I do not recall a figure of £150m being discussed however this is likely to be made up of significant risk allowances added to the calculated figures when CEC advisors were considering and overviewing the final figures. The final allowances were hugely subjective and I don't think that I concurred with them at that time.

What part did you, or members of your team play in it?

The tie QS team carried out extensive exercises to assess Infraco Entitlement and this would have included in parallel consideration of the construction costs to termination and estimated reprocurement costs being considered as an option. The tie QS team provided its view on construction costs when required to do so to assist in populating deckchair figures. As noted above there were discussions on prices for various options but allowances that were made for risks and unknowns were a judgement call.

• Did you agree that the increase was appropriate, and (whether you consider it appropriate or inappropriate) can you explain why?

I do not recall detailed discussion on the increases noted amounting to £150m other than to say that the CEC advisor disagreed with the previously tie assessment figures presented in the deckchair. I do not know how amounts totalling £150m were calculated however the QS view did not include a review of all the other costs and the variable elements therefore not involved in the make up of variable elements or other project costs. I would remain content with the QS assessed element of the costs. By reference to the CEC report provided now to me it would seem that CEC had considered the tie figures to be somehow inadequate and I do recollect some discussion on this at the time however my team were content with the construction

cost estimates. It might have been CEC's view at that time but all of the noted factors and assessed to be an additional £150m are speculative and highly subjective. I did not concur with the magnitude of the subjective risk items and I would have said so at that time.

 Do you consider that proper and adequate consideration was given by those negotiating at the mediation for CEC/tie to the option of separating and reprocuring? It may be helpful to consider (WED00000134), from page 234, especially paragraphs 7.4 and 7.6.

Discussions were held and tie's views were offered but CEC advisor disagreed with the tie assumptions and added significant amounts for risk items. Given that the matters discussed were variable and subjective there is no clear right or wrong answer to some risk items, however the amounts that were added were for risk items which some were speculative and all were not able to be evaluated by calculation.

- 25. One outcome from the Mar Hall mediation was an agreement on the price of £362.5m for completion of the off street works and settlement of all claims which had accrued under the Infraco contract.
 - Did you agree that was an appropriate price which represented good value and if so what is the basis for your answer?.

Infraco's Project Phoenix price was £449m. The Mar Hall agreed price of £362.5 excluded CAF which was £65m in Project Phoenix making a total of £ 427.5 including CAF. This compares with Project Phoenix £449m which also included CAF. As far as the tie QS's were concerned its calculated price was set out in the Infraco Entitlement paper which on a range of low £321m (ref table PP1A) to high £355 (ref table PP1B). tie's average of these ranges would be c £338m including CAF which compared to £427.5 Mar Hall agreement = difference of c£90m. The difference was the price for civils works off street and the Siemens price.

The tie QS calculations included in Infraco Entitlement were based upon the Contract Price plus the tie estimate of all changes (low) and Contract Price plus the Infraco priced changes (high). These figures were checked against an independent QS (Cyril Sweett) exercise in respect of off street civils works and prolongation prelims which also used the Acutus delay report for delay information.

In addition the Siemens price was calculated using Siemens contract price breakdown plus changes.

Basically tie had calculated on a bottom up approach using the contract price baseline and Infraco used a final cost based approach.

Beyond the calculated price, consideration would require to be given to a settlement agreement to progress matters and this usually occurs in a negotiated/mediated settlement. The final figure was, in my opinion, higher than I thought based on my calculated positions.

- Were you consulted in the run up to that price being agreed and did you endorse it? During Mediation I was involved in providing information and explanation of my calculations to the principals mostly based upon the QS calculated figures compiled during the lead up to Mediation. Mediation involved some detailed discussions and separate high level principals discussions. I was not involved in the principals discussions arriving at the deal. In accordance with my calculated commercial position my opinion was that the settlement price was too high. This opinion was most probably because I had spent the week at Mediation discussing and explaining my calculated positions on value of works as per the Infraco entitlement papers. In the situation at Mediation it was always going to be necessary to consider a compromise to allow the project to move on and that compromise figure in addition to the calculated figure was always going to be subjective and not one that could be said to be right or wrong.
- What calculations or estimates had been made to establish that that price was an appropriate one to pay?

I do not know of any calculations or estimates that form the basis of the agreed price. It was an offer that was agreed.

 Do you consider that there was an adequate basis for agreeing to pay this amount of public money and (whether your answer is yes or no) can you explain why?
 The tie QS team had calculated an entitlement using project facts and contract information. Infraco had proposed a settlement via Project Phoenix which was their estimated cost plus. Both exercises were carried out on an entirely different basis

and were not able to be reconciled from a quantum viewpoint albeit that I remain convinced that tie QS team adopted the correct methodology to arrive at a calculated entitlement amount from an audit point of view. It was clear that if there was going to be some success at Mediation and for the project to move on that some compromise was going to have to be reached on figures. The question is one of whether the compromised figure extra over the calculated figure was the right compromise and that I believe is a subjective view and one that people will have different views on. My opinion at the time was that the figure agreed was high.

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- What were the views of other tie officers to the contrary?
 I understood that the other tie officers were of a similar view to me.
- What is your understanding of the basis on which those views were overridden?
 I had presented many calculations and cost exercises for all to interrogate and analyse however others including the CEC advisor had different views and a different opinion on outturn figures.
- 26. The off street works price of £362.5m represented a very substantial increase in the price from the Construction Works Price in the Infraco contract more than £150m higher, and for a shorter line.
 - Do you agree that this implies acceptance by CEC that BSC's claims in respect of design change and delay were substantially well-founded? Was that the basis on which you made assessments of sums that would be paid to BSC?

No. In my opinion and whether that is right or wrong, by the time we got to Mar Hall the disagreements over design change, the magnitude of design change and delay responsibility were set aside to consider the best outcome for the project stakeholders and the city. The Mediation agreement ended the differences and allowed the works to proceed to completion. This was a key objective of CEC at the Mediation.

27. In June 2011, CEC produced a spreadsheet setting out updated estimates of different scenarios for the project (CEC02085613). The estimates on this spreadsheet for the cost of separating and re-procuring were between £1.032bn and £1.144bn. That

appears to be approximately £0.5bn higher than the estimates in the deckchair spreadsheet from March 2011 (TIE00355078).

- Were you involved in preparation of the June cost estimates?
 By June 2011 I was not involved in these reports. I believe that CEC and its advisors prepared these estimates. I do not think I was ever copied into these.
- Did you consider them at the time?
 No I do not think so.
- Even if you were not involved at the time, can you comment on the estimates, based on the knowledge you had from his involvement in preparing estimates at an earlier stage?

The figures are set out in a different way from the previous tie finance produced deckchair making cross analysis difficult. There are some significant line item amounts included for amongst other things Primary Risk (£106m), Bad project risk (£40m), Inflation Risk (£25m) Specified and Exclusion Risk (£77.5m). These added risks totalling almost £250m are not explained or supported and they seem extraordinarily high allowances in my opinion. In addition there is an £80m risk for BSC settlement premium. Whilst these allowances are highly subjective I do not agree with the magnitude of risk that CEC has attached to these items. That may partly explain the allowances made to arrive at £150m additional cost of Terminate and reprocure as noted in Q 24 above.

- In particular, do you consider them to be reasonable?
 There is no breakdown provided but no I do not consider them reasonable.
- 28. Can you explain the contents of your email for Alan Coyle dated 8 July 2011 included within the email chain TIE00688781?

Siemens had submitted a Target Sum for on street works at £20m. My estimate was £4.5m. I met with Siemens to discuss. Siemens did not differ greatly from my estimate however through further discussion it became clear that we were not comparing like for like and the difference some £14m was to cover extended prelim type resources from the proposed end date of Sept 13 to the then current programme date of May'14. I queried this since it seemed to me that whatever price deal was achieved at Mar Hall i.e. the asking price of £140m to agreed price of

£126m (a reduction of £14m) would become ineffective. I had numerous discussions with Axel Eickhorn on this but I could not reconcile nor accept the figures proposed.

 Was there an agreement or understanding that the reduction in the price agreed at Mar Hall would be recouped later?

None that I was aware of.

29. Please explain the report you prepared (TIE00691425 and TIE00691426) which was attached to your email to Vic Emery of 15 August 2011 (TIE00691424).

The report was to set out my analysis of the price submissions made by Infraco in relation to the On Street Works. It was an internal report for tie. My recollection is that following Mar Hall a Target Price for the On street works was to be agreed. The tie QS team carried out an assessment of the Infraco price submissions. This was set out in three sections starting with the BBUK element. The concerns raised on this are summarised in the bullet points at the start of the report. Firstly whilst I do not believe my team had seen any sub contract quotes at that time it was noted that tenders were received from 5 sub contractors for civils works. BBUK opted not to include the most commercially beneficial quote (as would be normally expected, all things being equal) but instead put in their own price which resulted in their proposal being almost £3m higher than if it used the lowest tender. (see table lowest bid = £17,911 ; BBUK proposal = £20,779. In my view at that time this was not an approach that provided best value since BBUK ignored the market price and inserted their own. In addition BBUK had requested tenderers to adopt worst case scenarios via pricing assumptions in their bids and it is assumed that they did. No such pricing assumptions were included in the BBUK proposal meaning that tenderers had priced a worst case scenario but BBUK in their proposal had not. This could have resulted in post contract change to tie's account if BBUK proposal was accepted. In other words it could have resulted in a base line cost plus changes which would be a client risk. I had assessed that risk at £4m. Other sub contract prices were required for example Logistics and Traffic Management however budgets only were offered at that time. Tie's view was that these packages would be significantly lower that the budgets proposed by reference to cost incurred earlier in the project on Princes Street.

Prelims were considered and essentially if the works were to be carried out by BBUK directly there would be £10m of prelims to carry out £20m direct works and this was considered to be high. In summary the BBUK price of £33m was considered to be high and tie had issues with the agreement of that for the reasons in the report of c£11m.(see conclusion of section 1 of the report).

Siemens price of £20m was assessed. This was considered high mainly in relation to Preliminaries which tie had assessed and discussed were partly included in the settled Off Street price. The difficulty with any assessment of Siemens price was that they approached it on a top down basis i.e. work up a GMP using estimated cost whereas tie had always approached price from a bottom up viewpoint using known and agreed tender price information as a baseline where appropriate. The issues relating to this were included in a series of questions in my email to Axel Eickhorn on 1 July'11. We never did get resolution to the queries raised however Siemens did reduce their price from £20m to £14m.

- 30. The Inquiry has heard evidence from Scott McFadzen that he discussed the Infraco contract with you both before and after it was signed. Is that correct?
 - I had known Scott as a former colleague for many years and it would have been normal for us to have informal discussions so yes. However, I think that Scott refers to discussing the project rather than the contract i.e. the works to be carried out rather than the contract terms. I do not recall discussing contract terms however I do recall talking about the schedules of rates and how preliminaries were to be paid for changes.
 - If correct please explain the nature of the discussions pre contract signature and the nature of discussions post contract signature
 I have noted the discussions pre contract above. Post Contract I recall that we may have had discussions on the early Estimates for changes but again not on the interpretation of the contract terms.
- 31. The Inquiry has heard evidence that you would hold discussions with David Gough or his predecessor at Bilfinger Berger UK, regarding monthly valuations.

- Is that correct?
- It is usual practice for a meeting between the Employer commercial team and the Contractor commercial team during the interim valuation process. Tom Murray was the BB commercial lead at the commencement of the contract and through the Advanced Works and Mobilisation Contract. I would have met Tom to agree the interim valuations at that time. Later on in the project David Gough became the BB commercial lead and he would discuss the monthly application for payment with me or (as was usually the case) with one of my team.
- Please explain the nature of those discussions

Discussions would be in two main parts (1) to agree the achieved Milestones in the relevant period since BBS were paid on an achieved monthly Milestone basis as set out in the Milestone Schedule in SP5 and (2) to agree the value of changes for works carried out in the period. Those together would form the interim valuation and result in payment to be made monthly. This is entirely normal practice.

• We understand that discussions were held with Bilfinger Berger UK regarding the

£2.5m claim in relation to Leith Walk. Please explain

I do not remember this claim.